

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.

IPR2023-00836
U.S. Patent No. 9,039,580

PATENT OWNER'S RESPONSE

TABLE OF CONTENTS

I.	Introduction.....	1
II.	Level of Ordinary Skill in the Art	3
III.	Claim Construction.....	4
	A. “substantially prevents”.....	5
	B. “safety device”	5
	C. “shaft”.....	6
IV.	Petitioner Fails to Establish Unpatentability of Any Challenged Claim.....	6
	A. The Cited Prior Art Does Not Disclose All Elements of the Challenged Claims	7
	1. Chickering does not disclose a “curved running surface” (Claims 1, 11, 25).....	7
	2. Chickering does not disclose that “the first and second bearing rails define a curved top profile” (Claim 25).....	13
	3. Socwell does not disclose two bearing rails, each having “a plurality of bearings” (Claims 1, 11, 25).....	16
	4. Socwell does not disclose “a running belt [... at least partially] supported by the first bearing rail and the second bearing rail” (Claims 1, 11)	20
	5. Socwell does not disclose “disposing a running belt on the plurality of bearings” (Claim 25).....	26
	B. Petitioner Fails to Demonstrate Motivation to Combine or Likelihood of Success	28
	1. A POSA Would Not Have Been Motivated to Combine Magid with Either Socwell or Chickering	28
	2. Petitioner’s Obviousness Arguments Regarding Sclater Rely on Improper Hindsight	34

V.	Secondary Considerations Dictate a Finding of NonObviousness.....	45
A.	Legal Standards	45
B.	Nexus.....	46
C.	Commercial Success.....	57
D.	Industry Praise.....	60
E.	Copying	61
F.	Failure of Others.....	65
G.	Passage of Time Between Publication of the Prior Art and the Invention.....	66
VI.	Conclusion	67

TABLE OF EXHIBITS

Exhibit No.	Exhibit
2001	Case Management Order, <i>Woodway USA, Inc. v. LifeCORE Fitness, Inc.</i> , Case No. 3:22-cv-00492-JO-BLM, Dkt. 23 (S.D. Cal.)
2002	Minute Entry for Claim Construction Hearing, <i>Woodway USA, Inc. v. LifeCORE Fitness, Inc.</i> , Case No. 3:22-cv-00492-JO-BLM, Dkt. 57 (S.D. Cal.)
2003	U.S. Patent No. 10,799,745 to Bayerlein, et al.
2004	U.S. Patent No. 5,709,632 to Socwell
2005	Redline Comparison of Specifications for U.S. Patent Nos. 5,709,632 and 5,897,461
2006	<i>Reserved</i>
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2008	Opening Expert Report of Dr. Robert Giachetti, <i>Chapco Inc. v. Woodway USA, Inc.</i> , C.A. No. 3:15-cv-01665 (JCH), Dkt. 216-1 (D. Conn.)
2009	Declaration of Robert Giachetti, <i>Chapco Inc. v. Woodway USA, Inc.</i> , C.A. No. 3:15-cv-01665, Dkt. 88-2 (JCH) (D. Conn.)
2010	U.S. Patent No. 10,799,745 File History
2011	<i>Reserved</i>
2012	July 21, 2020 Cease and Desist Letter (Excluding Attachments)
2013	<i>Reserved</i>

Exhibit No.	Exhibit
2014	Woodway USA, Inc.'s Disclosure of Asserted Claims and Infringement Contentions (Redacted), <i>Woodway USA, Inc. v. LifeCORE Fitness, Inc.</i> , Case No. 3:22-cv-00492-JO-BLM (S.D. Cal.)
2015	Defendant's Second Amended Invalidity Contentions and Associated Claim Charts, <i>Woodway USA, Inc. v. LifeCORE Fitness, Inc.</i> , Case No. 3:22-cv-00492-JO-BLM (S.D. Cal.)
2016	Declaration in Support of Jelenchick <i>Pro Hac Vice</i> Motion
2017	Declaration in Support of Rieger <i>Pro Hac Vice</i> Motion
2018	Declaration of Dr. Kim Blair re relevant Challenged Patent
2019	<i>Curriculum vitae</i> of Dr. Kim Blair
2020	Declaration of Eric A. Weber
2021	Additional Excerpts from Neil Sclater and Nicholas P. Chironis, <i>Mechanisms & Mechanical Devices Sourcebook</i> , Third Ed., (McGraw-Hill 2001) ("Sclater")
2022	January 10, 2024 Deposition Transcript of Robert Giachetti (IPR2023-00836, U.S. Patent No. 9,039,580)
2023	January 10, 2024 Deposition Transcript of Robert Giachetti (IPR2023-00849, U.S. Patent No. 10,799,745)
2024	January 9, 2024 Deposition Transcript of Robert Giachetti (IPR2023-00843, U.S. Patent No. 10,561,884)
2025	Woodway CURVE Treadmill Claim Chart ('580 Patent)
2026	<i>Reserved</i>
2027	<i>Reserved</i>

Exhibit No.	Exhibit
2028	Woodway Non-Motorized Treadmills User Manual
2029	Altra Industrial Motion Product Brochure
2030	<i>Reserved</i>
2031	Press Release, Woodway USA, Inc., Woodway Debuts Speedboard at IHRSA Show (March 20, 2009) (on file with author)
2032	Woodway's Confidential Sales and Cost Data for CURVE Line of Treadmills From Woodway's Fiscal Years 2010 through 2024.
2033	Woodway's Confidential Sales and Placement Data for the CURVE Legacy Treadmill From Woodway's Fiscal Year 2009
2034	Woodway's Confidential Sales and Placement Data for the CURVE Legacy Treadmill from Woodway's Fiscal Year 2010
2035	Video: Woodway CURVE® Treadmill With Safety Device
2036	Video: Woodway CURVE® Treadmill Without Safety Device
2037	<i>Patents</i> , WOODWAY.COM, http://www.woodway.com/support/patents (last visited Jan. 29, 2024)
2038	Confidential List Price and Cost Information for the CURVE Line of Treadmills From Woodway's Fiscal Year 2008 through Dec. 31, 2023
2039	<i>Shop</i> , WOODWAY.COM, http://www.woodway.com/shop (last visited Jan. 23, 2024)
2040	<i>Treadmills</i> , ASSAULTFITNESS.COM, http://assaultfitness.com/collections/treadmills (last visited January 23, 2024)

Exhibit No.	Exhibit
2041	Search Results for Assault Air Runner for Sale Online, http://google.com (search “Assault Air Runner treadmill”; then follow “shopping” icon)
2042	<i>Chapco, Inc. and Samsara Fitness, LLC v. Woodway USA, Inc.</i> , Case No. 3:13-cv-1665 (JCH), Dkt. 144 (D. Conn. Sept. 26, 2017)
2043	Letter from Richard J. McKenna, Foley & Lardner LLP, to Christopher Kelly, Gym Store, Inc. (Oct. 21, 2014) (on file with author)
2044	March 2, 2017 Expert Report of Kim B. Blair, Ph.D., <i>Chapco, Inc. and Samsara Fitness, LLC v. Woodway USA, Inc.</i> , Case No. 3:15-cv-1665 (JCH) (D. Conn.)
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2054	GOVERNMENT RECREATION & FITNESS, May 2020
2055	Rachel Bachman, <i>Treadmills Unplugged: A Gym Workout Powered by Your Feet</i> , WALL STREET JOURNAL (July 6, 2015), http://www.wsj.com/articles/treadmills-unplugged-a-gym-workout-powered-by-your-feet-1436202306 .
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Exhibit No.	Exhibit
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2067	Woodway’s Infringement Contentions (’580 Patent), <i>Assault Air Runner, Woodway USA, Inc. v. LifeCORE Fitness, Inc. d/b/a Assault</i> , Case No. 3:22-cv-00492-JP (BLM) (S.D. Cal.)
2068	Woodway Infringement Contentions (’884 Patent), <i>Assault Air Runner, Woodway USA, Inc. v. LifeCORE Fitness, Inc. d/b/a Assault</i> , Case No. 3:22-cv-00492-JP (BLM) (S.D. Cal.)

Exhibit No.	Exhibit
2069	Woodway Infringement Contentions ('745 Patent), Assault Air Runner, <i>Woodway USA, Inc. v. LifeCORE Fitness, Inc. d/b/a Assault</i> , Case No. 3:22-cv-00492-JP (BLM) (S.D. Cal.)
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2071	Owner's Manual, Assault Air Runner Manual Treadmill
2072	Marketing Material, Assault Air Runner
2073	Proposed Protective Order
2074	Proposed Protective Order Redline

I. INTRODUCTION

Woodway USA, Inc. (“Patent Owner” or “Woodway”) submits this Response to the Petition for *inter partes* review (“IPR”) of Claims 1-12, 14, 15, 18, and 25 (“Challenged Claims”) of U.S. Patent No. 9,039,580 (“the ’580 Patent”), filed by LifeCORE Fitness, Inc., d/b/a Assault Fitness (“Petitioner”).

In 2009, Woodway introduced its first manual, motorless treadmill with a curved running surface under the brand name CURVE. A key structural feature of the CURVE was to harness the force of gravity acting on the user based upon the user’s relative position on the running surface for inducing rotation of the running belt. The CURVE treadmill was an immediate commercial success, and since the 2009 launch, Woodway has introduced additional models and sizes in the CURVE product line, continuously improving on its manual treadmill technology each time.

While the concept of a manual, motorless treadmill has been in the public domain for centuries, before Woodway, no one had been able to solve the problem of how to handle the unpredictable rotation of the running belt for such a device, particularly when implementing a curved running surface in which both the front and rear portions of the running belt running surface are positioned vertically higher than the central portion of the running belt. As Patent Owner’s expert Dr. Kim Blair explains, one of the critical challenges with a curved, motorless treadmill is to ensure the safety of the user. EX2018, ¶¶32-33. In order for a curved, motorless treadmill

to function as intended, it requires free rolling or rotation of the running belt. *Id.* However, this necessarily means that, without intervention, the running belt may move in the forward and backward direction when a user is trying to mount or dismount the treadmill. *Id.* Because it is common for a user to enter the treadmill from the rear, when a user steps on the rear portion of the running surface of the treadmill which is curved upward, the user's weight may cause the belt to unexpectedly rotate forward (the opposite of the normal direction of rotation of the running belt). *Id.* Depending on how quickly and where the user mounts the treadmill, this may create an extreme safety hazard as unpredictable belt movement may startle the user, create a temporary feeling of loss of control, or even cause a user to fall. *Id.*

The Challenged Claims of the '580 Patent are all directed to solving this problem. *Id.*, ¶¶34-40. Each claim is directed to a "manually powered treadmill" or a method of providing such a device. EX1001, Claims 1-25. These claims combined and improved on a variety of features to create a novel device that solved – for the first time – the problems with curved, manual treadmills that had previously plagued the industry. While Petitioner now asserts that the claimed devices and method were obvious over the prior art, the reality is that no device disclosed all of the novel features described in the Challenged Claims, nor would a person of ordinary skill in the art ("POSA") been motivated to combine such features to create the claimed

device/method. *See* §IV, *infra*. Indeed, as described in further detail below, even the prior art Petitioner cites fails to disclose key features of the Challenged Claims, meaning that the Challenged Claims must be found non-obvious.

Additionally, the non-obviousness of the Challenged Claims is also supported by the significant commercial success of Woodway's CURVE treadmills, including numerous iterations that not only practice the Challenged Claims but are coextensive with them. The praise these treadmills have received (both in the form of industry recognition and industry awards), the failure of others to develop comparable products, the commercial success, and other secondary considerations further demonstrate the non-obviousness of the claimed invention. *See* §V, *infra*.

In short, there is no real basis for Petitioner's conclusory assertions that a POSA would have found the inventions described in the Challenged Claims obvious. To the contrary, the record demonstrates both that key features of the Challenged Claims are simply absent from the prior art and that, even if all elements were present, a POSA would not have been motivated to combine the various prior art references Petitioner cites to arrive at the claimed invention.

II. LEVEL OF ORDINARY SKILL IN THE ART

In contrast to Petitioner's proposal (Petition, 5), Patent Owner contends that a person of ordinary skill in the art of the '580 patent would be a person with a bachelor of science degree in mechanical engineering or at least two years of experience in

the treadmill industry, including experience and knowledge of the design, construction, testing, and operation of manual treadmills. EX2018, ¶¶65-70. Unlike Petitioner's proposal, the level of ordinary skill in the art as articulated by Patent Owner would not exclude certain of the inventors of the '580 patent and is more consistent with the language of the claims.

Dr. Blair is an individual of at least ordinary skill in the art under either standard, and the analysis throughout this Response would not change whether Petitioner or Patent Owner's level of ordinary skill in the art was adopted.

III. CLAIM CONSTRUCTION

Claim terms are generally given their ordinary and customary meaning, which is the meaning the term would have to a POSA at the time of invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005) (en banc). “[O]nly those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy.” *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

Petitioner identifies three terms for construction – “substantially prevent[],” “safety device,” and “shaft.” Since the Petition was filed, however, each of these terms have been construed by the district court in *Woodway USA, Inc. v. LifeCORE Fitness, Inc.*, Case No. 3:22-cv-00492-JO-BLM (S.D. Cal.) (“Parallel Litigation”).

EX1033, 10-22, 25-27. The Board should adopt and apply the constructions provided in the Parallel Litigation, which are discussed in further detail below.

A. “substantially prevents”

The district court construed “substantially prevents” to mean “restricts rotation to allow for only one rotational direction of movement.” EX1033, 16. In doing so, the court construed the term to exclude any significant “bi-directional movement” that the Applicant disavowed during prosecution while still allowing for some “degree of possible movement in the second rotational direction (the possibility of an initial swing back of the treadmill) before the safety device function locks in to allow for movement in one direction.” *Id.*, 15-16. The district court’s construction of “substantially prevents” should be adopted for the reasons stated in the district court’s claim construction order. *Id.*, 10-17.

B. “safety device”

For purposes of the ’580 patent, the district court construed “safety device” as a means-plus-function claim limitation with the corresponding structure being “a one-way bearing assembly, a cam locking system, a taper lock, a user operated pin system, or a band brake system with a lever.” *Id.*, 22. The district court’s construction of “safety device” should be adopted for the reasons stated in the district court’s claim construction order. *Id.*, 17-22.

C. “shaft”

The district court agreed with Patent Owner that “shaft” should be construed to have its plain and ordinary meaning, a meaning Patent Owner characterized as encompassing things such as “hollow or solid element / part / rod / tube / member / piece.” *Id.*, 25, 27. The district court specifically rejected Petitioner’s assertion that “shaft” should be construed to mean “a rotating element used to transmit power from one part to another,” finding that this proposed construction would render “entirely superfluous” other claim language describing the shaft as “rotatable” and “rotatably coupled” and that the extrinsic evidence demonstrated that “shafts may, but do not necessarily, rotate.” *Id.*, 26-27. The district court’s construction of “shaft” should be adopted for the reasons stated in the district court’s claim construction order. *Id.*, 25-27.

IV. PETITIONER FAILS TO ESTABLISH UNPATENTABILITY OF ANY CHALLENGED CLAIM

Petitioner asserts only obviousness grounds in the Petition, thus conceding that no single reference discloses all elements of the Challenged Claims. With no anticipatory references, Petitioner instead attempts to cobble together multiple disparate references, arbitrarily selecting various elements of those references until it arrives at something that superficially resembles the Challenged Claims. However, Petitioner fails to meet its burden of establishing that any of the claims would be obvious, including by failing to show an adequate motivation to combine or modify,

in each ground. Instead, Petitioner relies on conclusory arguments that are fraught with hindsight bias and ignore key structural aspects of the asserted references. Accordingly, the Petition should be rejected, and the patentability of the challenged claims should be upheld.

A. The Cited Prior Art Does Not Disclose All Elements of the Challenged Claims

1. Chickering does not disclose a “curved running surface” (Claims 1, 11, 25)

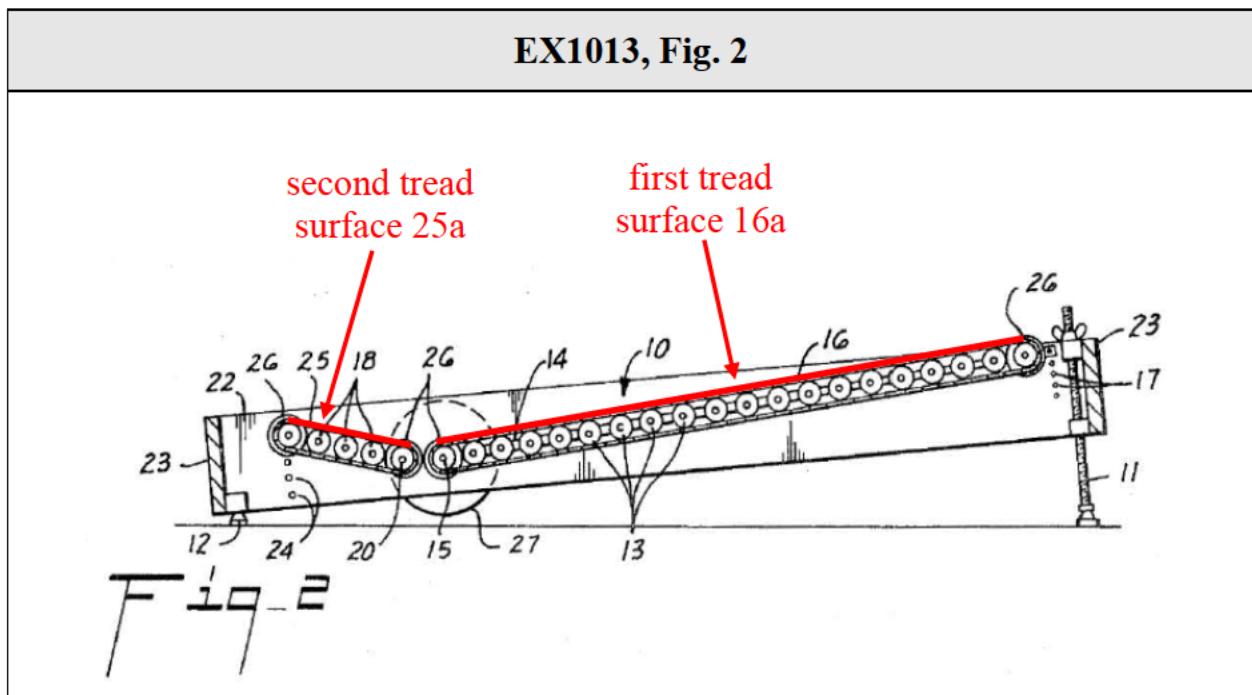
In Grounds 1-3, Petitioner relies on U.S. Patent No. 3,637,206 to Chickering (“Chickering”) for the vast majority of limitations. This includes the requirement in all three independent claims – Claims 1, 11, and 25 – that the running belt follow a curved running surface and be supported by or disposed on two bearing rails or a plurality of bearings. EX1001, Claims 1, 11, 25; Petition, 26-29, 31-33. Specifically, Petitioner asserts that Chickering discloses these requirements, specifically identifying Chickering's endless belt 28 as the running belt, its rollers 13 and 18 as the plurality of bearings, and its front and rear support arms 14 and 19 as the bearing rails. Petition, 26-29, 31-33. Although the Board preliminarily agreed with these assertions (D.I., 29-31, 34-35), these arguments are fatally flawed and should be rejected.

As an initial matter, it cannot be ignored that Petitioner's purported expert, Dr. Giachetti, has a patently ridiculous understanding of what makes a running

surface “curved.” During his deposition, Dr. Giachetti testified that a treadmill would have a “curved running surface” if, when the user stepped onto the treadmill, the running surface deflects downwards due to a gap as small as half a centimeter between the running surface and the rollers beneath it. EX2023, 23:4-24:4, 24:23-27:9, 31:23-32:21. No POSA would ever have such a tenuous understanding of what constitutes a “curved running surface.” Indeed, even Dr. Giachetti seemed to understand this point, as he acknowledged that such strained arguments were omitted from his declaration, which instead focused on what he (and presumably Petitioner) considered to be “more compelling” arguments regarding the prior art. *Id.*, 23:24-24:5. Still, Dr. Giachetti's testimony demonstrates how little he actually understands about the understanding of a POSA.

Regardless of interpretation, however, Chickering does not disclose a treadmill with a “curved running surface” as required by the claims; rather, it discloses a treadmill with two flat running surfaces positioned adjacent each other, i.e., a multi-planar running surface. In Chickering's main embodiment, the primary running surface (first tread surface 16a) is formed by placing endless belt 16 over “[a] first series of transverse parallel rollers 13” which “have their ends journaled in arms 14.” EX1013, 2:13-16. A second running surface (second tread surface 25a) is formed by placing a second endless belt 25 over “[a] second series of transverse parallel rollers 18” which “have their ends journaled in arms 19.” *Id.*, 2:17-20.

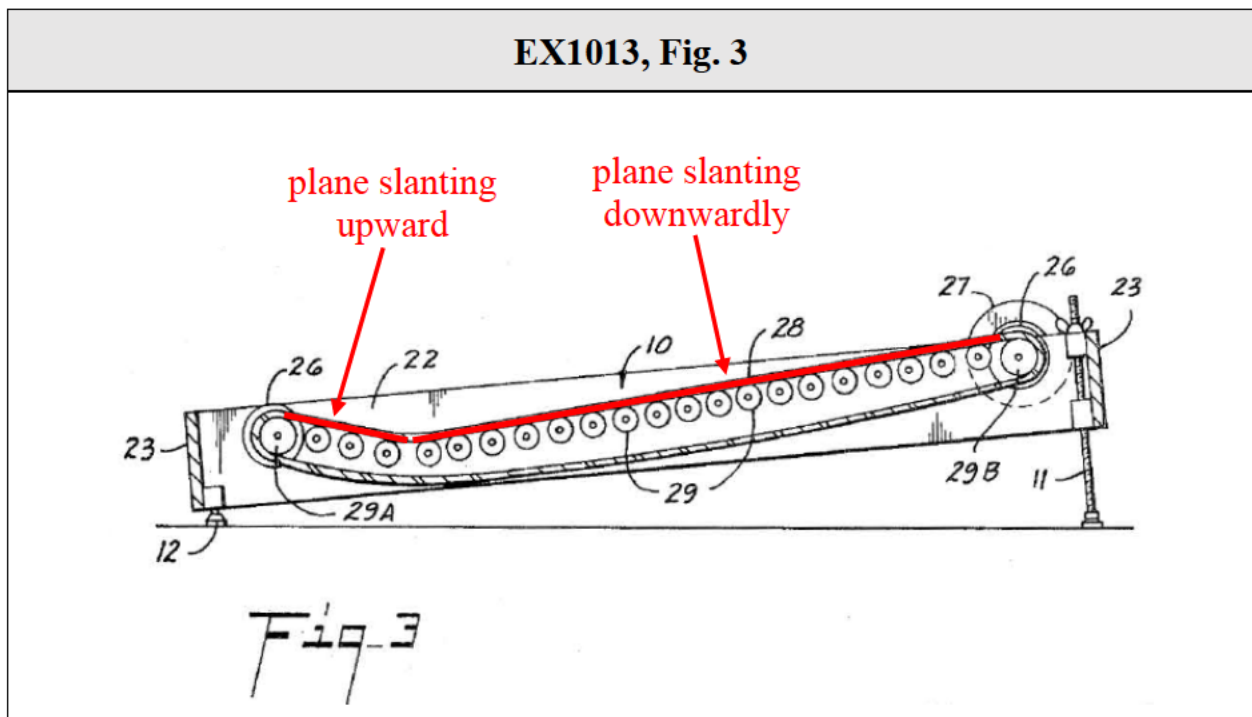
Because rollers 13 and 18 are described as “series of... parallel rollers,” a POSA would readily understand the rollers that support the two belts, as well as the arms they are journaled to, to form a pair of planar surfaces rather than a single curved surface. EX2018, ¶¶77-82. Thus, Chickering's primary, dual-belt embodiment discloses a multi-planar running surface, not a curved running surface as required by the claims, as can plainly be seen in Figure 2:



EX1013, Fig. 2 (annotations added); *see also id.*, Fig. 1; EX2018, ¶¶81-82.

Chickering's alternative embodiment, which utilizes “a single endless belt 28” placed over “a single series of rollers 29... journaled in the sidewalls 22 of base 10” (EX1013, 2:73-3:2), similarly fails to meet the claims' requirement for a “curved running surface.” Chickering expressly states that, in this alternative embodiment,

“the rollers are so disposed that the forward rollers lie approximately *in a plane slanting downwardly* from the front of the base, while the rear rollers lie approximately *in a plane slanting upward* toward the rear of the base 10.” *Id.*, 3:2-6 (emphasis added). Even Dr. Giachetti admits, as he must, that Chickering’s single-belt embodiment is therefore described as having “two subsets of rollers, each lying in different planes.” EX2022, 23:12-24 (agreeing that this description “is accurate”). Because the single endless belt 28 “follows” the planes of these rollers when it is “placed about the rollers” (EX1013, 3:6-8), a POSA would further understand that Chickering’s alternative, single-belt embodiment also discloses a multi-planar running surface rather than a curved running surface. EX2018, ¶¶83-85. Again, this can be seen in Chickering’s figures, namely in Figure 3:



EX1013, Fig. 3 (annotations added); EX2018, ¶¶84. There is no difference in the physical structure and arrangement of the rollers (13 and 29) that support the running belts between Chickering's main and alternative embodiments.

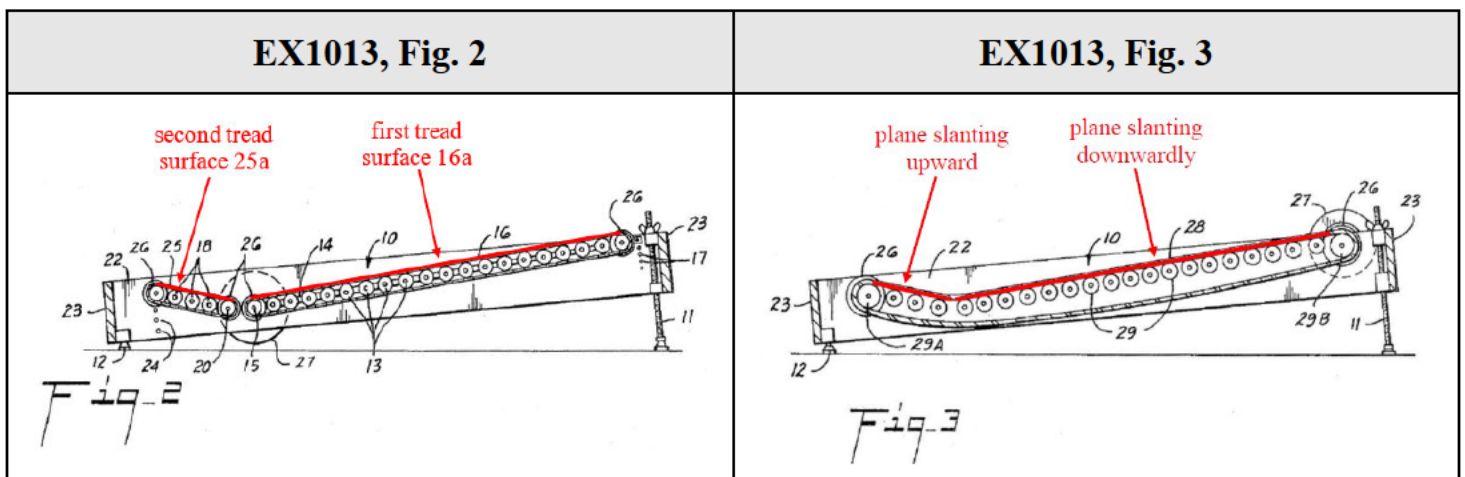
While the Board credited the testimony of Petitioner's purported expert, Dr. Giachetti, and preliminarily found that "there appears to be a curve in belt 28 at the area where the downwardly slanting plane of the forward rollers meets the upwardly slanting plane of the rear rollers" in Chickering's alternative, single-belt embodiment (D.I., 30-31), this does *not* establish that Chickering discloses a "curved *running surface*," as required by the claims. As Dr. Blair explains, a POSA would understand a treadmill's "running surface" to be a surface with which a runner's feet are intended to make contact when using the treadmill. EX2018, ¶¶86-87. Notably, Dr. Giachetti actually agrees with the general principle that a "running surface" must be a surface "where the user is expected to place their feet," and is only a portion of the running belt. EX2023, 33:7-10 ("The running surface is generally speaking the top of the treadmill where the user is expected to place their feet.").

The purported "curve in belt 28" identified in the Institution Decision does not meet these criteria. Indeed, as Chickering itself explains:

When a person is using the exercise device, during each step his foot moves in an approximate arc. The foot first contacts the tread surface 16a as shown in FIG. 1, and moves rearwardly and downwardly, the weight of the person acting to accelerate the motion of the belt 16. *Near*

the bottom of the arc the foot leaves surface 16a and may for a brief instant be out of contact with any surface. However, further rearward movement will bring at least a portion of the foot into contact with tread surface 25a....

EX1013, 2:50-58 (emphasis added). Because “the foot leaves surface 16a” and is “out of contact with any surface” before it contacts tread surface 25a, a runner’s feet are not intended to contact the area between those surfaces, *i.e.*, the point when the two surfaces come together to form an angle. EX2018, ¶¶88-89. While the cited portion of specification specifically relates to Chickering’s Figure 1-2 embodiment, the same effect occurs with the single-belt embodiment depicted in Figure 3, which differs from the dual-belt embodiment solely in its use of one belt instead of two. *Id.*, ¶¶90-91. This can be readily envisaged when comparing the profile formed by the dual-plane slopes depicted as first tread surface 16a and second tread surface 25a in Figure 2 and the profile formed by the downwardly slanting plane and upwardly slanting plane in Figure 3, respectively:



EX1013, Figs. 2-3 (annotations added); EX2018, ¶¶90. Thus, a runner's feet never contact the "area where the downwardly slanting plane of the forward rollers meets the upwardly slanting plane of the rear rollers," *i.e.*, the only area where Figure 3 even arguably depicts a curved surface. EX2018, ¶¶91. By extension, any curved portion of belt 28 cannot constitute a curved **running** surface as required by the claims. *Id.*

Chickering does not disclose any other embodiments, and Petitioner never asserts that a POSA would be motivated to modify Chickering so that its rollers are not arranged in a multi-planar orientation or so that the runner's feet would contact the purported "curved" area of the running belt. Thus, because Chickering does not disclose a "curved running surface," Grounds 1-3, which rely solely on Chickering to show the presence of this element in the prior art, must fail. EX2018, ¶¶76-92

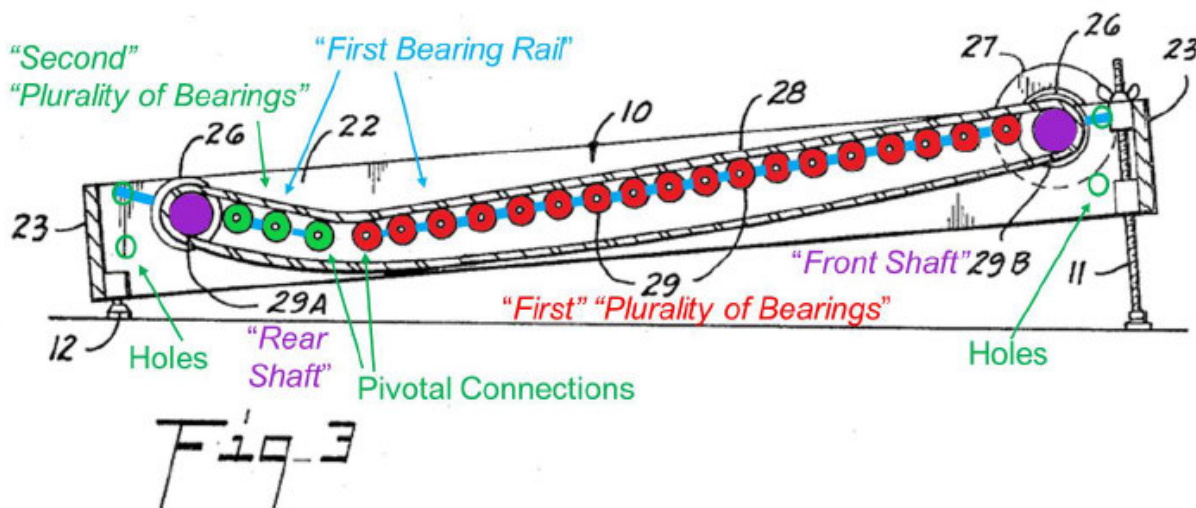
2. Chickering does not disclose that "the first and second bearing rails define a curved top profile" (Claim 25)

Petitioner also relies on Chickering for Claim 25's requirement that "the first and second bearing rails define a curved top profile." Petition, 31. However, the Petition never actually explains how or why the structure's identified as the bearing rails in Chickering actually "define a curved top profile," instead stating in conclusory fashion that "belt 28 ('*running belt*') is placed on the rollers ('*bearings*') supported by support arms 14, 19 ('*first and second bearing rails defin[ing] a curved*

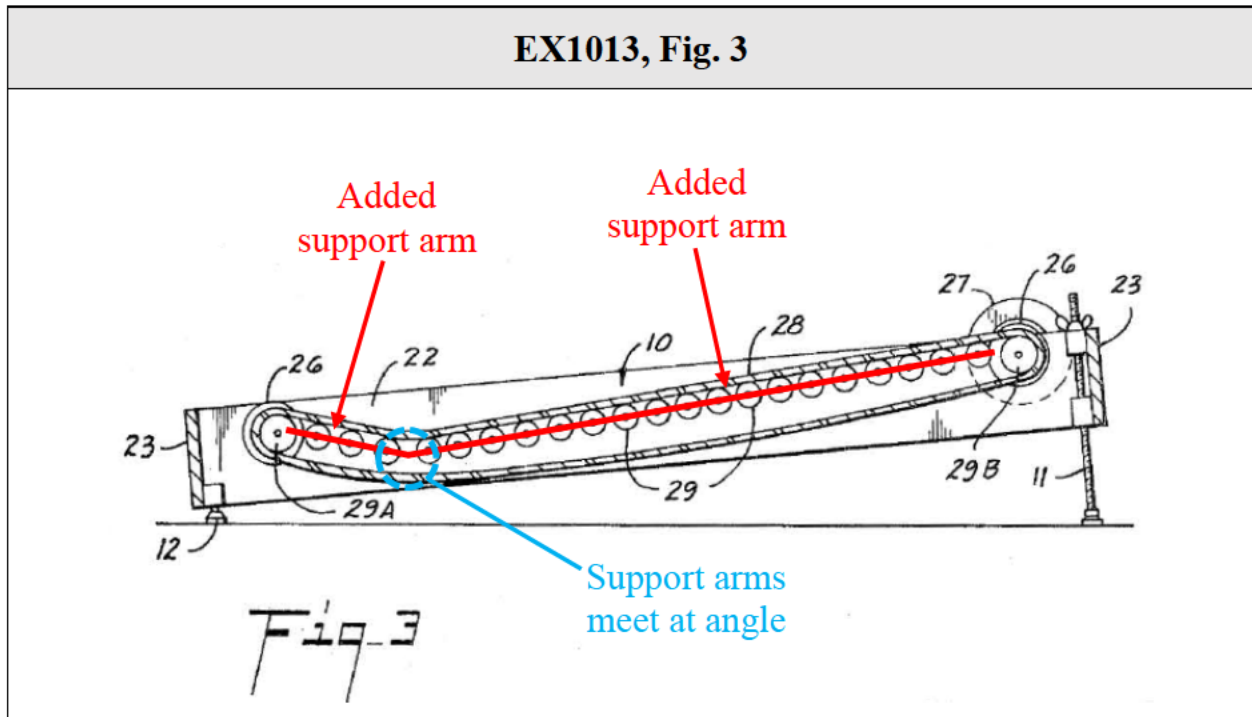
top profile') such that the belt follows their curved profile." *Id.* There is no factual basis for this statement. EX2018, ¶¶93-95.

As seen in the following figures, even if they are added to Chickering's single-belt variation, support arms 14 and 19 (blue, which Petitioner identifies as the first and second bearing rails) do not have any curved components.

Rather, support arms 14 and 19 are expressly identified as planar (Col. 3, Lines 4-5 and Claim 6) perfectly straight and, to the extent they meet at all, meet at a sharp, obtuse angle:



Petition, 30 (annotating EX1013, Fig. 3); EX2018, ¶96.



EX1013, Fig. 3 (annotations added); EX2018, ¶97.

Notably, when pressed, Petitioner's purported expert admitted that no physical component of the support arms was curved. *See* EX2022, 25:7-28:16. (further testifying that the support arms on either side of the Chickering device have essentially the same shape). Instead, Dr. Giachetti testified that he thinks these straight support arms "collectively are curved" because he would "fit a polynomial through them," i.e., he could "come up with an equation that would generate a line...that would...pass through the plurality of bearings and the second bearing rail." *See Id.*, 26:4-18. As Dr. Blair confirms, Dr. Giachetti's confusing testimony is inconsistent with the understanding of a POSA (*see* EX2018, ¶¶96-98 (explaining understanding of a POSA)) and, in any event, is not reflected anywhere in his

declaration. Thus, his arguments should be rejected both on the merits and as outside the scope of the Petition.

Petitioner never asserts that a POSA would be motivated to modify Chickering so that its support arms were curved at any point. Thus, because Chickering does not disclose that “the first and second bearing rails define a curved top profile,” Claim 25 cannot be found unpatentable on the basis of Grounds 1-3, which rely solely on Chickering to show the presence of this element in the prior art. EX2018, ¶¶93-98.

3. Socwell does not disclose two bearing rails, each having “a plurality of bearings” (Claims 1, 11, 25)

In Grounds 4-6, Petitioner relies on U.S. Patent No. 5,897,461 to Socwell (“Socwell”) for the vast majority of limitations. Notably, this includes the requirement in each independent claim – Claims 1, 11, and 25 – for “a first bearing rail” and “a second bearing rail,” each bearing rail having “a plurality of bearings.” EX1001, Claims 1, 11, 25; Petition, 69-72. In the Petition, Petitioner analogizes the “bearings” of Claims 1, 11, and 25 to Socwell’s curved deck 56 and roller 98 and the “bearing rail[s]” to Socwell’s cover members 168. Petition, 69-72. Petitioner also appears to suggest that the belt securing assembly 94 is analogous to the “bearings” in Claims 1, 11, and 25 (*see* Petition, 69-72 (figure annotations identifying element 94 as “bearing”)), although its expert disavowed such an identification during his

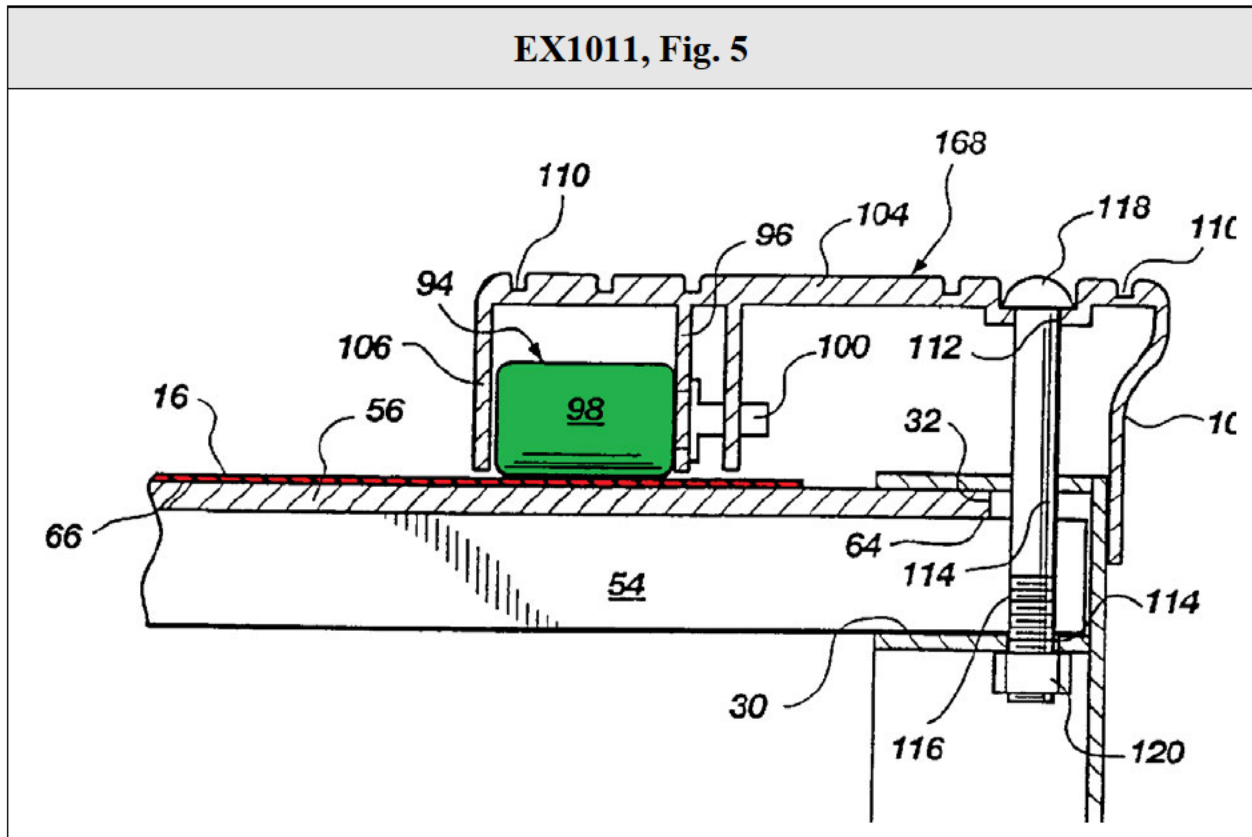
deposition (EX2023, 44:18-45:6). Regardless of the specific identification, though, these analogies are flawed.

In the '580 patent, the “plurality of bearings” are only described and depicted as lying below and supporting the running belt 16. For example, the '580 specification teaches that “[t]he running belt 16 contacts and *is supported in part by the bearings 208* of the bearing rails....” EX1001, 11:58-60 (emphasis added). This requires the bearings 208 to be positioned below the running belt 16. EX2018, ¶¶103-104. While the '580 specification does teach that certain elements may be positioned above or in line with running belt 16 to ensure that the running surface corresponds to the curved shape of the top profile 210 (EX1001, 11:66-12:3), this is accomplished either by using a heavier running belt that is pulled down through the force of gravity (*id.*, 13:30-67) or implementing some kind of running belt retention or braking system. While several different exemplary braking systems are described in the patent, none describe the use of “bearings” to exert downward forces on the belt and hold it in its preferred shape. Even when roller assemblies are used, these structures are consistently referred to as “rollers” or “wheels,” never as “bearings.” *E.g., id.*, 22:38-23:28, 23:46-24:14, 24:29-25:13, 26:1-9; EX2018, ¶¶105-111. In fact, Petitioner's expert admitted during his that he was unaware of even a single instance in which the '580 patent specification actually referred to such roller or wheel assemblies as “bearings,” even as he tried to argue that such rollers

were “bearings” under his improperly broad interpretation of the term. EX2023, 46:12-50:15, 54:17-19 (“Q. Are you aware of any instance in which those rollers are referred to as bearings? A. Not as I sit here.”)

A POSA would therefore understand the '580 specification to require a relative, weight-bearing relationship between the running belt and the plurality of bearings, such that, for a structure to constitute of a plurality of bearings, it must support the running belt either directly or indirectly and must bear some or all of the weight of the belt. EX2018, ¶¶104-111. Simply being a “roller” that contacts or is attached to the running belt is not enough to make something a “bearing,” particularly when the '580 patent specification uses the term “bearing” and “roller” in distinct and different contexts. *Id.*

As described in Socwell, neither belt securing assembly 94 nor rollers 98 constitute “bearings” as that term is used in the '580 patent. Socwell discloses a belt securing assembly 94 where, “[p]referably, the belt securing assemblies 94 provide a means for substantially conforming the inherent flexible nature of the belt 16 to the arcuate configuration....” EX1011, 10:8-12. “The belt securing assembly 94 comprises a roller 98 having an axle 100 which rotatably engages a mounting bracket 96.” *Id.*, 10:18-20. Importantly, the following excerpt of Socwell Figure 5 clearly shows roller 98 and belt securing assembly 94 (both green) positioned vertically *above* running belt 16 (red):



EX1011, Fig. 5 (annotations added); EX2018, ¶¶112-114.

Due to the position of roller 98 and belt securing assembly 94, the running belt 16 does not rest on roller 98 or belt securing assembly 94, and neither roller 98 nor belt securing assembly 94 supports any of running belt 16's weight. Thus, roller 98 and belt securing assembly 94 do not constitute "bearings" as that term is used in the '580 patent. EX2018, ¶115.

Further, the modifications to belt securing assembly 94 needed to place roller 98 below belt 16 would render belt securing assembly 94 inoperable for its articulated intended purpose of holding belt 16 in an arcuate configuration. EX2018, ¶¶116-117. Notably, belt securing assembly 94 accomplishes this by "being

substantially flush with the *upper surface* 66 of the deck 56.” EX1011, 10:5-9 (emphasis added). Modifications including placing roller 98 below deck 56 or between deck 56 and belt 16 would result in roller 98 being unable to exert a downward force on belt 16 to hold the belt in the arcuate configuration. EX2018, ¶¶117-118.

Thus, neither belt securing assembly 94 nor roller 98 constitute or could be modified to constitute one or more “bearings.” As such, of the structures Petitioner identifies for the “plurality of bearings” element, only one – deck 56 – can arguably constitute a “bearing.” EX2018, ¶119. But by reciting a *plurality* of bearings, the claims make clear that there must be more than one physically distinct structure that constitutes a bearing for the claims to be met. *See August Tech. Corp. v. Camtek, Ltd.*, 655 F.3d 1278, 1286 (Fed. Cir. 2011) (“A plurality of wafers means more than one physically distinct wafer.”). Here, because Socwell discloses only a single deck 56, and thus at most a single bearing, Socwell cannot meet the “plurality of bearings” element required by all challenged claims. EX2018, ¶¶101-120.

4. Socwell does not disclose “a running belt [... at least partially] supported by the first bearing rail and the second bearing rail” (Claims 1, 11)

Even if the “bearings” are not interpreted as an inherent weight-bearing relationship with running belt, the Petition still fails to establish that Socwell discloses all limitations of Claims 1 and 11, and by extension their dependent claims.

As previously discussed, Petitioner analogizes Claim 1, 11, and 25's "bearing rail[s]" to Socwell's cover members 168. Petition, 69-72. Notably, Petitioner never actually argues in the Petition that cover member 168 "support[s]" Socwell's running belt. Rather, Petitioner simply states that "Socwell discloses a cover member 168 ('bearing rail') that supports the belt securing assemblies 94, including the rollers 98 ('bearings'), and attaches to the frame 12 using bolts 118" and that "[t]he bolts 118 may also extend through apertures formed through the deck 56 (*bearing*) to attach the deck 56 to the frame 12." Petition, 71-72 (citing EX1011, 11:15-29; EX1003, ¶¶350-351). But the claims do not recite that the purported "bearings" be supported by the bearing rails or (perhaps more accurately) by a frame; they require that the ***running belt be supported by the bearing rails***. EX1001, Claims 1, 11.

The Board cannot (and should not) fix Petitioner's deficient arguments or rectify their failure to address all actual limitations of the challenged claims after the fact. *See In re Magnum Oil Tools Int'l, Ltd.*, 829 F.3d 1364, 1381 (Fed. Cir. 2016) (finding that Board is not "free to adopt arguments on behalf of petitioners that could have been, but were not, raised by the petitioner" in the Petition). Because Petitioner completely fails to address the actual requirements of independent claims 1 and 11 for "a running belt [... at least partially] supported by the first bearing rail and the second bearing rail," the Petition's arguments for finding unpatentable Claims 1 and

11 (and Claims 2-5, 10, 14, and 18, which depend from them (EX1001, 33:1-16, 33:39-42, 34:8-11, 34:29-32)) must be rejected and the claims found patentable.

Nonetheless, even if the Board were to (improperly) extrapolate Petitioner's arguments and assess whether cover members 168 indirectly "support[]" the running belt because they allegedly "support[]" some of the purported bearings, a review of Socwell's teachings in context establish that no such "support[]" exists.

First, the only section of Socwell Petitioner cites for the proposition that a cover member 168 supports any the purported "bearings" is column 11, lines 15-29. In its entirety, this paragraph reads as follows and never so much as mentions running belt 16:

Referring now to FIG. 5, the belt securing assembly 94 and the corresponding cover member 68 may be attached to the support frame 12 by a conventional fastening means. For example, in one presently preferred embodiment of the present invention, a bolt 118 may be disposed through an aperture 112 formed in the cover member 168 and at least one aperture 114 formed in a respective side 20, 22 of the support frame 12. Alternatively, the bolt 118 may be disposed through an aperture 116 formed in a support rib 54 which may further serve to secure the support rib 54 to the support frame 12. Moreover, if a longitudinal side 64 of the deck 56 were to extend past the apertures formed in the cover member 168 and the support frame 12, a corresponding through-bore (not shown) may be formed in the deck 56 and disposed in alignment with the other apertures....

EX1011, 11:15-29. However, neither the foregoing disclosure nor any other section of Socwell suggests that running belt 16 is "supported by" belt securing assembly

94 or rollers 98 (the first set of alleged “bearings” identified in the Petition) or, by extension, that running belt 16 is “supported by” a cover member 168 when “support” is properly understood. EX2018, ¶¶122-126.

Specifically, a POSA would understand the term “support” as used in the ’580 patent to indicate some type of weight-bearing relationship, wherein the support may be provided directly or indirectly and bears some or all of the weight of another component. EX2018, ¶127. Here, there can be no real dispute that neither belt securing assembly 94 nor rollers 98 “support” the running belt within this meaning. Neither belt securing assembly 94 nor rollers 98 bear any weight of the running belt, either directly or indirectly, nor could they as they are positioned vertically *above* the running belt without ever extending below it, as previously discussed. *See* §IV(A)(3), *supra* (discussing orientation of belt securing assembly, rollers, and running belt). As also previously discussed, due to the position of roller 98 and belt securing assembly 94, the running belt 16 does not rest on roller 98 or belt securing assembly 94, and, by extension, neither roller 98 nor belt securing assembly 94 supports any of running belt 16’s weight. *Id.* Thus, even if the alleged first set of bearings (i.e., roller 98 and belt securing assembly 94) are supported by cover member 168, running belt 16 is not, either directly or indirectly. EX2018, ¶¶128-129.

Likewise, there is nothing in Socwell to suggest that cover members 168 “support[]” the running belt via deck 56, the other structure Petitioner identifies as a “bearing.” Indeed, even the Petition states only that deck 56 may be “attach[ed]... *to the frame 12*” via the same set of bolts that also attach cover member 168 to the frame in some embodiments. Petition, 72 (emphasis added). At most, this suggests that both cover members 168 and deck 56 are supported by frame 12. It does not follow, however, that cover members 168 support deck 56 or vice versa. EX2018, ¶¶130-132. Indeed, as seen in the following annotated version of Socwell Figure 5, cover member 168 (yellow) and deck 56 (blue) are not even contact each other but rather are connected via frame 12 (purple):

EX1011, Fig. 5

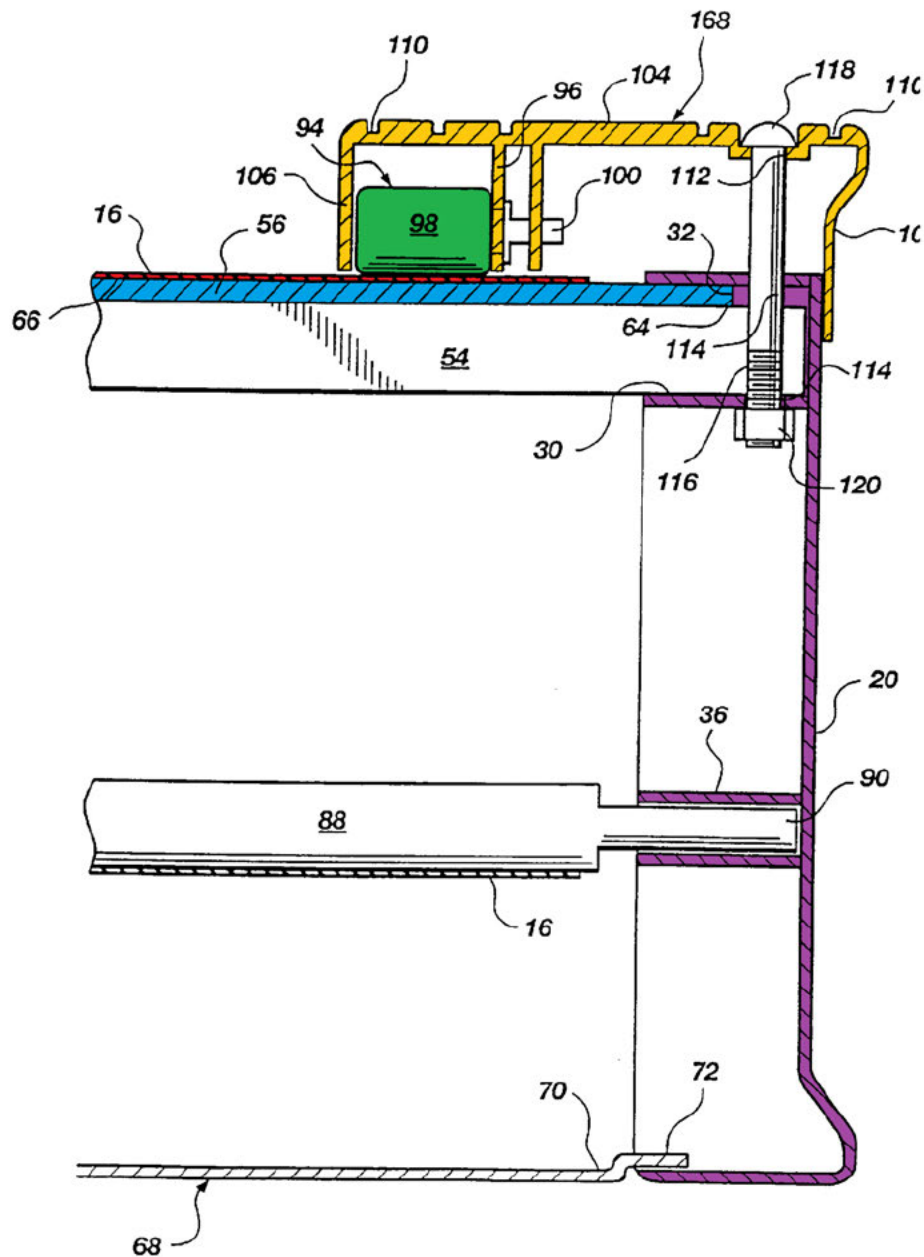


Fig. 5

EX1011, Fig. 5 (annotations added, also showing running belt 16 in red, belt securing assembly 94 and rollers 98 in green); EX2018, ¶131. Again, cover member

168 does not support any weight of running belt 16, either directly or indirectly via deck 56. EX2018, ¶132. In fact, unlike the first set of bearings, cover member 168 does not even support deck 56. *Id.*

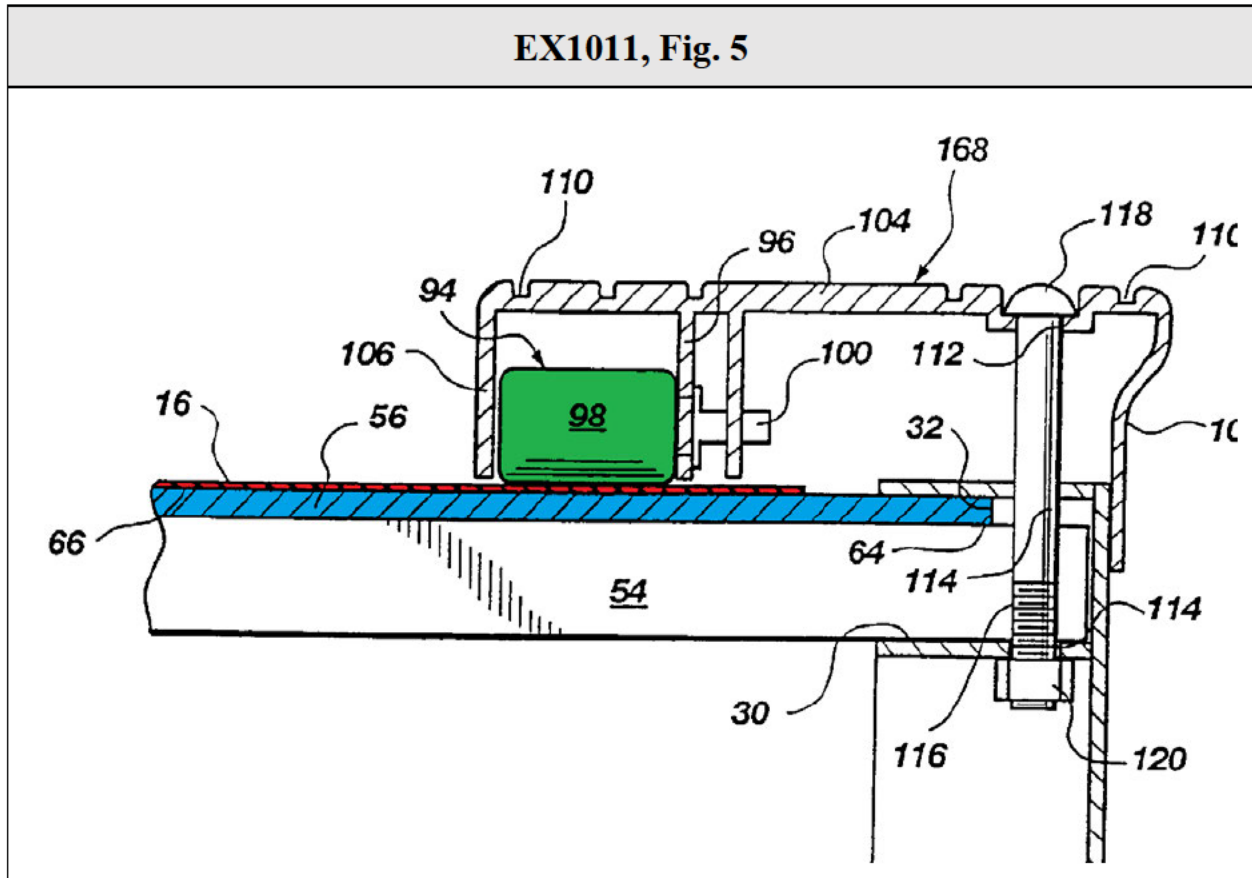
Because Petitioner fails to establish that all elements of independent claims 1 and 11 are disclosed by Socwell, the Petition's arguments for finding Claims 1 and 11 (and Claims 2-5, 10, 14, and 18, which depend from them (EX1001, 33:1-16, 33:39-42, 34:8-11, 34:29-32)) unpatentable in Grounds 4-6 must be rejected and the claims' patentability upheld. EX2018, ¶¶121-133.

5. Socwell does not disclose “disposing a running belt on the plurality of bearings” (Claim 25)

Petitioner's arguments regarding Claim 25 are similarly deficient. As discussed above, Socwell discloses, at most, only one structure – deck 56 – that can arguably constitute a “bearing” as that term is used in the '580 patent. §IV(A)(3), *supra*; EX2018, ¶135. However, even if belt securing assembly 94 and/or roller 98 could be considered “bearings,” Socwell still could not disclose “disposing a running belt on the *plurality* of bearings,” as required by Claim 25. EX2018, ¶136.

There can be no reasonable dispute that, of the structures Petitioner identifies as “bearings” in Socwell, only deck 56 is positioned below Socwell's running belt. Unlike deck 56, the remaining structures Petitioner identifies as “bearings” – belt securing assembly 94 and rollers 98 – are all positioned above the running belt. *Id.*, ¶¶136-137. Indeed, this is plainly shown in Socwell Figure 5, which is excerpted and

annotated below with the running belt in red, the belt securing assembly 94 and rollers 98 in green, and the deck in blue:



EX1011, Fig. 5 (annotations added); EX2018, ¶138.

A POSA would not understand a running belt to be “disposed on” something positioned physically above the running belt. EX2018, ¶139. Rather, in order for the running belt to be “disposed on” a structure, the structure must be positioned below the running belt such that the structure supports and/or bears at least some of the weight of the running belt (and ultimately, the user). *Id.* Accordingly, a POSA would

understand that Socwell's running belt is not "disposed on" either belt securing assembly 94 or rollers 98. *Id.*, ¶¶140-141.

Claim 25, however, requires that the "disposing a running belt on the *plurality of bearings*." EX1001, Claim 25. As the Federal Circuit has acknowledged, claim terms reciting a "plurality" of structures require "at least two" of those structures. *See ResQNet.com*, 346 F.3d at 1382 ("plurality" means "at least two"). Where, as here, there is only one possible "bearing" on which the running belt is disposed – that is, deck 56 – it is not possible for Socwell to disclose "disposing the running belt on the plurality of bearings," as required by Claim 25. Accordingly, Petitioner's Socwell-based arguments for Claim 25, which fail to cite any other reference for this limitation (Petition, 73-75), must be rejected. EX2018, ¶¶134-141.

B. Petitioner Fails to Demonstrate Motivation to Combine or Likelihood of Success

1. A POSA Would Not Have Been Motivated to Combine Magid with Either Socwell or Chickering

In each Ground, Petitioner argues that it would have been obvious to a POSA to combine the "unidirectional control means 6, 6'" (which Petitioner analogizes to the "safety device" recited in each independent claim) of U.S. Patent No. 5,538,489 to Magid ("Magid") with either Socwell or Chickering. *E.g.*, Petition, 34-38, 63, 76-79, 100. However, for the reasons described below, a POSA would not combine the teachings of Magid with that of Socwell or Chickering. EX2018, ¶¶142-171. This

alone is sufficient to uphold the patentability of all challenged claims as all Grounds rely on some combination of Magid and either Socwell or Chickering.

A POSA would immediately recognize that, unlike Socwell and Chickering, Magid is focused on a two-belt therapeutic walker device. Indeed, the primary object of Magid is to provide two independently moving belts for therapeutic purposes, not a single belt. EX1012, 1:46-52; *see also id.*, Fig. 1 (showing a “prior art” single-belt treadmill, indicating an intent to move away from a single-belt device); EX2018, ¶143. As such, Magid teaches two flat, parallel belts that “move independently when treaded by the left and right feet of the user, thereby preventing the action of the user’s left foot from influencing the action of his right foot and vice-versa....” EX1012, 5:19-27. If a single belt were utilized, the key feature of “preventing the action of the user’s left foot from influencing the action of his right foot and vice-versa” would be lost. *Id.*; EX2018, ¶¶144-146.

Socwell and the Chickering embodiment Petitioner relies on, however, are focused solely on a single running belt exercise treadmill – the precise kind of device Magid rejects – and lack any reference to therapeutic use. For example, every embodiment of Socwell discloses only a single belt 16 that serves as a running surface. *See generally* EX1011; EX2018, ¶¶147-148. Similarly, the Chickering

embodiment Petitioner relies on is also a single-belt design.¹ *See, e.g.*, Petition, 32-33 (citing EX1013, 2:73-3:10, Fig. 3); EX1013, 2:73-3:10 (describing an embodiment with “a single endless belt”), Fig. 3 (same); EX2018, ¶149. Both Socwell and Chickering are also directed to a non-therapeutic “exercising treadmill” or “exercise device” for purely recreational purposes. *See, e.g.*, EX1011, 1:10-12 (“This invention relates to exercise treadmills and, more particularly, to novel systems and methods for providing a curved deck treadmill.”); EX1013, Abstract (“This disclosure relates to a new type of treadmill exercising device....”), 1:48-51 (“A still further object is to provide such an exercising device which enables the user to more accurately simulate the movements of ordinary walking, jogging and running so as to obtain the greatest possible benefits and pleasure from such exercise.”); *see also* EX2018, ¶¶152-153. In view of Magid’s teachings regarding

¹ To the extent Chickering discloses a dual-belt design, a POSA would immediately recognize that this design is fundamentally different from that in Magid. Specifically, unlike Magid, which discloses a treadmill with two parallel belts positioned side-by-side – one corresponding to the user’s left foot and one corresponding to the user’s right foot – Chickering’s dual-tread design has uses two sequential belts (albeit in different planes) positioned fore and aft, each of which is intended to contact both of the user’s feet when the device in use. EX2018, ¶150.

the criticality of a two-belt design in which the walking belts are positioned parallel to one another and of ensuring that the device is capable of therapeutic use, a POSA would not have been motivated to look to Magid and combine its teachings with a single-belt treadmill for exercise, such as those taught in Socwell and the relevant Chickering embodiment. EX2018, ¶154.

Indeed, a POSA would immediately recognize that the Socwell and Chickering devices would have no need for the purported safety device disclosed in Magid, particularly because the purpose of Magid's walking device is fundamentally different from that of the treadmills described in Socwell and Chickering. Magid's walker device is specifically intended for therapeutic use by "people with uncoordinated feet movement, such as small children, physically handicapped people and old people...." EX1012, 1:30-35, 5:52-55. With a flat or uniplanar walking surface, Magid's walker device would be relatively easy and appropriate to use for therapeutic purposes. However, those with "uncoordinated feet movement" face a heightened risk if the one of the Magid's two walking belts moves in the opposite direction from that intended during use. EX2018, ¶¶155-156. Such people are particularly prone to falls because they have a limited ability to maintain their balance and, as even Dr. Giachetti admits, "a person that has issues balancing is more precarious than a person who is what we would consider able-bodied." EX2023, 81:13-22.

Thus, the Magid device requires some kind of control means to prevent one of the belts from moving in the opposite direction *while the other remains stationary or moves in the correct direction* during normal use. EX2018, ¶157. Without such a control means in Magid, it would be possible for the user's feet to move in opposite directions while in contact with their respective belts, potentially causing significant injury to the user. *Id.*, ¶¶156-157.

That same motivation is not present in the single-belt designs of Socwell and Chickering, however. In a single-belt design, it is not possible for the user's feet to move in opposite directions while both are in contact with the belt. *Id.*, ¶158. A POSA therefore would have recognized that there was no need for the control means of Magid to be incorporated into either Socwell or Chickering. *Id.* Moreover, as a more general matter, a curved running surface like that of Socwell or a multi-planar running surface like that of Chickering would be inherently difficult to adapt and inappropriate for therapeutic use. *Id.*, ¶¶159-163. For all of these reasons, a POSA would not recognize the teachings of Magid to be necessary or even compatible with those of Socwell or Chickering.

Thus, the prior art effectively teaches away from Petitioner's proposed combination. With respect to Chickering, a primary objective was to provide a user (of presumably ordinary physical abilities) the ability to exercise without the need for "relying on handles, railings, belts, or the like, for maintaining his balance and

his position[,]” thus disclosing a surface that is unsuitable for physically handicapped people and people with uncoordinated feet movement. EX1013, 1:40-47. Likewise, Socwell addressed the same disadvantage in prior art of “having to grasp a handle” when the user begins to jog or run. EX1011, 2:61-67. Thus, Magid, a therapeutic “walker apparatus,” teaches away from a single belt, non-planar, or multi-planar exercise treadmill. EX1012, 1:17. At the very least, a reader of Magid would be discouraged from combining it with elements of Chickering or Socwell, particularly where those references criticize the features emphasized in Magid.

Rather, when looking to improve or modify a curved or multi-planar treadmill like that described in Socwell or Chickering, respectively, a POSA would examine the teachings of other treadmills having curved or multi-planar running surfaces, not a narrow-use walker device with a flat or uniplanar surface, such as in Magid. EX2018, ¶164. This is because the design and engineering requirements of a treadmill having a curved running surface differ from those of a treadmill with a flat or uniplanar running surface. *Id.*, ¶¶165-170. Design and engineering requirements would urge a POSA to avoid combining the teachings of Socwell, Chickering, or other non-planar or multi-planar treadmills with Magid, particularly given Magid's express teaching away from a single-belt treadmill. *Id.*

Accordingly, a POSA would not be motivated to combine the curved running surface of Socwell or the multi-planar inclined surface of Chickering with the flat,

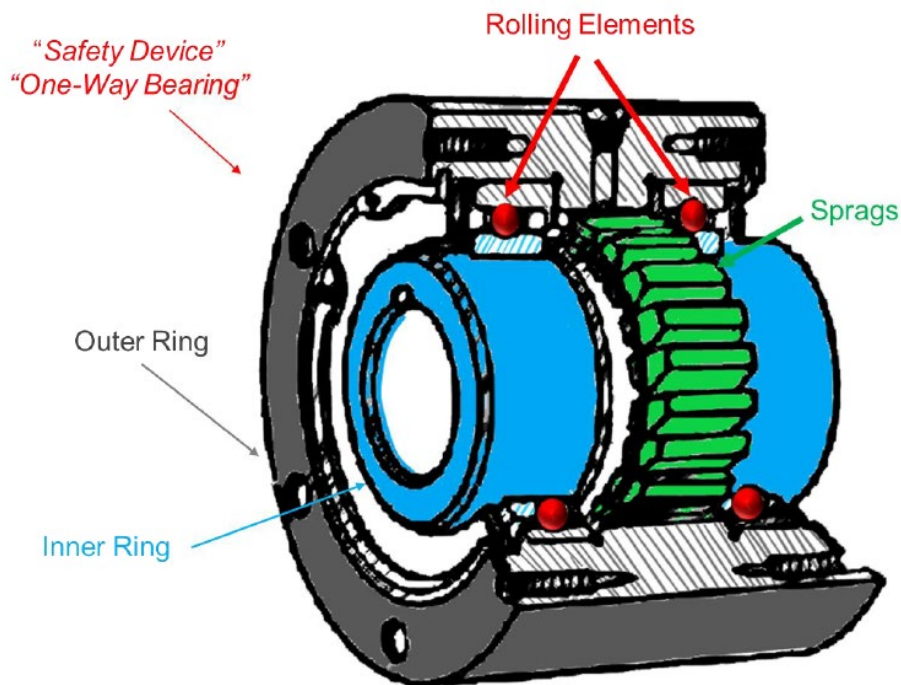
uniplanar walking device of Magid because the thus-modified piece of equipment would be unsuited for any of the references' intended purposes.

2. Petitioner's Obviousness Arguments Regarding Sclater Rely on Improper Hindsight

The obviousness arguments underlying Grounds 2, 3, 5, and 6 should also be rejected because Petitioner's motivation to combine arguments are fraught with hindsight bias. In essence, Petitioner's asserted motivations to combine amount to little more than just picking and choosing aspects of alleged prior art to attempt to satisfy the claim elements, which is not the law of obviousness. *See InTouch Techs., Inc. v. VGO Commc'ns, Inc.*, 751 F.3d 1327, 1352 (Fed. Cir. 2014) (finding hindsight bias where expert testimony "primarily consisted of conclusory references to [the] belief that one of ordinary skill in the art *could* combine these references, not that they *would* have been motivated to do so") (original emphasis); *Metalcraft of Mayville, Inc. v. The Toro Co.*, 848 F.3d 1358, 1367 (Fed. Cir. 2017) ("[W]e cannot allow hindsight bias to be the thread that stitches together prior art patches into something that is the claimed invention.").

This is particularly apparent with respect to Petitioner's arguments regarding Neil Sclater and Nicholas P. Chironis, *Mechanisms & Mechanical Devices Sourcebook* (3d ed. 2001) ("Sclater"). Grounds 2, 3, 5, and 6 each argue first that a POSA would have been motivated to combine Magid's purported teachings of a ratchet-type control means to Chickering or Socwell to meet the Challenged Claims'

requirement for a “safety means.” *E.g.*, Petition, 34-42, 65, 76-85, 101-102. However, Petitioner then summarily argues that a POSA would immediately discard Magid’s ratchet-type control means and replace it with a specific one-way bearing assembly described in Sclater. *E.g.*, *id.*, 56-61, 65, 99, 102. Specifically, Petitioner relies on the specific sprag-type clutch shown below:



Petition, 95 (annotations added by Petitioner).

However, even assuming *arguendo* that a POSA would have been motivated to incorporate Magid’s control means into the devices of Chickering or Socwell – as explained above, she would not – Petitioner does not adequately explain why a POSA would have been specifically motivated to select the mechanism Petitioner relies on, rather than one of the dozens of other options Sclater presents. As

Petitioner acknowledges, Sclater “contains drawings and descriptions of *more than 2000 different mechanisms and mechanical devices* that have proven themselves in modern products, machines, and systems.” Petition, 19 (quoting EX1017, 24) (emphasis added). More specifically, although Petitioner omits much of the book from its Exhibit 1017, opting instead to provide only sporadic excerpts from the “Coupling, Clutching, and Braking Devices” and “Fastening, Latching, Clamping, and Chucking Devices” chapters, even the limited excerpts Petitioner included identify *dozens* of mechanisms and devices, including at least twenty different types of clutches. *See generally* EX1017.

Although Petitioner purports to provide reasons why a POSA would have been motivated to select the specific sprag-type clutch Petitioner relies on, the features that Petitioner identifies as the sole motivation for using a sprag-type clutch – “reduced noise and improved durability” (Petition, 61) – are *not* ascribed to the specific clutch Petitioner identifies. EX2018, ¶¶173-181.

With respect to “reduced noise,” while Sclater states generally that a “friction-type clutch is quieter,” it identifies at least six different friction-type clutches – *e.g.*, plate clutches, cone clutches, expanding shoe clutches, cam and roller clutches, expanding shoe centrifugal clutches, and mercury gland clutches – which are not limited to the sprag-type clutch Petitioner actually relies on. EX1017, 302-03, 316. Any one of these alternative devices would function just as well as – if not better

than – the sprag-type clutch Petitioner cites, at least when considering the alleged motivations to combine recited in the Petition. EX2018, ¶¶175-177.

Moreover, Dr. Giachetti admitted during his deposition that he never conducted any analysis of how the noise of a ratchet-and-pawl clutch compares to the noise generated by the multitude of other components of a treadmill, despite volunteering an entire list of mechanical and environmental factors that can affect the amount of noise a treadmill makes. EX2023, 102:23-107:10. Rather, he testified that he came to the problem “preloaded with how quiet a belt on rollers is” and decided that he “didn’t have to” conduct any kind of analysis comparing the sound of Magid’s ratchet-and-pawl clutch to the sound made by the rest of the treadmill. *Id.*, 102:23-103:13.

This omission, and Petitioner’s omission of the vast majority of Sclater’s full disclosure, is even more jarring when one considers Dr. Giachetti’s testimony as to *why* he believes a POSA would consider a ratchet-and-pawl clutch too noisy. Specifically, Dr. Giachetti testified that, based on his untested assumptions, a ratchet-and-pawl clutch would cause an unsuitable amount of noise because “[e]very time the pawl strikes the ratchet gear, there is going to be a -- a pinging sound or a clicking sound.” EX2023, 106:9-20; *see also* EX1003, ¶272 (“The pawl is spring-loaded to engage each gear tooth of the ratchet and it makes an audible ‘click’ when colliding with the gear tooth root after overrunning or passing over each tooth.”).

But this overlooks the fact that the “pinging” or “clicking” sound Dr. Giachetti cites would only occur in a ratchet-and-pawl clutch that uses teeth.² EX2018, ¶¶176-177. In reality, there are many different kinds of ratchet-and-pawl clutches in the art, many of which do *not* have teeth. Indeed, one of the pages of Sclater that Petitioner intentionally omitted from its Exhibit 1017 expressly describes “[r]atchets with springs, rollers, and other devices” but “no teeth.” EX2021, 124. Neither Dr. Giachetti nor Petitioner even acknowledge these teachings, despite Dr. Giachetti testifying during his deposition that a POSA would have been aware of the mechanical components described in Sclater even without consulting the text. EX2024, 110:12-25.

Thus, neither Dr. Giachetti nor Petitioner have offered any explanation as to why a POSA would opt to replace Magid's ratchet-and-pawl unidirectional control means with a completely different kind of clutch rather than using one of the known alternative ratchet-and-pawl clutches that lack the feature that causes the purportedly undesirable “pinging” or “clicking” sound Dr. Giachetti describes. In reality, a

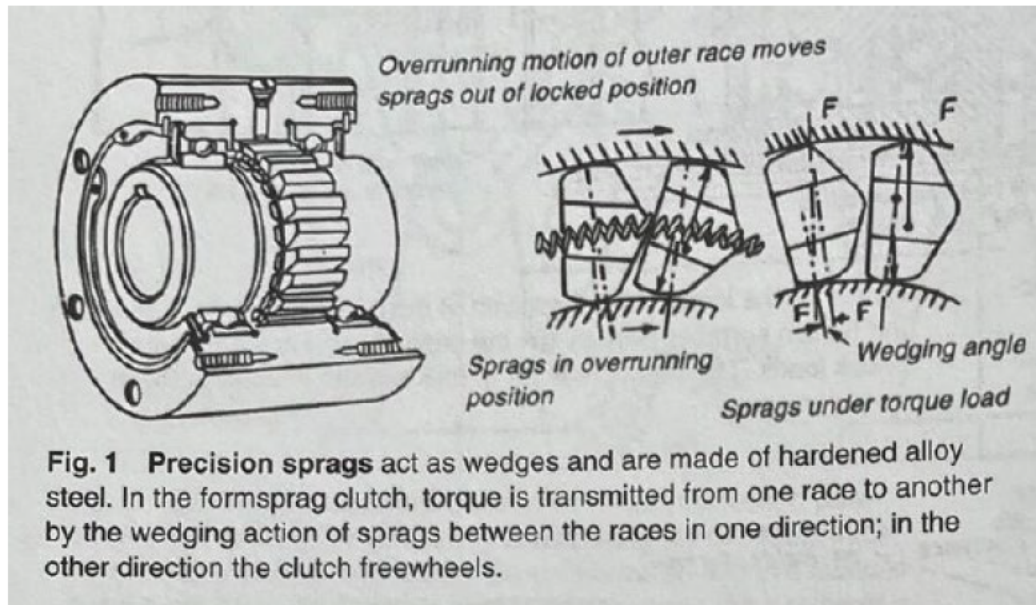
² Indeed, other portions of Dr. Giachetti's testimony also suggests that he assumed a ratchet-and-pawl device must have teeth. *See, e.g.*, EX2023, 99:16-100:4 (testifying that “you're dependent on that pawl being able to lock into the teeth on the ratchet” when using a ratchet-and-pawl in overspeed conditions).

POSA would be far more likely to look to these alternate ratchet-and-pawl clutches, particularly when Magid – the reference Petitioner relies on – expressly discloses their use to ensure unidirectional movement in a walker device. *See* EX2018, ¶¶177, ¶180. Opting instead to incorporate a completely different kind of clutch, such as a sprag-type clutch, would entail significant engineering considerations, including the ones expressly outlined in Sclater itself, as discussed *infra. Id.*, ¶¶181-183.

Thus, one is left with nothing by Dr. Giachetti's *ipse dixit* to support the idea that Magid's ratchet-and-pawl unidirectional control means would have produced any meaningful noise at all and that a POSA would have any motivation to replace it with a purportedly quieter option. This is not enough to support a finding of obviousness. *See TQ Delta, LLC v. Cisco Sys., Inc.*, 942 F.3d 1352, 1362-63 (Fed. Cir. 2019) (reversing Board's obviousness determination where expert testimony characterizing the prior art was "[u]ntethered to any supporting evidence").

As for "durability," Sclater does not make any statements regarding the general durability of sprag-type clutches relative to other options, let alone the durability of the specific clutch relied on by Petitioner. *See generally* EX1017. Indeed, Sclater has very little to say about the mechanism Petitioner identifies at all. The following is Sclater's entire discussion of that particular clutch:

EX1017, 318



See also Petition, 20. The foregoing excerpt is found in a section that also discusses nine other overrunning clutches, *all of which* Sclater explains “allow freewheeling, indexing and backstopping” and “will solve many design problems. EX1017, 318-19. Again, Sclater does not identify any benefits that are specific to the mechanism Petitioner relies on rather than generically applying to any of the dozens of alternatives Sclater also discusses. Indeed, as with the purported “reduced noise and improved durability” motivation, many of the alternative devices would function just as well as or even better than the sprag-type clutch Petitioner cites. EX2018, ¶¶178-179. Indeed, during his deposition, Petitioner’s expert argued that he was not relying on Sclater for any particular sprag-type clutch but rather for some “general” teaching that sprags are included in the category of one-way bearings, without articulating

any opinions or offering an explanation as to why a POSA would actually use any particular sprag. EX2023, 90:3-94:15. Again, Petitioner's arguments amount to little more than saying that a POSA *could* use a sprag-type clutch without actually explaining why a POSA *would* use such a feature, let alone articulating what that feature would even look like in the proposed combination.

Moreover, to the extent Sclater does provide some indication of the factors a POSA would consider when deciding to incorporate any particular sprag or other clutch into a mechanical device, Petitioner's expert admitted during his deposition that he never conducted *any* analysis of these factors as to *any* particular sprag-type clutch. More specifically, when discussing applications of sprag-type clutches, Sclater discloses as follows:

Overrunning sprag clutches transmit torque in one direction and reduce speed, rest, hold, or free-wheel 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.**

EX1017, 320 (emphasis added). Yet when asked about these factors during his deposition, Dr. Giachetti could point, at most, to generic statements in the “state of the art” section of his declaration indicating that sprag-type clutches in general “meets the torque requirements of most machine applications” (EX2023, 89:8-15), and comparing the differing “speed” characteristics of ratchet-and-pawl clutches vs.

roller-and-friction-type clutches generally (*id.*, 94:16-95:10 (further indicating that he was discussing “speed in general,” not specifically overrunning speed)). Meanwhile, Dr. Giachetti admitted that his declaration never even mentions other factors such as the “type of lubrication” to be used (*id.*, 101:2-8) or the “shock conditions that might be encountered” (*id.*, 101:19-23). Thus, despite the fact that the reference he relies on (Sclater) explicitly states a review of such factors is “require[d]” for a sprag-type clutch to be selected for application, Dr. Giachetti’s declaration contained no actual analysis of these factors for any particular sprag. EX1017, 320. Instead, it relies on generic statements directed to an entire class of clutches without ever conducting even a basic analysis of whether it would be feasible to apply and incorporate any particular clutch in the primary references.

Generic statements like those Petitioner relies on from Sclater cannot support a motivation to combine when they are not specifically tied to the clutch Petitioner argues should be incorporated into the primary reference devices. *See Purdue Pharma L.P. v. Depomed, Inc.*, 643 F. App’x 960, 964-66 (Fed. Cir. 2016) (agreeing that “generic and conclusory statements of interrelated teachings of the prior art” cannot support a finding of motivation to combine). A POSA would readily recognize that the same benefits also apply to the countless other mechanisms and devices that Sclater discloses in equal detail. EX2018, ¶¶174-181. Yet, beyond Sclater itself and equally nonspecific references like Exhibit 1018 (which is

apparently an entire catalog of clutches with varying designs and overlapping uses), neither Petitioner nor Dr. Giachetti explain why a POSA would have been motivated to use the specific clutch Petitioner relies on. *See* Petition, 56-61, 65, 99, 102; EX1003, ¶¶271-278, 465-472. Without more, it is clear that the only reason Petitioner selected that mechanism is that Petitioner used the limitations of the Challenged Claims as a guide for its obviousness arguments. This is not permissible.

The Federal Circuit and the Board have long recognized that Petitioner's approach is improper and a clear example of impermissible hindsight bias. *E.g., In re NTP, Inc.*, 654 F.3d 1279, 1299 (Fed. Cir. 2011) ("Care must be taken to avoid hindsight reconstruction by using 'the patent in suit as a guide through the maze of prior art references, combining the right references in the right way so as to achieve the result of the claims in suit.'") (citations omitted); *Purdue Pharma L.P. v. Depomed, Inc.*, 643 F. App'x 960, 966 (Fed. Cir. 2016) ("To the extent that [Petitioner] relies on the problem to be solved to supply the reason to combine the prior art, it failed to demonstrate to the Board that the problem was known in the art or that [Petitioner's] formulation of the problem was derived directly from the prior art, rather than from the challenged claims."); *Metacluster LT, UAB v. Bright Data Ltd.*, IPR2022-00936, Paper 8 at 24 (PTAB Dec. 1, 2022) (rejecting motivation to combine argument where "Petitioner appears to be employing hindsight bias... by using the patent claim limitations as a guide"); *Amazon.com, Inc. v. JumpSport, Inc.*,

IPR2018-00715, Paper 8 at 38-39 (PTAB Sept. 6, 2018) (rejecting motivation to combine argument given, *inter alia*, “the lack of any discussion of the advantages – if any – of the particular portion of the Katzman design used by Petitioner,” which was indicative of improper hindsight); *see also Duo Security Inc. v. StrikeForce Techs., Inc.*, IPR2017-01064, Paper 7 at 24-25 (PTAB Oct. 16, 2017) (rejecting motivation to combine argument where “Petitioner’s vague assertions do not substantiate a reason that would have prompted [a POSA] to combine the specific relevant *element* or *teaching* of [the secondary reference]... with [the primary references] to achieve the invention recited in the challenged claims”) (original emphasis).

Petitioner cannot justify its otherwise arbitrary selection of the specific clutch it references in any other way, particularly when its proposed combination involves first adding (from Magid) a feature lacking from the primary prior art references while assuming that a POSA would find that feature so plainly inadequate that he would immediately replace it in its entirety with a structurally different feature (from Sclater). Under such circumstances, replacing Magid’s control means with the sprag-type clutch of Sclater can hardly be considered a mere “substitution” of known elements as discussed in *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 417-18 (2007). After all, neither Socwell nor Chickering disclosed **any** comparable one-way bearing element; as such, there was no known element for which Sclater’s sprag-type clutch

could be “substituted.” Under such circumstances, simply saying that sprag-type clutches were generally known in the art cannot possibly be enough to establish motivation to combine.

Because Petitioner plainly used the Challenged Claims as a guide for selecting its asserted prior art, it cannot establish an adequate motivation to combine any specific teachings of Sclater with the other references. Because Grounds 2, 3, 5, and 6 all rely on Sclater for elements of every Challenged Claim, these Grounds should be rejected.

V. SECONDARY CONSIDERATIONS DICTATE A FINDING OF NONOBVIOUSNESS

A. Legal Standards

“[O]bjective considerations of non-obviousness must be considered in *every case*,” *WBIP, LLC v. Kohler Co.*, 829 F.3d 1317, 1328 (Fed. Cir. 2016) (emphasis in original), and “can be *the most probative evidence of nonobviousness in the record*, and enables the... court to avert the trap of hindsight.” *Crocs, Inc. v. Int’l Trade Comm’n*, 598 F.3d 1294, 1310 (Fed. Cir. 2010) (emphasis added). Objective considerations may include evidence of “commercial success, industry praise, unexpected results, copying, industry skepticism, licensing, and long-felt but unsolved need.” *Transocean Offshore Deepwater Drilling, Inc. v. Maersk Drilling USA, Inc.*, 699 F.3d 1340, 1349 (Fed. Cir. 2012).

“[T]here is a presumption of nexus for objective considerations when the patentee shows that the asserted objective evidence is tied to a specific product and that product is the invention disclosed and claimed in the patent.” *WBIP*, 829 F.3d at 1328. “The presumption of nexus is rebuttable... [but] a patent challenger cannot successfully rebut the presumption with argument alone—it must present evidence.” *Id.* at 1329. “Where the allegedly obvious patent claim is a combination of prior art elements,... the patent owner can show that it is the claimed combination as a whole that serves as a nexus for the objective evidence; proof of nexus is not limited to only when objective evidence is tied to the supposedly ‘new’ feature(s).” *Id.* at 1330.

The Board has acknowledged that the validity of patents otherwise facing a *prima facie* case of obviousness may nonetheless be upheld as patentable due to objective indicators of nonobviousness. *See Fox Factory, Inc. v. SRAM, LLC*, Case IPR2017-01440, Paper No. 62 (PTAB Dec. 6, 2018) (finding showing of secondary considerations sufficient to outweigh petitioner’s showing of obviousness).

B. Nexus

Patent Owner manufactures and sells several different models of curved, manual treadmills that practice and are coextensive with the Challenged Claims. These curved, manual treadmills include the following:

- CURVE – The first iteration of what became known as the CURVE treadmill was first offered for sale at the International Health, Racquet

& Sportsclub Association (“IHRSA”) trade show in 2009. EX2020, ¶7.


At that time, the CURVE treadmill was referred to as the “SpeedBoard” treadmill. *Id.* That CURVE treadmill may now be referred to internally as the “CURVE Legacy.” *Id.* Upon product launch, the CURVE treadmill received numerous awards, including the 2010 FIBO Innovation Award. *Id.*, ¶56; EX2057.

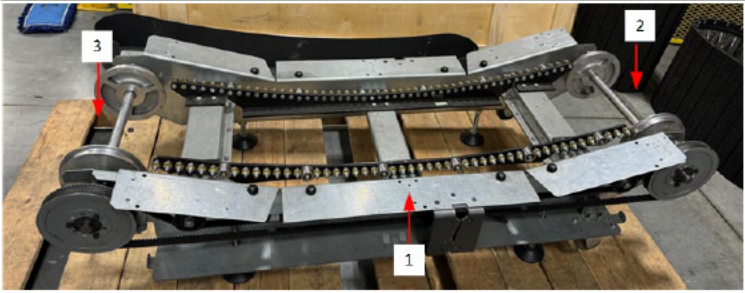
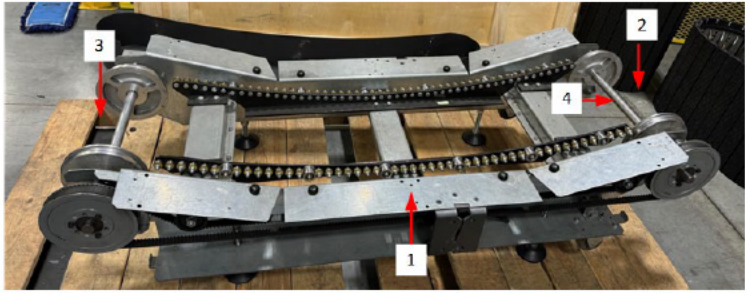
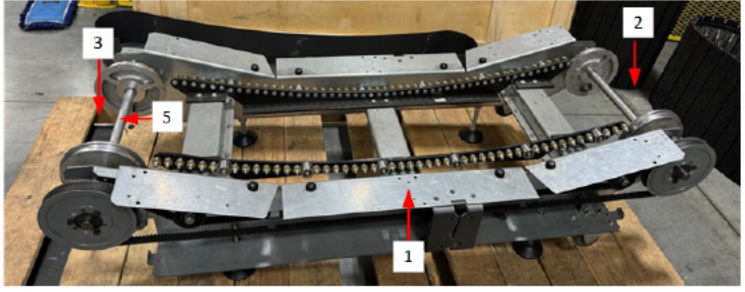
- Curve XL – The Curve XL treadmill offers a larger running surface than the CURVE Legacy, but for purposes of determining nexus with the Challenged Claims, is structurally the same as the other CURVE products. EX2018, ¶191.
- Curve LTG – The Curve LTG treadmill is a lighter duty version of the CURVE Legacy, but for purposes of determining nexus with the Challenged Claims, is structurally the same as the other CURVE products. *Id.*
- Curve FTG – The Curve FTG treadmill has different handrails than the CURVE Legacy and added features for providing different levels of resistance, but for purposes of determining nexus with the Challenged Claims, is structurally the same as the other CURVE products. *Id.*
- Curve 3.0 – The Curve 3.0 treadmill contains upgraded software and other sophisticated electronics but, for purposes of determining nexus

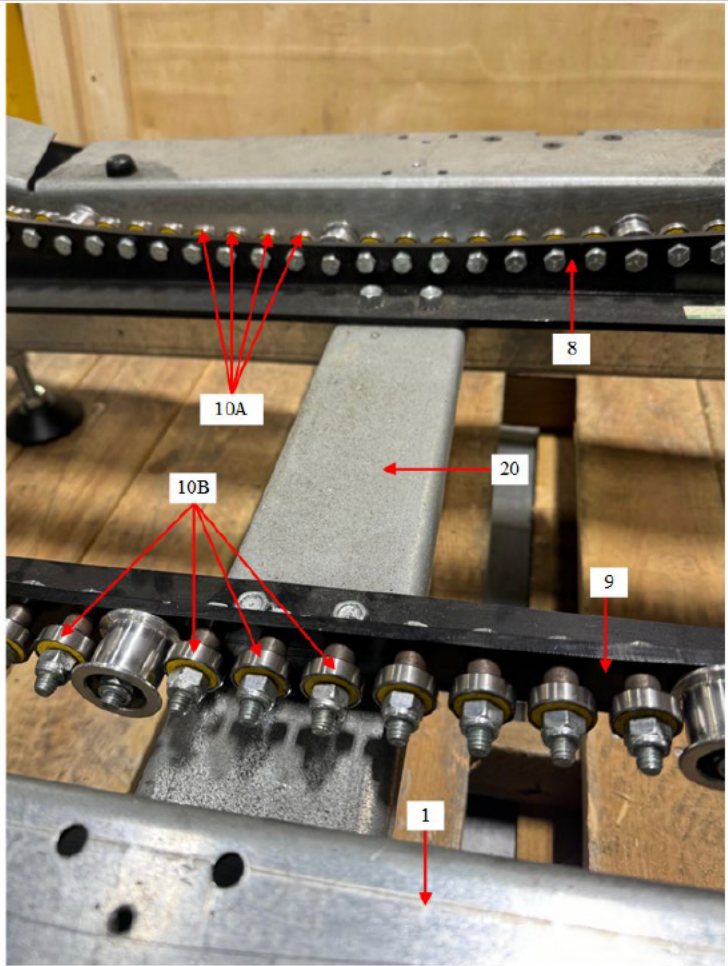
with the Challenged Claims, is structurally the same as the other CURVE products. *Id.*

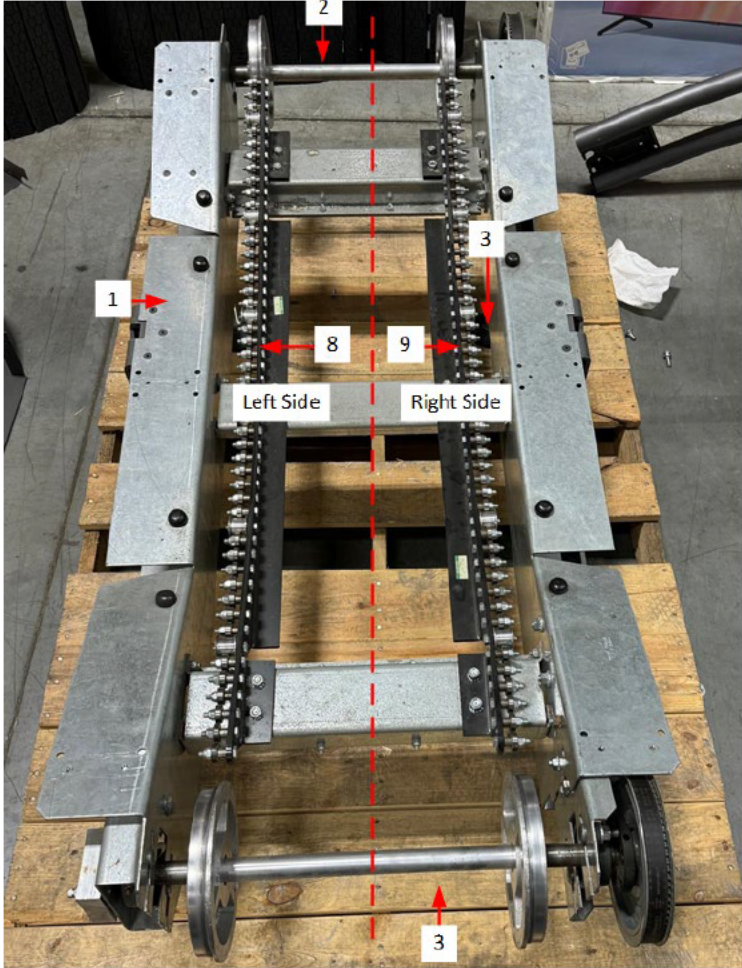
- Curve Trainer – The Curve Trainer has a slightly less steep curve than the CURVE treadmill. *Id.* The Curve Trainer may provide a quieter and quicker acceleration than the CURVE treadmill but, for purposes of determining nexus with the Challenged Claims, is structurally the same as the other CURVE products. *Id.*
- EcoMill and EcoMill Legacy– The EcoMill and EcoMill Legacy each have an onboard generator system that produces power for the display and a USB charging station but, for purposes of determining nexus with the Challenged Claims, are structurally the same as the CURVE products. *Id.*

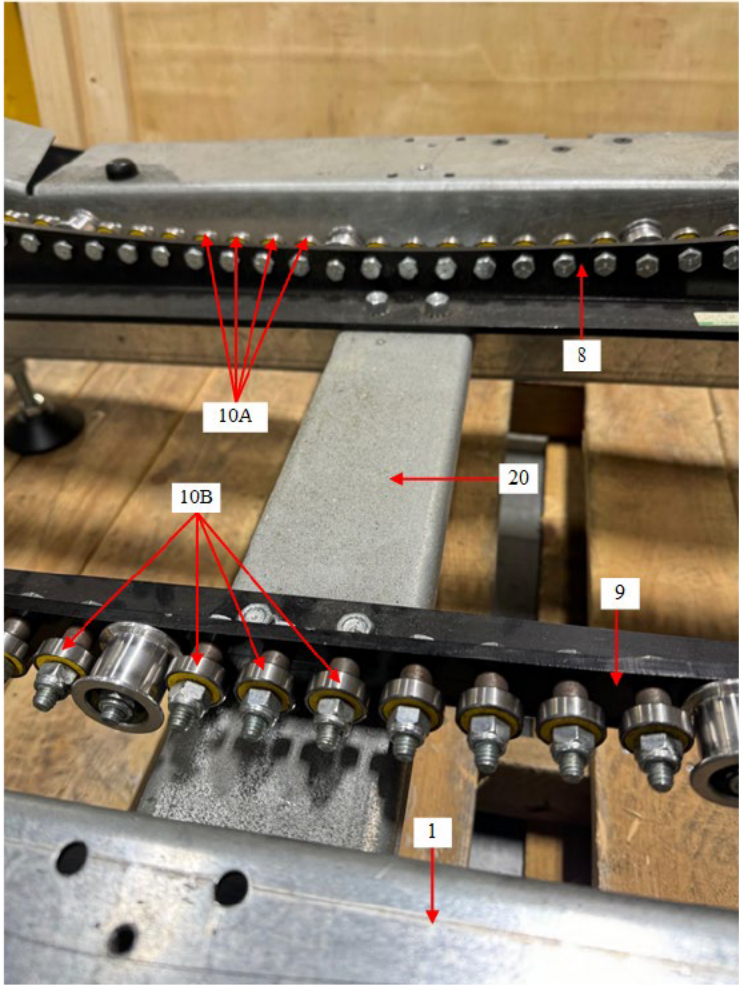
As explained by Dr. Blair and in the exemplary claim chart accompanying his declaration, Patent Owner's curved, manual treadmills, including specifically its CURVE family of products, practice at least Claims 1-8, 10-12, 14, 15, 18, and 25 of the '580 Patent and are coextensive with the patent claims. EX2018, ¶¶189-190; EX2025. For example, the following chart illustrates how Claim 1 of the '580 Patent practices and is coextensive with the CURVE products:

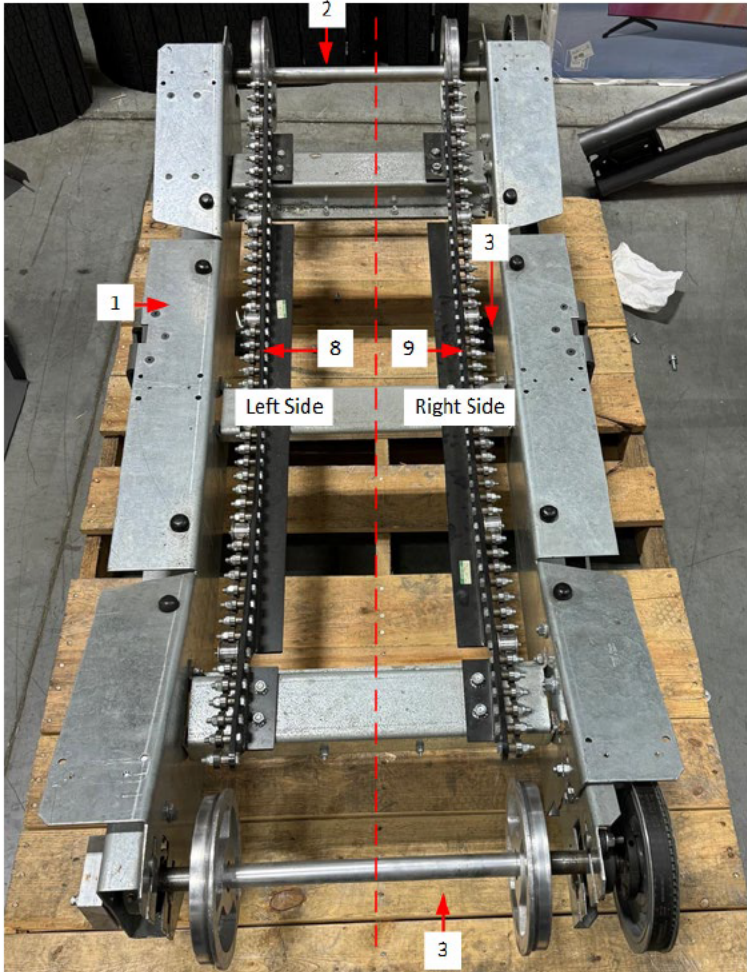
Claim Element	Curve Legacy
<p>1. A manually powered treadmill comprising:</p>	<p>The Woodway CURVE is described in the Woodway User Manual as a “non-motorized treadmill[,]” and “manually driven.” EX2028 1, 20.</p> 
<p>a frame having a front end and a rear end positioned opposite the front end;</p>	<p>The Woodway CURVE includes a frame [1], with a front end [2] and a rear end [3], where the front end [2] is positioned opposite the rear end [3]. EX2028, 33 (referring to “the frame”).</p>


Claim Element	Curve Legacy
	
<p>a front shaft rotatably coupled to the frame at the front end;</p>	<p>The Woodway CURVE includes a front shaft [4] rotatably coupled to the frame [1] at the front end [2], as the term “coupled” is used in the '580 patent. EX1001, 32:10-14.</p> 
<p>a rear shaft rotatably coupled to the frame at the rear end;</p>	<p>The Woodway CURVE includes a rear shaft [5] rotatably coupled to the frame [1] at the rear end [3], as the term “coupled” is used in the '580 patent. EX1001, 32:10-14.</p> 
<p>a first bearing rail having a plurality of bearings, the first bearing rail attached to a left side of the frame;</p>	<p>As shown in the first image, a first bearing rail [8] includes a plurality of bearings [10A] and is attached to at least one cross-member [20] which is coupled to and/or an element of the frame [1].</p>

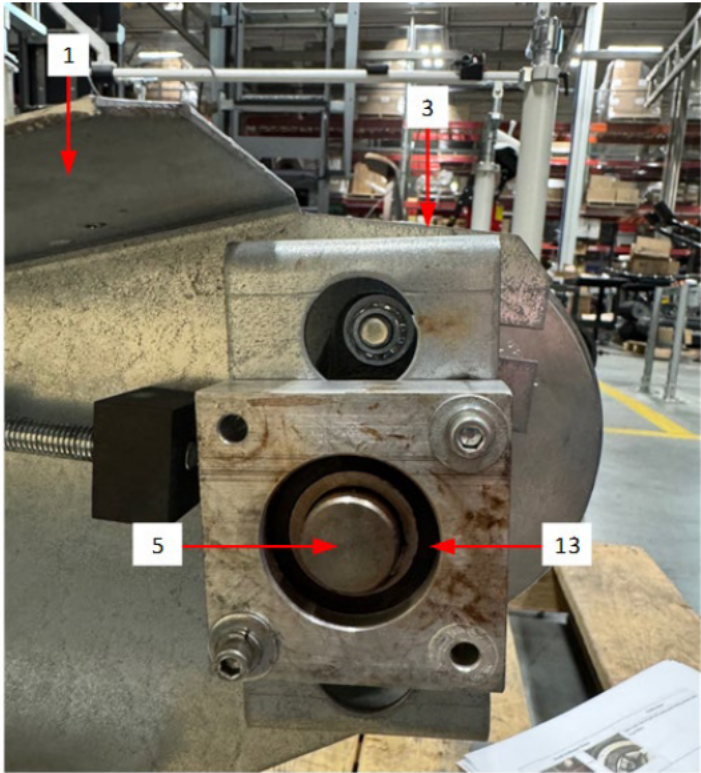
Claim Element	Curve Legacy
	<p>As shown in the second image, the first bearing rail [8] is coupled to a left side of the frame [1].</p> <p><i>See also, e.g., EX2028, 32 (stating “[t]he bearing rail system consists of two support rail units, with steel-wire-reinforced V-belts, high-performance ball bearings, and guide rollers”).</i></p> 

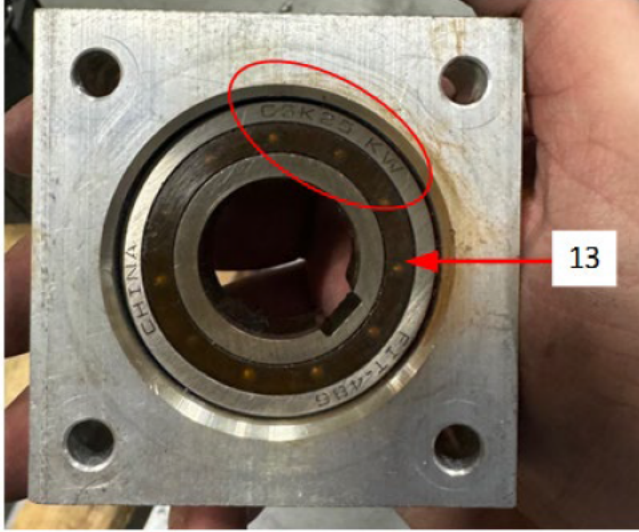
Claim Element	Curve Legacy
	
<p>a second bearing rail having a plurality of bearings, the second bearing rail attached to a right side of the frame;</p>	<p>As shown in the first image, a second bearing rail [9] includes a plurality of bearings [10B] and is attached to at least one cross-member [20] which is an element of the frame [1].</p> <p>As shown in the second picture, the second bearing rail [9] is attached to the right side of the frame [1].</p> <p><i>See also, e.g., EX2028, 32 (stating “[t]he bearing rail system consists of two support rail units, with steel-wire-reinforced V-belts, high-performance ball bearings, and guide rollers”).</i></p>

Claim Element	Curve Legacy
	

Claim Element	Curve Legacy
	
<p>a running belt supported by the first bearing rail and the second bearing rail and disposed about the front shaft and the rear shaft,</p> <p>wherein the running belt follows a curved running surface; and</p>	<p>As shown in the first image depicting an underside of a running belt [11], the running belt [11] is supported by the first bearing rial [8] and the second bearing rail [9].</p> <p>As shown in the second image, the running belt [11] is also disposed about the front shaft [4] and the rear shaft [5]. The running belt [11] follows a curved running surface [12], described in the Woodway User Manual as an “upwardly curved running surface.” EX2028, 31; <i>see also id.</i>, 32 (stating “[t]he bearing rails support the running surface”).</p>

Claim Element	Curve Legacy
	
<p>a safety device coupled to at least one of the front shaft and the rear shaft,</p> <p>wherein the safety device is structured to substantially prevent rotation of at least one of the front shaft and the rear shaft in a first rotational direction while permitting</p>	<p>As shown in the first image, the safety device [13] is coupled to the rear shaft [5].</p> <p>The safety device [13] includes a “one-way bearing.” EX2028, 117. Specifically, as shown in the second image, safety device [13] includes a CSK25 one-way bearing. The type CSK25 one-way bearing is a “sprag type freewheel[.]” EX2029, 16 The CSK25 “freewheel allows rotation in one direction only.... The freewheel prevents reverse rotation....” <i>Id.</i>, 3.</p>

Claim Element	Curve Legacy
<p>rotation of the at least one of the front shaft and the rear shaft in a second rotational direction opposite the first rotational direction.</p>	<p>Because the safety device [13] is coupled to the rear shaft [5] and allows rotation in one direction only, the safety device [13] is “structured to substantially prevent rotation... of the rear shaft... in a first rotational direction while permitting rotation... of the rear shaft... in a second rotational direction opposite the first rotational direction.”</p> <p><i>See also, e.g., EX2028, 73 (“[f]or the safety of the user, the running surface only rotates in one direction, which only allows use of the device for running forward (not for running reverse)”).</i></p> 

Claim Element	Curve Legacy
	

EX2025, 1-10; *see also id.*, 11-41 (discussing other Challenged Claims).

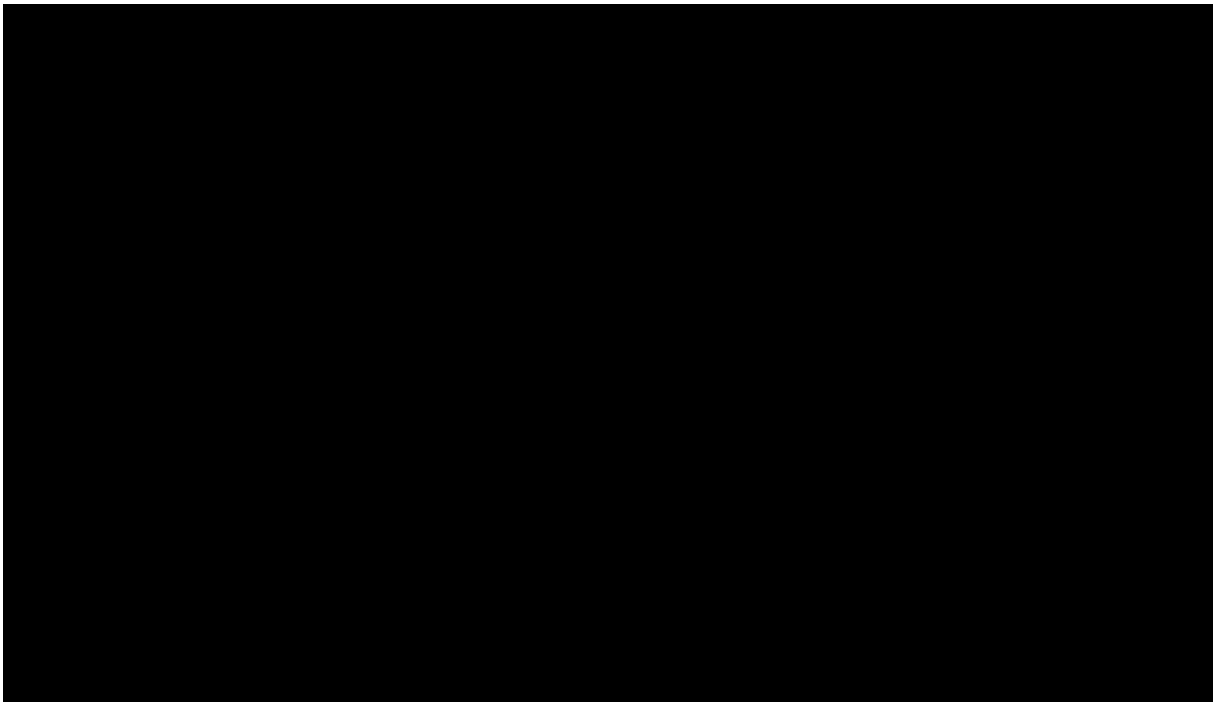
Accordingly, there is a presumption of nexus between Patent Owner's CURVE line of treadmills and the Challenged Claims. *WBIP*, 829 F.3d at 1328.

C. Commercial Success

Commercial success is strong evidence of non-obviousness. *See WBIP*, 829 F.3d at 1337. Since the launch, Patent Owner's curved, manual treadmills have seen massive commercial success. For example, from March 2009 through December 2023, Patent Owner sold or provided nearly [REDACTED] curved, manual treadmills. EX2020, ¶¶17-31. Using average sales price, this results in sales of nearly [REDACTED] [REDACTED] for that same time period. *Id.*, ¶31. Indeed, Patent Owner's products became the gold standard for high-end treadmills, and for the time period through 2017, Patent Owner enjoyed 100% of the market share for curved, manual treadmills. *Id.*,

¶¶17, 22-29. This changed briefly in 2014, when competitors including Samsara Fitness began to introduce copycat curved treadmills into the market, but Patent Owner's 100% market share was restored when Samsara took a license to use the '580 patent following three years of litigation. *Id.*, ¶¶22-23.

Even with the entry of copycats in the market, Patent Owner's sales increased steadily and significantly until 2017, as can be seen in the following figure:



Id., ¶¶18, 22-32. However, in 2017, Petitioner introduced another copycat treadmill – the Assault AirRunner – into the market. As is evident from Figure 1 above, this heavily impacted Patent Owner's sales, and since the release of the Assault AirRunner, there have been numerous occasions when Patent Owner has lost bids and sales to Petitioner for curved, manual treadmills. *Id.*, ¶29. Nonetheless, Petitioner's incursion into the manual curved treadmill market is also indicative of

the commercial success of the claimed invention as the Assault AirRunner infringes the claims of the '580 patent. *See* EX2067, EX2068, EX2069, EX2070 (Patent Owner's infringement contentions from Parallel Litigation); *see also Brown & Williamson Tobacco Corp. v. Philip Morris, Inc.*, 229 F.3d 1120, 1130 (Fed. Cir. 2000) ("Our case law provides that the success of an infringing product is considered to be evidence of the commercial success of the claimed invention.").

Moreover, despite the impact of the Assault AirRunner, Patent Owner continued to see substantial sales of its CURVE line of treadmills. For example, in 2018, Patent Owner still sold [REDACTED] units of CURVE line treadmills, significantly more than the [REDACTED] units it sold when the Curve Legacy was first introduced. *See* EX2032, EX2033. Moreover, if one considers all sales of CURVE line treadmills from their introduction in 2009 through December 2023, Patent Owner's sales increased [REDACTED] over this period this period, even when Patent Owner was forced to share the market with copycats and other infringers. *See id.* Notably, these sales figures does not account for sales attributed to licensees or infringers of the '580 patent.

The commercial success of Patent Owner's products was based on the key features of the claimed invention. EX2020, ¶¶34-41. With the exception of the aforementioned copycats and infringers, Patent Owner's competitors, on the other hand, focused on fundamentally different treadmill designs and did not offer any

manual curved treadmills at all. See EX2020, ¶¶17, 35 (indicating that Woodway was the first to offer a commercial, manual curved treadmill). The commercial success of Patent Owner's products, including the CURVE family of products, thus weighs heavily in favor of nonobviousness.

D. Industry Praise

Industry praise is further evidence that the invention is not obvious and provides "probative and cogent evidence that one of ordinary skill in the art would not have reasonably expected [the invention would be successful]." *Institut Pasteur v. Focarino*, 738 F.3d 1337, 1347 (Fed. Cir. 2013). Because the claimed invention presented such an unconventional, yet successful, manual treadmill, it should not be a surprise that the CURVE line of treadmills garnered significant attention and praise in the industry.

In 2010, the Curve Legacy was nominated for an Innovation Award by FIBO—the leading international trade show for fitness, wellness and health. EX2020, ¶56; EX2057. Additionally, as summarized in the accompanying declaration of Eric Weber, Patent Owner's Director of Sales and Marketing, Patent Owner's CURVE line of treadmills received almost immediate industry and media attention and praise. Treadmills within the CURVE line have been featured in industry publications such as Health and Fitness Sports Magazine, Athletic Business, Government Recreation & Fitness, and Club Solutions Magazine, as well as in

mainstream media publications like Men's Health, the Los Angeles Times, South Carolina's Post and Courier, the Wall Street Journal, and the New York Times. EX2020, ¶¶43-55. Several of these publications praised the CURVE treadmills for their innovative design and their unique ability to improve a runner's form or to enable those who otherwise could not use more conventional treadmills to run recreationally. EX2045, 5; EX2046, 3, 5; EX2052, 1.

Industry praise for the invention claimed in the '580 patent, which has been widespread since Patent Owner first introduced the CURVE line of treadmills, is undeniable and overwhelming. Accordingly, industry praise also weighs in favor of nonobviousness.

E. Copying

"Copying may indeed be another form of flattering praise for inventive features, and thus evidence of copying tends to show nonobviousness." *WBIP*, 829 F.3d at 1336 (internal quotations and citation omitted). Copying exists when "the evidence fails to persuade [the tribunal] that th[e] similarity between the parties' respective products is either a coincidence or the result of independent creation." *Intri-Plex Techs. Inc. v. Saint-Gobain Performance Plastics Rencol Ltd.*, IPR2014-00309, Paper 83 at 41 (PTAB Mar. 23, 2015). "Evidence of access and substantial similarity is evidence of copying." *Medtronic, Inc. v. Teleflex Innovations S.A.R.L.*, 70 F.4th 1331, 1340 (Fed. Cir. 2023) (original emphasis).

As Mr. Weber recounts, a number of companies (including Petitioner) have launched products that not only infringe the patents covering Patent Owner's CURVE line of treadmills but are also close copies of the then-existing products within the CURVE line. EX2020, ¶¶57-68. As previously discussed, after Patent Owner introduced the Curve Legacy in 2009, it enjoyed 100% of the market in curved, manual treadmills, with no competitors offering anything even resembling Patent Owner's products. That changed, however, in 2014 when Samsara Fitness introduced the Trueform Runner. As shown below, Samsara Fitness's Trueform Runner was substantially similar to the Curve Legacy:



EX2058, 1; EX2018, ¶45; EX2020, ¶¶57-58. Patent Owner sued Samsara Fitness for patent infringement and the litigation proceeded until 2018 when, following an infringement determination by the court, Samsara Fitness agreed to take a license to

the asserted patents, including the '580 patent for the continued promotion and sale of the Trueform Runner. EX2020, ¶¶23, 59.

Patent Owner learned of another copy of its CURVE line of treadmills in 2017, when its employees observed Speedfit's Speedboard treadmill at that year's International Health, Racquet & Sportsclub Association ("IHRSA") tradeshow. Speedfit's Speedboard treadmill was also substantially similar to the CURVE line of treadmills:



EX2060, 1; EX2018, ¶45; EX2020, ¶¶57, 61.

With respect to Petitioner, Patent Owner also observed Petitioner's Assault AirRunner at the 2017 IHRSA tradeshow and determined that the Assault AirRunner was also substantially similar to Woodway's CURVE line of treadmills, as shown below:



EX2067, 1; EX2018, ¶45; EX2020, ¶¶57, 64. Patent Owner sued Petitioner for patent infringement, and the Parallel Litigation remains pending. EX2020, ¶64. During the Parallel Litigation, evidence emerged that confirmed Petitioner's access to and copying of Patent Owner's products. For example, portions of the Assault AirRunner Owner Manual were not only copied from Patent Owner's materials but actually retained explicit references to "WOODWAY Customer Service" and instructions to "[c]ontact a WOODWAY Customer Service technician" in the event of certain technical problems. *Id.*, ¶65; EX2071, 20. Additional Petitioner sales collateral touts the AirRunner's abilities to "[b]urn[] up to 30% more calories than a motorized treadmill," which is a claim that originated from Woodway based on Woodway's testing of Woodway's CURVE® treadmill. EX2072.

All of the foregoing companies as well as In10ct, Xebex, NOHRD, Cascade, and Tru Grit (along with other no-name Chinese companies) had access to Patent Owner's CURVE line of treadmills before releasing their substantially similar, infringing products. Their copycat activity began in 2014, five years after Patent Owner first released the Curve Legacy and exhibited it at the 2009 IHRSA tradeshow. EX2020, ¶67. Since then, the CURVE line of treadmills have been available for purchase by the general public through Patent Owner's website or through one of its authorized distributors. *Id.* Additionally, as discussed with respect to industry praise for the claimed invention, the CURVE line of treadmills has been widely featured in industry publications and mainstream newspapers. *Id.*, ¶68; §V(D), *supra*. Finally, with respect to Petitioner, the Assault AirRunner Owner Manual confirms that Petitioner copied Patent Owner's materials. EX2020, ¶64-65. Collectively, these factors demonstrate that each of the above companies had ample access to the CURVE line of treadmills that embody the Challenged Claims.

This pattern of copying provides further strong evidence that the invention claimed in the '580 patent and other patents covering the CURVE line of treadmills were nonobvious.

F. Failure of Others

Before the priority date of the '580 patent, no one had successfully commercialized a curved, manual treadmill. EX2020, ¶¶17, 35. Even then, until

others in the industry started to copy Patent Owner's CURVE products, Patent Owner was the only provider of curved, manual treadmills in the market. *Id.*, ¶22. Accordingly, the "failure of others" factor also weighs heavily in favor of nonobviousness.

G. Passage of Time Between Publication of the Prior Art and the Invention

In this case, the length of time between the cited prior art references and the patent also "speaks volumes to the nonobviousness" of the claimed invention. *See Leo Pharm. Prods., Ltd. v. Rea*, 726 F.3d 1346, 1359 (Fed. Cir. 2013) ("The intervening time between the prior art's teaching of the components and the eventual preparation of a successful composition speaks volumes to the nonobviousness of the [challenged] patent."). Petitioner identifies an earliest possible priority date of March 17, 2009 for the '580 patent. Petition, 3. The patent references cited in the Petition, on the other hand, were published no later than January 1972 (Chickering), July 1996 (Magid), and April 1999 (Socwell), respectively. EX1013, 1; EX1012, 1; EX1011, 1. Thus, at a minimum, a decade passed between the time the latest primary reference (Socwell) was published and the time of invention, and more than three decades passed between the time the earliest primary reference (Chickering) was published and the time of invention. EX2018, ¶¶195-196. Such significant passage of time before the time of invention, particularly in the face of the failure of others to develop anything resembling the claimed invention in the interim, weighs in favor

of nonobviousness. *See Leo Pharm.*, 726 F.3d at 1359 (fining that passage of twenty-two years and fourteen years, respectively, between publication of prior art and invention weighed in favor of nonobviousness).

VI. CONCLUSION

For the foregoing reasons, Patent Owner respectfully requests that the Board uphold the patentability of all challenged claims.

Dated: January 31, 2024

Respectfully submitted,

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Counsel for Patent Owner

CERTIFICATE OF COMPLAINE

This Preliminary Patent Owner Response complies with the type-volume limitations required by 27 C.F.R. §42.24. The word count in this paper totals 12,590 words. Patent Owner has relied upon the word count feature of Microsoft Word.

Dated: January 31, 2024

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of the foregoing **Patent Owner's Response** was served on January 31, 2024, by email to Petitioner's counsel of record:

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