

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.

IPR2023-00849
Patent 10,799,745 B2

Before MEREDITH C. PETRAVICK, NEIL T. POWELL, and
AMEE A. SHAH, *Administrative Patent Judges*.

SHAH, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

LifeCore Fitness, Inc. d/b/a Assault Fitness (“Petitioner”) filed a Petition per 35 U.S.C. §§ 311–319 for *inter partes* review of claims 1, 4, 7–12, 14, 17, 18, and 20–27 (“the Challenged Claims”) of U.S. Patent No. 10,799,745 B2 (Ex. 1001, “the ’745 patent”). Paper 2 (“Pet.”). Woodway USA, Inc. (“Patent Owner”) is identified as the owner of the ’745 patent. Paper 4. Patent Owner filed a preliminary response to the Petition. Paper 5 (“Prelim. Resp.”).

We have authority under 35 U.S.C. § 314. Under 35 U.S.C. § 314(a), an *inter partes* review may not be instituted unless the information presented in the Petition and any response thereto shows “there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” Moreover, a decision to institute under 35 U.S.C. § 314 may not institute on fewer than all claims challenged in the petition. *SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018); *see also* 37 C.F.R. § 42.108(a) (“When instituting . . . review, the Board will authorize the review to proceed on all of the challenged claims and on all grounds of unpatentability asserted for each claim.”). The Board determines whether to institute a trial on behalf of the Director. 37 C.F.R. § 42.4(a) (2022).

Considering the Petition, the Preliminary Response, and the evidence of record, for the reasons set forth below we determine that, at this stage based on the evidence presented, Petitioner has demonstrated that there is a reasonable likelihood that at least one of the Challenged Claims is unpatentable. Accordingly, we institute an *inter partes* review of all challenged claims and on all grounds asserted in the Petition. *PGS Geophysical AS v. Iancu*, 891 F.3d 1354, 1360 (Fed. Cir. 2018) (stating that

a decision to institute is “a simple yes-or-no institution choice respecting a petition, embracing all challenges included in the petition”).

Our factual findings and conclusions at this stage of the proceeding are based on the evidentiary record developed thus far. This is not a final decision as to patentability of claims for which *inter partes* review is instituted. Any final decision will be based on the record, as fully developed during trial.

II. BACKGROUND

A. RELATED MATTERS

Patent Owner has asserted infringement of the ’745 patent in *Woodway USA, Inc. v. LifeCore Fitness, Inc. d/b/a Assault Fitness*, Case No. 3:22-cv-00492-JO-BLM (S.D. Cal.) (the “’492 litigation”). Paper 2, v; Paper 4, 1. Petitioner indicates that “[t]he ’745 Patent is being asserted in this proceeding, along with three other patents within the same family: U.S. 9,039,580 [the “’580 patent”], U.S. 10,561,884 [the “’884 patent”], and U.S. 11,465,005,” and that the ’580 patent was at issue in district court proceedings *USA, Inc. v. Samsara Fitness, LLC et al.*, Case No. 2-15-cv-00956 DWI, and *Chapco, Inc. et al v. Woodway USA, Inc.*, Case No. 3-15-cv-01665 (DCT). Paper 2, v. Petitioner contemporaneously filed petitions challenging the ’580 patent in IPR2023-00836 and the ’884 patent in IPR2023-00843.

B. REAL PARTIES-IN-INTEREST

Petitioner identifies “LifeCore Fitness, Inc. d/b/a Assault Fitness” as the real party in interest. Paper 2, v. Patent Owner identifies “Woodway” as “the sole assignee of U.S. Patent 10,799,745.” Paper 4, 1.

C. OVERVIEW OF THE '745 PATENT

The '745 patent is titled "MANUAL TREADMILL AND METHODS OF OPERATING THE SAME," and was issued on October 13, 2020, from U.S. Patent Application No. 16/792,426. Ex. 1001, codes (21), (45), (54). The '745 patent also refers back to Provisional Application No. 61/161,027, filed March 17, 2009. *Id.* at code (60).

The treadmill includes:

a frame; a front running belt pulley; a rear running belt pulley; a plurality of bearings coupled to the frame; a running belt at least partially supported by at least one of the front running belt pulley and the rear running belt pulley, the running belt including a running surface, at least a portion of which is curved; a support element coupled to the frame; and a safety device coupled to the running belt. The safety device is at least partly supported by the support element. The running belt freely rotates in a first direction of rotation relative to the frame, however, in a second direction of rotation, opposite the first direction of rotation, engagement between the support element and at least a portion of the safety device substantially prevents rotation the running belt relative to the frame.

Id. at code (57).

Figure 1, reproduced below, is a perspective view of the manual treadmill having a non-planar running surface according to an exemplary embodiment of the '745 patent. Ex. 1001, 2:66–67.

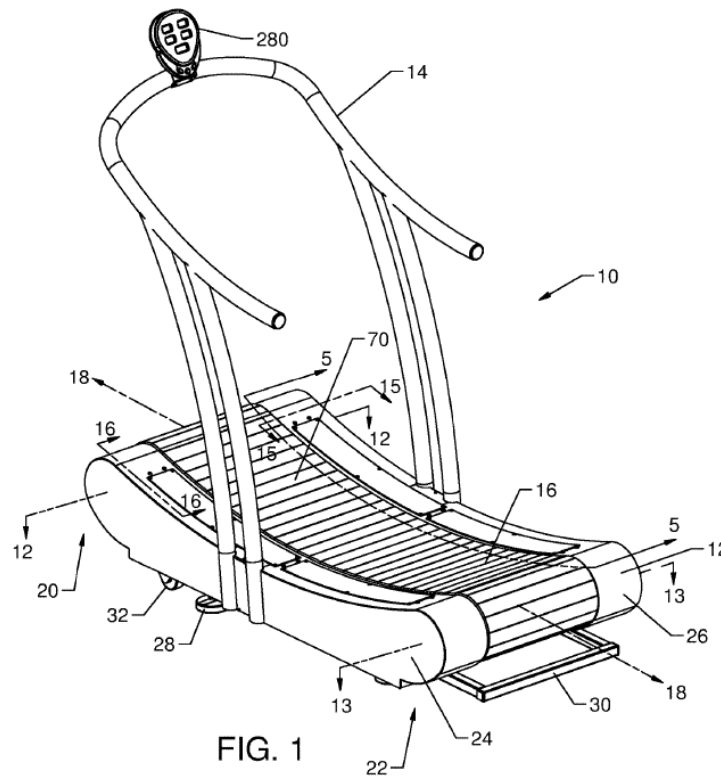


Figure 1 illustrates a manual treadmill 10 that generally comprises a base 12 and a handrail 14 mounted to the base. *Id.* at 4:50–52. Base 12 includes a running belt 16 that extends substantially longitudinally along a longitudinal axis 18. *Id.* at 4:52–54. Base 12 is supported by multiple support feet 28. *Id.* at 4:63–64. Running surface 70 has a substantially concave curve and a substantially convex curve. *Id.* at 6:41–43.

Figure 2, reproduced below, is a left-hand partially exploded perspective view of a portion of the manual treadmill according to the exemplary embodiment of Figure 1 of the '745 patent. Ex. 1001, 3:1–3.

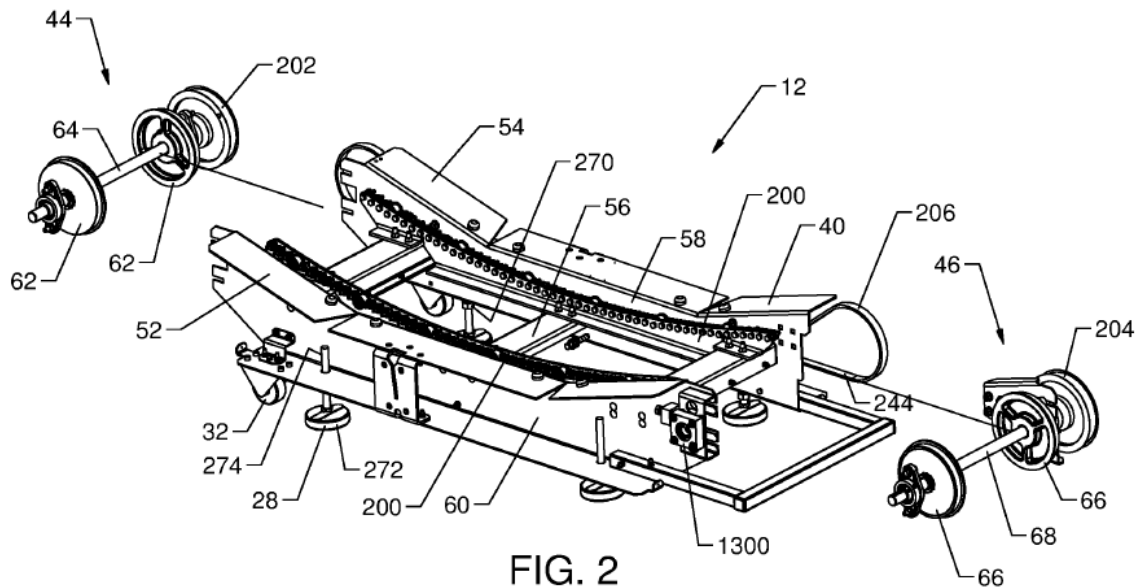


Figure 2 illustrates treadmill base 12, which includes a frame 40, a front shaft assembly 44 positioned near a front end 48 of frame 40, and a rear shaft assembly 46 positioned near the rear end 50 of frame 40, generally opposite the front end 48. Ex. 1001, 5:12–16. Front shaft assembly 44 is coupled to frame 40 at front end 48, and rear shaft assembly 46 is coupled to frame 40 at rear end 50 so that the frame supports these two shaft assemblies. *Id.* at 5:17–21. To help support the running belt, base 12 also includes opposing bearing rails 200 as shown in Figure 9, reproduced below.

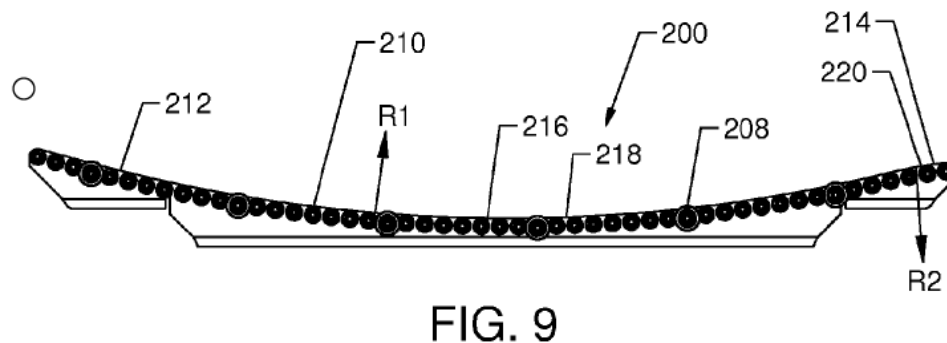


Figure 9 depicts a side elevation of the bearing rails 200. Ex. 1001, 3:26. Bearing rails 200 supported by and mounted to the frame. *Id.* at 11:23–27. Rails 200 include a plurality of bearings, an upper profile

having a central portion with a concave curve continued to the front portion, and a rear portion having a complex curve. *Id.* at 11:20–23; 11:57–12:5.

“A number of safety devices may be used with the treadmill 10 to help prevent undesirable forward rotation of the running belt 16.” Ex. 1001, 27:11–13. A safety device as illustrated in Figure 36, reproduced below, has a one-way bearing assembly that is a “motion restricting element . . . configured to permit rotation of at least one of the front and rear shaft assemblies” and the running belt in only one direction. *Id.* at 27:13–19.

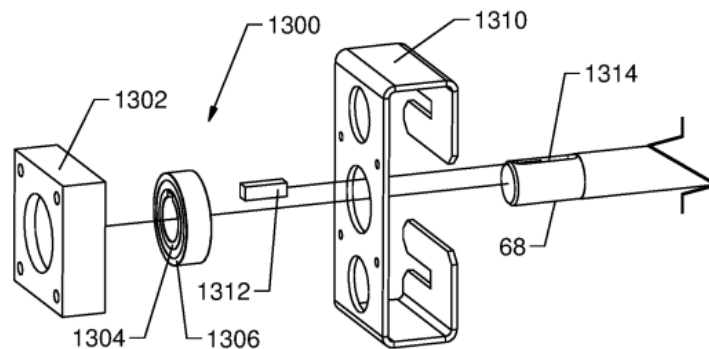


FIG. 36

Figure 36 “is a perspective view of a one-way bearing for the manual treadmill.” Ex. 1001, 4:37–38. The one-way bearing assembly 1300 comprises housing 1302 fixed to bracket 1310 supports both inner ring 1304 that cooperates with rear shaft 68 and outer ring 1306 that is fixed relative to housing 1302. *Id.* at 27:22–25. A plurality of asymmetric sprags that are not shown in Figure 36 are disposed between inner ring 1304 and outer ring 1306. Ex. 1001, 27:26–28. The asymmetric sprags provide for motion in one direction and prevent motion in the opposite direction. *Id.* at 27:28–29. The one-way bearing can include rollers in addition to sprags. *Id.* at 27:40–42.

The bearing assembly also includes key 1312 that is fixed relative to inner ring 1304 and configured to operate with keyway 1314. *Id.* at 27:43–46. If a force applied by the user urges the rear shaft to rotate counterclockwise, the bearing assembly prevents that rotation by providing a counterforce by the interaction of the key and keyway driving the inner ring rearward, wedging the sprags between the inner ring and outer ring, preventing the counterclockwise rotation of the inner ring and key. *Id.* at 27:43–67.

Other safety devices disclosed include another embodiment of a one-way bearing assembly having snap rings (Ex. 1001, 28:5–63; Fig. 38), a one way bearing including rollers and sprags (*id.* at 28:65–67), cam-locking systems (*id.* at 29:31–33), “taper locks, a user operated pin system, or a band brake system with a lever” (*id.* at 29:34–35).

D. ILLUSTRATIVE CLAIMS

Of the challenged claims, claims 1, 10, 18, and 21 are independent. Claims 4 and 7–9 depend directly from independent claim 1, claims 11, 12, 14, and 17 depend directly from independent claim 10, claim 20 depends directly from independent claim 18, and claims 22–27 depend, directly or indirectly, from independent claim 21.

Claim 1 is illustrative and is reproduced below with certain reformatting:¹

1. [1.0] A treadmill, comprising:

[1.1] a frame;

[1.2] a front running belt pulley coupled to the frame;

[1.3] a rear running belt pulley coupled to the frame and spaced a distance from the front running belt pulley;

[1.4] a plurality of bearings coupled to the frame;

[1.5] a running belt at least partially supported by at least one of the front running belt pulley and the rear running belt pulley, wherein the running belt includes a running surface, at least a portion of which is curved;

[1.6] a support element coupled to the frame; and

[1.7] a safety device coupled to the running belt, the safety device at least partially supported by the support element, wherein the safety device includes a first safety race element and a second safety race element, wherein at least one of the first and second safety race elements is adapted for rotation relative to the frame, and wherein one of the first and second safety race elements substantially surrounds the other of the one of the first and second safety race elements;

[1.8] wherein one of the first and second safety race elements and the running belt freely rotates in a first direction of rotation relative to the frame, however, in a second direction of rotation, opposite the first direction of rotation, the one of the first and second safety race elements is substantially prevented from rotation relative to the frame to substantially prevent rotation of the running belt relative to the frame.

Ex. 1001, 32:60 – 33:20.

¹ We apply the same identifiers Petitioner uses to label the different portions of claim 1. Pet. 118 (Claims Listing App'x.).

E. ASSERTED GROUNDS OF UNPATENTABILITY

Petitioner challenges the patentability of claims 1, 4, 7–12, 14, 17, 18, and 20–27 on the following grounds:

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1, 4, 7–12, 14, 17, 18, 20–27	103	Schonenberger, ² Socwell, ³ Magid, ⁴ Sclater ⁵
1, 4, 7–12, 14, 17, 18, 20–27	103	Schonenberger, Socwell, Magid, Sclater
1, 4, 7–12, 14, 17, 18, 20–25	103	Socwell, Magid, Sclater

In support of its unpatentability contentions, Petitioner also relies on the Declaration of Robert Giachetti, Ph.D. P.E. Ex. 1003 (“Declaration”).

III. ANALYSIS

A. DISCRETION TO DENY UNDER 35 U.S.C. § 314(A)

Patent Owner argues that we should exercise our discretion under 35 U.S.C. § 314(a) to deny the Petition based on the involvement of the ’745 patent in District Court of the ’492 litigation. Prelim. Resp. 32–45.

Institution of *inter partes* review is discretionary. 35 U.S.C. § 314(a); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2140 (2016).

We consider several factors to assess whether to deny institution under § 314 based on a parallel proceeding:

1. whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted;

² Rolf Schönenberger, U.S. Patent No. 4,614,337, issued Sept. 30, 1986 (Ex. 1010, “Schonenberger”).

³ Jeff D. Socwell, U.S. Patent No. 5,897,461, issued Apr. 27, 1999 (Ex. 1011, “Socwell”).

⁴ Sidney H. Magid, U.S. Patent No. 5,538,489, issued July 23, 1996 (Ex. 1012, “Magid”).

⁵ Neil Sclater and Nicholas P. Chironis, *Mechanisms & Mechanical Devices Sourcebook*, Third Ed., (McGraw-Hill 2001) (Ex. 1017, “Sclater”).

2. proximity of the court's trial date to the Board's projected statutory deadline for a final written decision;
3. investment in the parallel proceeding by the court and the parties;
4. overlap between issues raised in the petition and in the parallel proceeding;
5. whether the petitioner and the defendant in the parallel proceeding are the same party; and
6. other circumstances that impact the Board's exercise of discretion, including the merits.

Apple Inc. v. Fintiv, Inc., IPR2020-00019, Paper 11 at 5–6 (PTAB Mar. 20, 2020) (precedential) (“*Fintiv*”). In evaluating these factors, we “take[] a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review.” *Id.* at 6. We also consider “several clarifications” made by the Director of the United States Patent and Trademark Office (“USPTO”). See USPTO Memorandum, Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation, 2 (June 21, 2022), *available at* https://www.uspto.gov/sites/default/files/documents/interim_proc_discretionary_denials_aia_parallel_district_court_litigation_memo_20220621_.pdf (“*Fintiv* Memo”).

In its arguments that we should exercise our discretion to deny institution based on parallel proceedings, Patent Owner does not discuss any parallel proceeding other than the '492 litigation. Prelim. Resp. 1–5. Accordingly, we focus on that proceeding when analyzing the *Fintiv* factors. Upon consideration of these factors, we decline to exercise our discretion to deny the Petition.

1. *Factor 1 – Whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted.*

The *Fintiv* panel indicated that, in previous Board decisions, the existence of a district court stay pending Board resolution of an *inter partes* review has weighed strongly against discretionary denial, while a denial of such a stay request sometimes weighs in favor of discretionary denial. *Fintiv*, Paper 11 at 6–8.

No motion for stay has been instituted in the '492 litigation. Pet. 111; Prelim Resp. 33. Patent Owner, however, argues that “even if Petitioner were to seek a stay pending IPR, the Court would almost certainly deny such a request under the three-factor test used in the Southern District of California.” Prelim. Resp. 33; *see also id.* at 34–37 (arguing all three factors weigh against a stay).

Determining how the District Court might handle a motion for stay that has not yet been filed invites conjecture. It would be improper to speculate, at this stage, what the District Court might do regarding a motion to stay, given the particular circumstances of this case. *See Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 15 at 12 (PTAB May 13, 2020) (informative) (“*Fintiv II*”) (“We decline to infer, based on actions taken in different cases with different facts, how the District Court would rule should a stay be requested by the parties in the parallel case here.”). Accordingly, this first factor is neutral.

2. *Factor 2 – Proximity of the court’s trial date to the Board’s projected statutory deadline for a final written decision.*

No trial date has been set in the '492 litigation. Pet. 112; Prelim. Resp. 37. Parties may present evidence regarding the most recent statistics

on median time-to-trial for civil actions in the district court in which the parallel litigation resides for the PTA's consideration. *Fintiv* Memo, 8–9. Petitioner states that “the median time to trial for civil actions in S.D. California is 45.4 months.” Pet. 112. Patent Owner argues that “the most recent statistics for the Southern District of California make clear that the Parallel Litigation will likely proceed to trial around the same time that any Final Written Decision would issue, and potentially before then.” Prelim. Resp. 37. Based on these statistics, Patent Owner contends that the “Final Written Decision would issue only 2-4 months before the expected trial date.” *Id.* at 38.

Regardless of which median time to trial we apply, neither party asserts that the trial for the '492 litigation would occur before our projected statutory deadline for a final written decision, which is October 2024.

Accordingly, this second factor weighs against exercising our discretion to deny institution.

3. *Factor 3 – Investment in the parallel proceeding by the court and the parties.*

The more pretrial activities that have been completed in any parallel district court proceedings, the more this factor weighs in favor of denial, and vice-a-versa. *See Fintiv*, Paper 11 at 9–10. In evaluating this factor, “[i]f the evidence shows that the petitioner filed the petition expeditiously, such as promptly after becoming aware of the claims being asserted, this fact has weighed against exercising the authority to deny institution under *NHK*.” *Id.* at 11 (footnote omitted).

Petitioner asserts that neither party will have invested significant resources in the '492 litigation by institution of this *inter partes* review as the court has not issued a schedule beyond the Markman Hearing or any

substantive rulings, such as on claim construction or dispositive motions.

Pet. 112. Patent Owner disagrees and asserts that the '492 litigation has been pending for over a year and the parties have (1) conducted substantial fact discovery, (2) exchanged initial infringement and invalidity contentions, (3) began expert discovery, and (4) conducted a Markman hearing. Prelim. Resp. 39.

The evidence of record indicates that the District Court and the parties have invested some resources in the '492 litigation to the issues of unpatentability involving the '745 patent, but that much work remains in the '492 litigation as it relates to invalidity. The District Court has not yet issued any substantive orders as to the patentability of the challenged claims or a claim construction order. Pet. 112; Prelim. Resp. 39. Although a Claims Construction Hearing has been held, no decision has yet been issued. Ex. 2002, 1. And the deadline for dispositive motions is not yet set. Ex. 2001. These facts do not favor denial.

Additionally, *Fintiv* directs us to consider whether “the petitioner filed the petition expeditiously.” *Fintiv*, Paper 11 at 11.

If the evidence shows that the petitioner filed the petition expeditiously, such as promptly after becoming aware of the claims being asserted, this fact has weighed against exercising the authority to deny institution under *NHK*. If, however, the evidence shows that the petitioner did not file the petition expeditiously, such as at or around the same time that the patent owner responds to the petitioner's invalidity contentions, or even if the petitioner cannot explain the delay in filing its petition, these facts have favored denial.

Fintiv, Paper 11 at 11–12.

Patent Owner contends that Petitioner did not act expeditiously because Petitioner filed the Petition on April 13, 2023, more than seven

months after receiving Patent Owner’s preliminary infringement contentions on September 6, 2022. Prelim. Resp. 39–40 (citing Ex. 2014, 2).

Petitioner was served with the complaint in the District Court Litigation on April 13, 2022 and filed the Petition on April 13, 2023. *See* Paper 2, vii. Petitioner does not explain its failure to act expeditiously in filing the Petition. These facts favor denial.

Considering the facts as a whole, we determine that this third factor weighs slightly against discretionary denial of institution.

4. *Factor 4 – Overlap between issues raised in the petition and in the parallel proceeding.*

“[I]f the petition includes the same or substantially the same claims, grounds, arguments, and evidence as presented in the parallel proceeding, this fact has favored denial.” *Fintiv*, Paper 11 at 12. “Conversely, if the petition includes materially different grounds, arguments, and/or evidence than those presented in the district court, this fact has tended to weigh against exercising discretion to deny institution under *NHK*.” *Id.* at 12–13.

Petitioner stipulates that it “will not raise at trial in parallel litigation any Ground raised here,” and as such, “Petitioner’s stipulation mitigates concerns for duplicating efforts and inconsistent conclusions.” Pet. 112.

Patent Owner argues that Petitioner’s stipulation is not a “*Sotera* stipulation,” and thus “cannot short-circuit the *Fintiv* analysis and does not account for the significant risk of overlap between the asserted grounds and Petitioner’s invalidity positions in the [District Court Litigation].” Prelim. Resp. 41–42 (citing *Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12 (PTAB Dec. 1, 2020) (precedential)).

The Petition challenges claims 1, 4, 7–12, 14, 17, 18, and 20–27 and relies on Schonenberger, Socwell, Magid, and Sclater. Pet. 4. Petitioner’s

invalidity contentions in the '492 litigation address claims 1, 4, 7–12, 14, 17, 18, and 20–26 and rely on the prior art asserted in this proceeding. *See* Ex. 2015, 2–3, 9–62. Nonetheless, Petitioner's stipulation that it will not rely on the grounds asserted in the Petition in the District Court Litigation mitigates to at least some degree concerns of duplicative efforts and potentially conflicting decisions. *See Sand Revolution II, LLC v. Continental Intermodal Grp. – Trucking LLC*, IPR2019-01393, Paper 24 at 12 (PTAB June 16, 2020) (informative). Thus, we determine that the fourth factor weighs at least slightly against discretionary denial of institution.

5. *Factor 5 – Whether the petitioner and the defendant in the parallel proceeding are the same party.*

“If a petitioner is unrelated to a defendant in an earlier court proceeding, the Board has weighed this fact against exercising discretion to deny institution under *NHK*.” *Fintiv*, Paper 11 at 13–14. Petitioner is the defendant in the '492 litigation. Paper 2, v. Under these circumstances, we determine that the fifth factor slightly favors discretionary denial of institution.

6. *Factor 6 – Other circumstances that impact the Board's exercise of discretion, including the merits.*

Regarding this factor, Petitioner argues that “the merits of this Petition are particularly strong” and cites to pages 3 to 5 of the *Fintiv* Memo, which discuss compelling merits. Pet. 113. We construe Petitioner's argument as raising a compelling merits argument. Patent Owner responds that Petitioner has not shown compelling merits because “[m]erely meeting the statutory likelihood of success threshold for institution is not enough.” Prelim. Resp. 44.

On balance, we determine that *Fintiv* factors 1–5 do not favor discretionary denial of institution. In particular, we determine that factor 1 is neutral, factors 2–4 weigh against denial of institution, and factor 5, which is the lone factor favoring denial of institution, does not outweigh factors 1–4. As a result, we need not decide whether Petitioner presents a compelling unpatentability challenge. *See CommScope Techs. LLC v. Dali Wireless, Inc.*, IPR2022-01242, Paper 23 at 4–5 (PTAB Feb. 27, 2023) (decision on Director review) (precedential) (“[I]n circumstances where the Board determines that the other *Fintiv* factors 1–5 do not favor discretionary denial, the Board shall decline to discretionarily deny under *Fintiv* without reaching the compelling merits analysis.”).

In addition, Petitioner asserts:

(1) the Board is best suited to address the technical issues raised here; (2) a decision on the merits at institution may aid the parties in resolving their dispute; and (3) determining patentability will benefit the public, providing a complete record and rationale absent from a jury verdict form.

Pet. 113. Patent Owner responds that Petitioner’s argument does nothing more than “proclaim[] in conclusory fashion that institution will result in some vague benefit to the [’492 litigation] and the public.” Prelim.

Resp. 45. We agree with Patent Owner. Petitioner’s assertion is conclusory and does not adequately specify the particular benefits to the proceeding here or to the ’492 litigation.

Thus, we determine that the sixth factor is neutral.

7. *Holistic Assessment of Fintiv Factors*

We consider the above factors and take “a holistic view of whether efficiency and integrity of the system are best served by denying or

instituting review.” *Fintiv*, Paper 11 at 6. Based on our holistic view, for the foregoing reasons we decline to deny institution under § 314(a).

B. DISCRETION TO DENY UNDER 35 U.S.C. § 325(d)

35 U.S.C. § 325(d) states, in relevant part: “In determining whether to institute or order a proceeding under this chapter, chapter 30, or chapter 31, the Director may take into account whether, and reject the petition or request because, the same or substantially the same prior art or arguments previously were presented to the Office.” The Board uses a two-part framework for evaluating arguments under § 325(d):

(1) whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office; and

(2) if either condition of first part of the framework is satisfied, whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims.

Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH, IPR2019-01469, Paper 6 at 8 (PTAB Feb. 13, 2020) (precedential). “[T]he *Becton, Dickinson* factors provide useful insight into how to apply the framework under 35 U.S.C. § 325(d).” *Id.* at 9 (footnote omitted). The non-exclusive *Becton, Dickinson* factors are:

(a) the similarities and material differences between the asserted art and the prior art involved during examination;

(b) the cumulative nature of the asserted art and the prior art evaluated during examination;

(c) the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection;

(d) the extent of the overlap between the arguments made during examination and the manner in which Petitioner relies on the prior art or Patent Owner distinguishes the prior art;

(e) whether Petitioner has pointed out sufficiently how the Examiner erred in its evaluation of the asserted prior art; and

(f) the extent to which additional evidence and facts presented in the Petition warrant reconsideration of the prior art or arguments.

Becton, Dickinson & Co. v. B. Braun Melsungen AG, IPR2017-01586, Paper 8, 17–18 (PTAB Dec. 15, 2017) (precedential as to § III.C.5, first paragraph). *Becton, Dickinson* factors (a), (b), and (d) relate to the first part of the *Advanced Bionics* framework (whether the same or substantially the same art or arguments previously were presented to the Office), and *Becton, Dickinson* factors (c), (e), and (f) relate to the second part of that framework (previous Office error). *Advanced Bionics*, IPR2019-01469, Paper 6 at 9–11.

Beginning with the first part of the *Advanced Bionics* framework, we consider whether *Becton, Dickinson* factors (a), (b), and (d) indicate that “the same or substantially the same art previously was presented to the Office” or that “the same or substantially the same arguments previously were presented to the Office.” Previously presented art includes art made of record by the Examiner, and art provided to the Office by an applicant, such as on an Information Disclosure Statement (“IDS”), in the prosecution history of the challenged patent. *Becton*, Paper 8, 7–8.

Patent Owner argues that the same and or substantially the same art were previously presented to the office because Schonenberger, Socwell, Magid, and the Declaration of Dr. Giachetti from *Chapco Inc. v. Woodway USA, Inc.*, C.A. No. 3:15-cv-01665 (JCH) (D. Conn.) (the “Chapco

Litigation”) are listed on the face of the ’745 patent. Prelim. Resp. 25–26; *see also* Ex. 1001, 2, 4 (code 56) (listing references cited). Additionally, Patent Owner argues the Petitioner relies upon “nearly identical arguments” regarding the teachings of Schonenberger, Socwell, and Magid because the Chapco Litigation Declaration was presented to the Office during the prosecution. Prelim. Resp. 25–26.

Petitioner does not dispute that Schonenberger, Socwell, Magid, and the Chapco Litigation Declaration were previously presented to the Office but argues that Sclater was not and “the combinations of references applied in the petition, were not applied, nor cumulative with, the references applied during Examination.” Pet. 113.

Patent Owner does not dispute that Sclater was not previously presented to the Office (Prelim. Resp. 25) and does not assert that the Chapco Litigation Declaration addresses Sclater (*see id.* at 25–27; *see also* Ex. 1004). Patent Owner, however, takes the position that “the Examiner was presented with and considered references that disclose sprag-type clutches before allowing the claims.” Prelim. Resp. 28 (citing Nizamuddin, U.S. Patent 7,115,073 B2, iss. Oct. 2006); *see also id.* at 25. Additionally, Patent Owner argues that the addition of Sclater is cumulative and does not add anything meaningful because Petitioner allegedly does not adequately explain why a POSA would be motivated to combine Sclater with any of the other references. Prelim. Resp. 29–30.

It is not disputed the Sclater was not previously presented to the Office. As can be seen from our analysis below, all of Petitioner’s asserted grounds substantially rely upon Sclater to teach limitations of the safety device. Sclater, thus, is meaningful to the prior art combination.

Accordingly, we determine that discretionary denial is not warranted because the asserted combination, all of which include Sclater, were not previously presented to the Office. Because we determine that part one of the framework is not satisfied, we need not turn to part two to determine whether Petitioner demonstrates that the Office erred in a manner material to the patentability of the challenged claims.

For the reasons discussed above, we decline to exercise our discretion under § 325(d) to deny the Petition.

C. LEGAL STANDARDS

In an inter partes review, the petitioner has the burden of showing there is a reasonable likelihood that Petitioner would prevail with respect to at least one of the claims challenged in the Petition. 35 U.S.C. § 314. That burden never shifts to the patentee. *Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015).

A patent claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter and the prior art are “such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The legal question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) when in evidence, objective evidence of obviousness or nonobviousness.⁶ *Graham v. John*

⁶ The record at this time does not include allegations or evidence of objective indicia of obviousness or nonobviousness.

Deere Co. of Kansas City, 383 U.S. 1, 17–18 (1966). One seeking to establish obviousness based on more than one reference also must articulate sufficient reasoning with rational underpinnings to combine teachings. *See KSR*, 550 U.S. at 418.

To show obviousness, it is not enough to merely show that the prior art includes separate references covering each separate limitation in a challenged claim. *Unigene Labs., Inc. v. Apotex, Inc.*, 655 F.3d 1352, 1360 (Fed. Cir. 2011). “This is so because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known.” *KSR*, 550 U.S. at 418–419.

On the other hand, an obviousness analysis “need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *KSR*, 550 U.S. at 418; *accord In re Translogic Tech., Inc.*, 504 F.3d 1249, 1259 (Fed. Cir. 2007). However, a petitioner cannot satisfy its burden of proving obviousness by employing “mere conclusory statements.” *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016). Instead, a petitioner must articulate a reason why a person of ordinary skill in the art would have combined or modified the prior art references. *In re NuVasive, Inc.*, 842 F.3d 1376, 1382 (Fed. Cir. 2016); *see also Metalcraft of Mayville, Inc. v. The Toro Co.*, 848 F.3d 1358, 1366 (Fed. Cir. 2017) (“In determining whether there would have been a motivation to combine prior art references to arrive at the claimed invention, it is insufficient to simply conclude the combination would have been obvious without identifying any reason why a person of skill in the art would have made the combination.”); *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064,

1073 (Fed. Cir. 2015) (“[O]bviousness concerns whether a skilled artisan not only *could have made* but *would have been motivated to make* the combinations or modifications of prior art to arrive at the claimed invention.”) (citing *InTouch Techs., Inc. v. VGO Commc’ns, Inc.*, 751 F.3d 1327, 1352 (Fed. Cir. 2014)).

We analyze the challenges presented in the Petition in accordance with the above-stated principles.

D. LEVEL OF ORDINARY SKILL IN THE ART

In determining the level of ordinary skill in the art, various factors may be considered, including the “type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field.” *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (citation omitted).

Petitioner contends that a person of ordinary skill in the art at the time of the invention (“POSA” or “skilled artisan”) “would have had a bachelor’s degree in mechanical engineering and at least one year of machine design experience related to power transmission equipment and a demonstrated understanding of the biomechanics of exercise, including knowledge in the field of anthropometry (i.e., the study of human proportion).” Pet. 5 (citing Ex. 1003 ¶¶ 48, 44–49).

Patent Owner “does not dispute Petitioner’s proposed qualifications of a person of ordinary skill in the art.” Prelim. Resp. 2.

Thus, for purposes of this Decision, we find that the ’745 patent and the cited prior art references reflect the appropriate level of skill at the time of the claimed invention and that the level of appropriate skill reflected in

these references and in the '745 patent is consistent with the level of skill proposed by Petitioner. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001). Accordingly, for purposes of this Decision, we adopt Petitioner's proposed definition for a person of ordinary skill in the art.

E. CLAIM CONSTRUCTION

In this inter partes review, we apply the same claim construction standard that would be used in a civil action under 35 U.S.C. § 282(b). 37 C.F.R. § 42.100(b). In applying this standard, we generally give claim terms their ordinary and customary meaning as would be understood by a person of ordinary skill in the art at the time of the invention and in the context of the entire patent disclosure. *See id.*; *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–14 (Fed. Cir. 2005) (en banc).

Petitioner states that claim terms should be construed according to their ordinary and customary meaning. Pet. 14. Alternatively, Petitioner indicates that, in the '492 litigation, the parties are pursuing different claim constructions for the following terms: “substantially prevent[],” “safety device,” and “shaft.” Pet. 14–16. For each of these three terms, Petitioner states that “the cited art teaches both constructions.” *Id.* at 15, 16. Petitioner also indicates that “Petitioner is pursuing the following alternate claim construction positions for Ground 2 only.” *Id.* at 14.

Patent Owner “submits that no claim construction is necessary to deny institution.” Prelim. Resp. 3.

We currently do not discern any claim-construction issue affecting Petitioner's demonstration of a reasonable likelihood of prevailing. Thus, at this stage, we do not find it necessary to construe expressly any language of the challenged claims. *See Nidec Motor Corp. v. Zhongshan Broad Ocean*

Motor Co., 868 F.3d 1013, 1017 (Fed. Cir. 2017) (noting that “we need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy’”) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

At this stage of the proceeding and based on the record, we determine that no claim construction is necessary to institute.

F. OVERVIEW OF CITED ART AND EVIDENCE

1. *Overview of Schonenberger – Exhibit 1010*

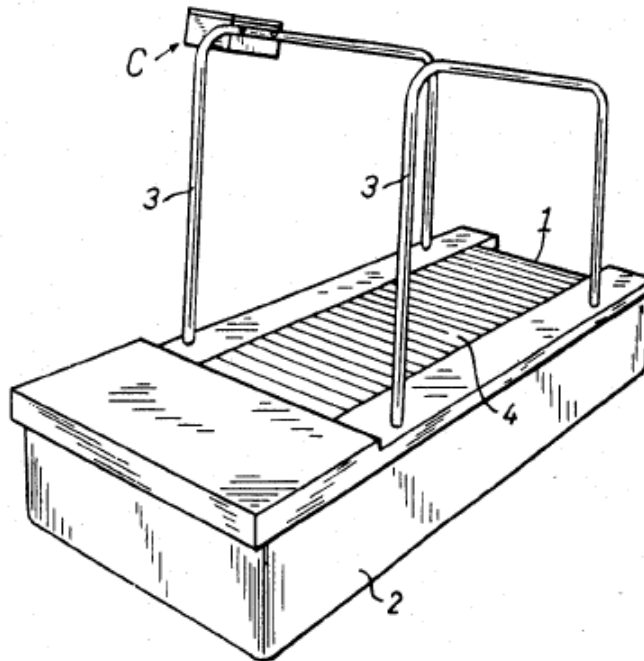
Schonenberger discloses a preferably power-driven “a movable surface apparatus, typically for physical exercise and training.” Ex. 1010, Abstr. (code 57), 1:63–65, 4:1–3. One objective of Schonenberger’s invention is to provide an apparatus that “is safe in operation and requires little operating power, has low noise level in operation.” *Id.* at 1:65–66.

Another objective is to provide an apparatus having

a pleasant, springy feel when being stepped or jumped on without, however, being excessively stressed by bending or bowing, so that the surface which is engaged by the foot of the user will have, essentially, the characteristics of a yielding, yet firm support similar, for example, to walking on moss-covered ground or a needle-covered path.

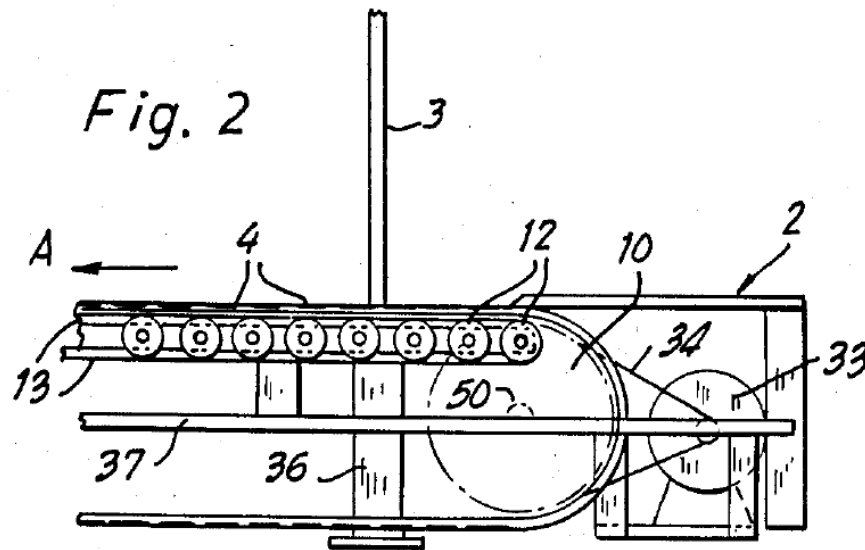
Id. at 1:67 – 2:5.

An embodiment of Schonenberger’s physical exercise apparatus is shown in Figure 1, which is reproduced below.



Schonenberger's Figure 1 is a general perspective view of the apparatus arranged for training and physical exercise. Ex. 1010, 2:67–68. Schonenberger's physical exercise apparatus includes a motor 33 (not shown in Figure 1) that drives movable surface 1. Ex. 1010, 4:1–3. “The apparatus is enclosed in a housing 2 to which also support bars 3 are secured” and “[a] control unit C is mounted on one of the support bars to control operation of the motor, for example its starting, stopping, and operating speed.” *Id.* at 4:5–9.

Figure 2, reproduced below, “is a fragmentary schematic side view of the movable surface and its drive arrangement, with the housing removed.” Ex. 1010, 3:1–3.

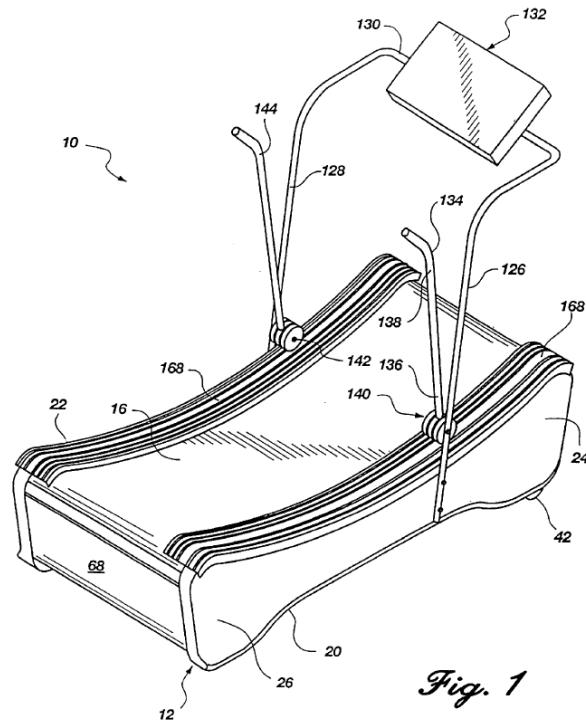


Schonenberger's Figure 2 "is a fragmentary schematic side view of the movable surface and its drive arrangement, with the housing removed." Ex. 1010, 3:1–3. As shown in Figure 2, housing 2 includes frame members 36 and 37 which provide for physical and structural support. Schonenberger discloses that "within the housing 2 are located rotatable drums, rollers, sheaves, sprockets, or the like, about which the surface 1, which is an endless loop, is placed." *Id.* at 4:15–17. Schonenberger discloses that the rotatable elements are "preferably in the form of two operating drums or rollers 10" and that "rollers or sheaves 10 have a toothed or ribbed circumference." *Id.* at 4:18–20; 4:23–24.

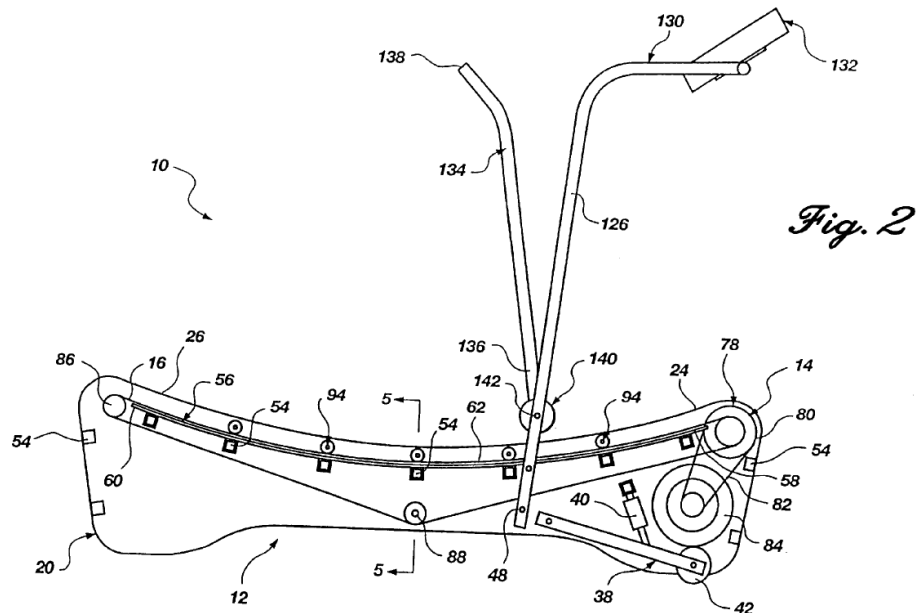
2. Overview of Socwell – Exhibit 1011

Socwell discloses "[a] curved deck treadmill." Ex. 1011, Abstr. Socwell discloses that an objective of the invention is "to provide a novel curved deck treadmill which provides a structurally supported arcuate shaped, movable surface on which a user may exercise." *Id.* at 3:26–29.

Socwell's curved deck treadmill is shown in Figure 1, which is reproduced below.



Socwell's Figure 1 "is a perspective view of one presently preferred embodiment of a curved deck treadmill." Ex. 1011, 4:35–36. As shown in Figure 1, Socwell's curved deck treadmill 10 comprises a support frame 12 having a first side 20 and a second opposing side 22 and having a deck 56 supportably disposed therebetween, as shown in Figure 2, which is reproduced below.

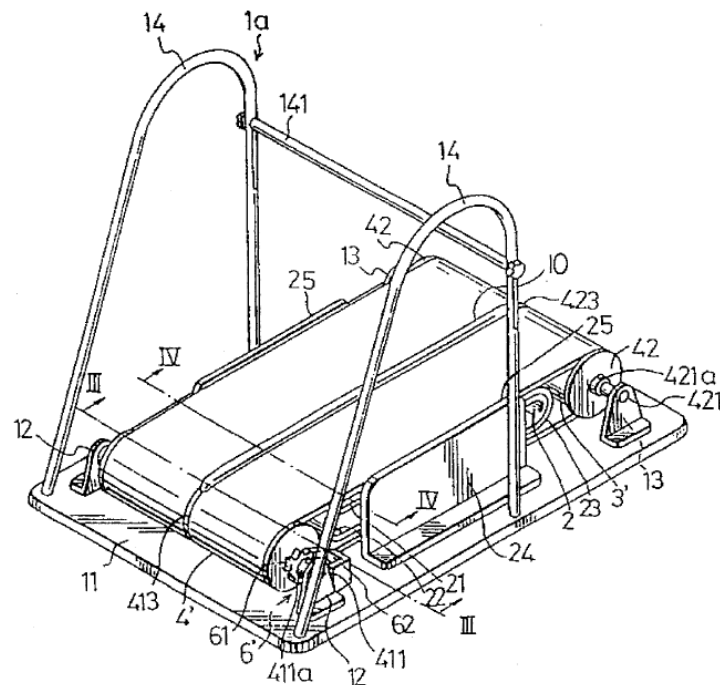


Socwell’s Figure 2 “is a side elevational view of the embodiment of [Figure 1] exposing one presently preferred arrangement of the internal components of the present invention.” Ex. 1011, 4:38–40. Socwell discloses that in a “preferred construction, the deck 56 comprises a first end 58, a second end 60, and an intermediate portion 62 disposed therebetween.” Ex. 1011, 5:26–28. As shown in Figure 2, “a roller assembly 14 is provided preferably comprising a first and second roller 78, 86,” and “[t]he first roller 78 may be rotatably disposed contiguous the first end 58 of the deck 56 between the first side 20 and the second opposing side 22 of the support frame 12.” *Id.* at 5:33–38. In an embodiment, the curved deck treadmill may be implemented without a driving means such as a motor. *Id.* at 11:54–60.

3. Overview of Magid – Exhibit 1012

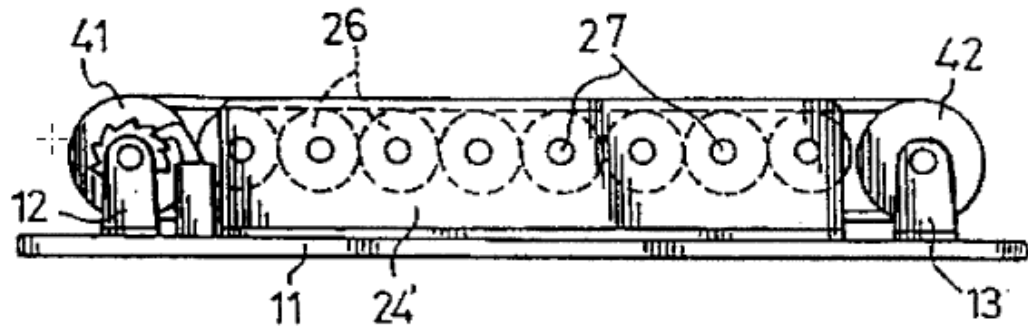
Magid discloses a non-motorized “walker apparatus which prevents the action of the user’s left foot from influencing the action of his right foot and vice-versa when the walker apparatus is in use.” Ex. 1012, 1:17–20.

Figure 2 of Magid, reproduced below, depicts a first preferred embodiment of a walker apparatus.



Magid's Figure 2 "is a perspective view of the first preferred embodiment of a walker apparatus." Ex. 1012, 3:40–42. The walker apparatus shown in Figure 2 comprises "a base 11, a pair of front rollers 41, a pair of rear rollers 42, endless left and right foot belts 4, 4', and a support unit." Ex. 1012, 4:12–16. Unidirectional control means 6, 6' permits only unidirectional movement of belts 4, 4' and, in one embodiment, includes ratchet gears 61 attached to the front rollers and mounted rotatably on shaft 411. *Id.* at 4:47–51. Control means 6, 6' also includes pawls 62 secured to base 11 that engage one of ratchet gears 61 to permit only unidirectional rotation of front roller 41 or rear rollers 42 and to prevent bidirectional movement of belts 4, 4'. *Id.* at 4:51–60.

Figure 9 is reproduced below.



Magid's Figure 9 "is a schematic side view of the second preferred embodiment" of a walker apparatus. Ex. 1012, 3:66–67. The main difference between the first embodiment shown in Figure 2 and the second embodiment shown in Figure 9 is in the configuration of the support unit. Ex. 1012, 6:46–53. In Figure 9's embodiment, each belt 4, 4' is "wound circulatively on the respective one of the front rollers 41 and on the respective one of the rear rollers 42, and the support unit includes a plurality of adjacent parallel third shafts 27 between the front and rear rollers 41, 42'." *Id.* at 6:54–58.

4. Overview of Sclater – Exhibit 1017

Sclater is titled "Mechanisms and Mechanical Devices Sourcebook, Third Edition." Ex. 1017, 1.⁷ Chapter 9 of Sclater is titled "Coupling, Clutching, and Braking Devices." *Id.* at 4. On pages 5–6 of Exhibit 1017 (internal numbers 302–303), Sclater describes twelve basic mechanical friction and mechanical clutches including, in part, a pawl and ratchet external control clutch and cam and roller clutch. A pawl and ratchet clutch is described as one where the driving ratchet "is keyed to the driving shaft,

⁷ We refer to page numbers added to Exhibit 1017 starting with the front cover as page 1.

and the pawl is pinned to the driven gear which can rotate freely on the driving shaft. *Id.* at 5 (internal page 302). When the control arm is raised, the spring pulls in the pawl to engage the ratchet and drive the gear.” *Id.* A cam and roller clutch is described as “an over-running clutch [that] is better suited for higher-speed free-wheeling than a pawl-and-ratchet clutch.” *Id.* at 6 (internal page 303). In the cam and roller clutch,

[t]he inner driving member has cam surfaces on its outer rim that hold light springs that force the rollers to wedge between the cam surfaces and the inner cylindrical face of the driven member. While driving, friction rather than springs force the rollers to wedge tightly between the members to provide positive clockwise drive. The springs ensure fast clutching action. If the driven member should begin to run ahead of the driver, friction will force the rollers out of their tightly wedged positions and the clutch will slip.

Id.

Sclater also discusses seven overrunning clutches including a molded sprags clutch indicated as being “for light duty” and an “internal ratchet and spring-loaded pawls” clutch. Ex. 1017, 7 (internal page 311). On page 8 of Exhibit 1017 (internal page 312), Sclater discusses spring-loaded pins aiding sprags in a one-way clutch and describes that as having “[s]prags combined with cylindrical rollers in a bearing assembly [that] can provide a simple, low-cost method of meeting the torque requirements of most machine applications” and can serve as a roller bearing, and that the clutch’s torque rating depends on the number of sprags.

Sclater further provides “details of overriding clutches” and explains a friction clutch is quieter than a ratchet and pawl but requires a spring device to keep the pawl in constant engagement. Ex. 1017, 9 (internal page 316) (capitalization omitted). In discussing ten ways to apply overrunning

clutches, Sclater explains that “[t]hese clutches allow freewheeling, indexing and backstopping,” and “they will solve many design problems.” *Id.* at 11 (internal page 318). Among the depicted examples of clutches is Figure 1 (*id.*), reproduced below, which depicts precision sprags. Sclater discusses that in this formsprag clutch, torque is transmitted from one race to another by the wedging actions of sprags between the races in one direction and in the other direction, the race freewheels. *Id.*

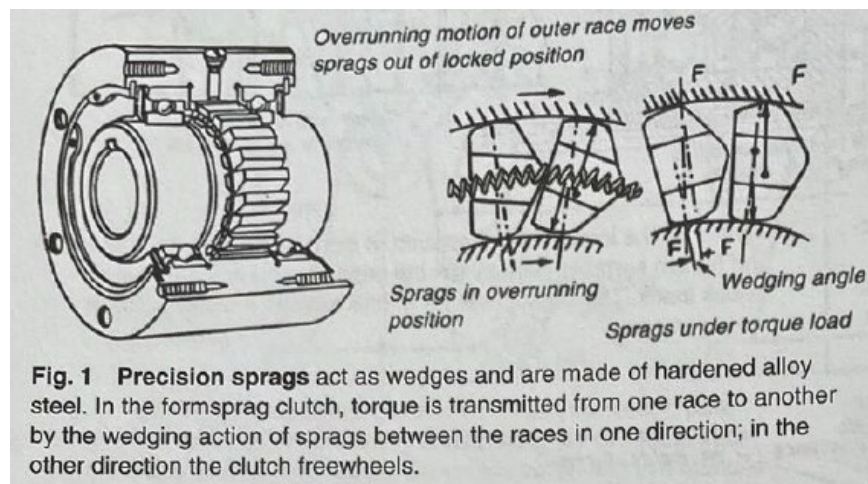
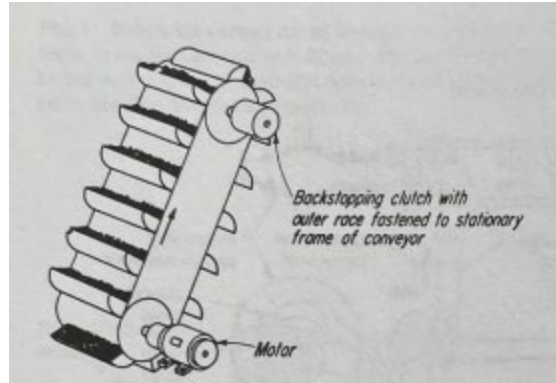


Figure 1 of Sclater’s Chapter 9 illustrates “precision sprags” which are an example of overrunning clutches. Ex. 1017, 11. Sclater states that applications for sprag-type clutches “include overrunning, backstopping, and indexing” and the selection of an overrunning sprag clutch “requires a review of the torque to be transmitted, overrunning speed, type of lubrication, mounting characteristics, environment conditions, and shock conditions that might be encountered.” Ex. 1017, 13 (internal page 320). For backstopping, Sclater’s Figure 2, reproduced below, depicts a vertical conveyor transporting buckets and having a clutch mounted on the headshaft whereby if power to the conveyor is interrupted, the clutch “will prevent the buckets from running backwards and dumping the load.” *Id.*



Sclater's Figure 2 depicts a vertical conveyor carrying buckets and having a motor and a backstopping clutch with an outer race fastened to the stationary frame of the conveyor. Ex. 1017, 13.

G. GROUND 1 – ALLEGED OBVIOUSNESS OVER SCHONENBERGER, SOCWELL, MAGID, AND SCLATER – CLAIMS 1, 4, 7–12, 14, 17, 18, AND 20–27

1. Discussion

Petitioner challenges claims 1, 4, 7–12, 14, 17, 18, and 20–27 as unpatentable under 35 U.S.C. § 103 over Schonenberger, Socwell, Magid, and Sclater. Pet. 21–68. Petitioner groups independent claims 1, 10, 18, and 21 together. Pet. 21–57. We address independent claim 1 and note where independent claims 10, 18, and 21 differ.

Petitioner argues Schonenberger discloses a treadmill comprising a frame having front and rear ends, and a front pulley, a rear belt pulley, bearings, and support element coupled to the frame. Pet. 21–28, 41. Petitioner also argues that Socwell teaches a running belt partially supported by a pulley, the belt having a running surface of which at least a portion is curved, and a person of ordinary skill in the art would have had motivation to combine Socwell's teachings with Schonenberger, as well as a reasonable expectation of success in doing so. *Id.* at 29–41. Further, Petitioner alleges that Magid teaches a safety device coupled to the running belt and at least

partially supported by the support element and Sclater teaches inner and outer race elements, one of which is prevented from rotating in a second direction opposite a first direction of rotation and wherein one of the elements substantially surrounds the other. *Id.* at 41–46. Petitioner argues a person of ordinary skill in the art would have had motivation to combine Magid’s teachings with the Schonenberger’s treadmill as modified by Socwell and to combine Sclater’s teachings with the Schonenberger’s treadmill as modified by Socwell and Magid as well as a reasonable expectation of success in doing so. *Id.* at 46–57. Petitioner maps the disclosures of Schonenberger, Socwell, Magid, and Sclater to the challenged claims. *Id.* at 21–57.

Patent Owner alleges that Petitioner’s position that claims 1, 4, 7–12, 14, 17, 18, and 20–27 would have been obvious over Schonenberger, Socwell, Magid, and Sclater is based on hindsight and Petitioner does not demonstrate that a person of ordinary skill in the art would have had motivation to combine the teachings of Schonenberger, Socwell, Magid, and Sclater, or a reasonable expectation of successfully doing so. Prelim. Resp. 4–22.

After considering the parties’ arguments and evidence, we determine that at this stage, Petitioner has demonstrated a reasonable likelihood of establishing obviousness of at least independent claim 1 over Schonenberger, Socwell, Magid, and Sclater to support institution of Ground 1. We turn now to detailed discussions of the disputes raised by the parties’ arguments at this stage.

a) *Independent Claims 1, 10, 18, and 21*

(1) *Limitations 1.0/10.0/18.0/21.0 and 1.1/10.1/18.1/21.1 — A treadmill, comprising: “a frame”, “a frame having a front end and a rear end.”*

Petitioner asserts that Schonenberger teaches a treadmill and a method for providing a treadmill comprising a housing (i.e., frame) having a front and rear end, as recited in limitations 1.0, 10.0, 18.0, 21.0, 1.1, 10.1, 18.1, and 21.1. *Id.* at 21–22 (citing Ex. 1010, 1:17–22, 4:10–17).

Patent Owner does not present argument against this assertion. After considering the parties’ arguments and evidence as presented, we determine that at this stage, Petitioner has provided sufficient arguments and evidence that Schonenberger teaches these limitations.

(2) *Limitations 1.2/1.3/10.2/21.2, and 1.6/21.4 — “a front running belt pulley coupled to the frame,” “a rear running belt pulley coupled to the frame and spaced a distance from the front running belt pulley,” “a rotatable element coupled to the fame,” and “a support element coupled to the frame.”*

Regarding limitations 1.2, 1.3, 10.2, 21.2, 1.6, and 21.4, Petitioner contends that the claimed front running and rear running belt pulleys coupled to the frame are taught by Schonenberger. Petitioner directs attention to Schonenberger’s front shaft assembly that includes rotatable elements in the form of two operating drums or rollers “suitably journaled to the frame,” and rotatable drums or rollers at either end of the treadmill. Pet. 23–24 (citing Ex. 1010, 4:14–23). Petitioner also alleges that Schonenberger contemplates pulleys in disclosing that “[i]f two sheaves or pulleys are provided at either end of the apparatus, one will be located at either side

thereof, suitably journaled and, connected by a transverse shaft 26” and that single belt 114 is formed with a ribbed or toothed portion that is “destined for engagement by sprockets or toothed wheels of pulleys 10.” *Id.* (citing Ex. 1010, 4:14–23, 9:31–35). Petitioner also asserts that a “POSA would have understood that the pulleys 10 and the shafts 26 are both ‘rotatable elements.’” *Id.* at 24–25 (citing Ex. 1010, 4:14–23; Ex. 1003 ¶ 218).

For limitations 1.6 and 21.4, Petitioner asserts that “[a]s is discussed above, each of the pulleys 10 is supported by a shaft 26 coupled to the frame. . . . Therefore, each shaft 26 is a ‘support element.’” Pet. 41 (citing Ex. 1010, 4:10–24; Ex. 1003 ¶¶ 160–162, 262–263).

Patent Owner does not present argument against these assertions. After considering the parties’ arguments and evidence as presented, we determine that at this stage, Petitioner has provided sufficient arguments and evidence that Schonenberger teaches these limitations.

(3) *Limitations 1.4/18.2— “a plurality of bearings coupled to the frame.”*

For limitations 1.4 and 18.2 of “a plurality of bearings coupled to the frame,” Petitioner equates Schonenberger’s rollers 12 provided on both left and right sides of the frame and attached by bracket 19 with the claimed bearings. Pet. 26–28 (citing Ex. 1010, 4:67–5:05, 5:47–51, 8:45–51, Figs. 5, 19; Ex. 1003 ¶¶ 134, 136).

Patent Owner does not present argument against this assertion. After considering the parties’ arguments and evidence as presented, we determine that at this stage, Petitioner has provided sufficient arguments and evidence that Schonenberger teaches these limitations.

(4) Limitations 1.5/10.3/18.3/21.3— “a running belt at least partially supported by at least one of the front running belt pulley and the rear running belt pulley, wherein the running belt includes a running surface, at least a portion of which is curved,” “a running belt at least partially supported by the rotatable element, wherein the running belt includes a running surface, at least a portion of which is curved,” and “disposing a running belt on the plurality of bearings such that the curved top profile of the plurality of bearings define at least a portion of a curved running surface of the running belt.”

Petitioner asserts that Schonenberger teaches the claimed running belt supported by a belt pulley and including a running surface in disclosing a movable surface 1 formed of slats 4 secured to belt 5 and supported by pulleys 10 and rollers 12. *Id.* at 30–31 (citing Ex. 1010, 2:6–9, 4:10–17, 4:38–41, 8:34–44, Fig. 12; Ex. 1003 ¶¶ 139–144, 223–225, 261, 248–250). For the running surface having a curved portion, Petitioner cites to Socwell that “discloses a ‘novel curved deck treadmill which provides a structurally supported arcuate shaped, moveable surface on which a user may exercise.’” *Id.* at 32 (quoting Ex. 1011, 3:27–29 and citing Ex. 1011, 3:25–26, Fig. 1; Ex. 1003 ¶ 145).

Petitioner provides multiple reasons why “[i]t would have been obvious to POSA to modify Schonenberger’s brackets 19 and rollers 12, 12’ (*‘plurality of bearings’*) to provide a curved support surface such that the movable surface 1 (*‘running surface’*) ‘follows a curved running surface’ as taught by Socwell.” Pet. 32. Petitioner reasons that “[i]t would have been obvious to a POSA to combine the flat manual treadmill topology of Schonenberger with the curved manual treadmill topology of Socwell to:”

(1) “increase safety” (*id.* at 33–34 (citing Ex. 1011, 2:11–29, 2:45–67, 3:1–9, 3:Ex. 1003 ¶ 148; Ex. 1010 4:1–6));

(2) “reduce impact loading of the user’s joints” (*id.* at 33, 35 (citing Ex. 1011, 2:11–29, 2:45–55, 3:1–9, 3:53–57; Ex. 1003 ¶ 148));

(3) provide “a more comfortable treadmill” (*id.* at 35–36 (citing Ex. 1011, 13:43–47); and

(4) provide “a more versatile treadmill that can be used for exercise and rehabilitation” (*id.* at at 35 (citing Ex. 1011, 3:53–57; Ex. 1003 ¶ 153).

Petitioner further asserts that one of ordinary skill in the art “would have understood that by arranging the rollers 12 of Schonenberger in a curved alignment, similar to the curved deck 56 of Socwell, a curved running surface would result.” Pet. 36–39. “The modification would be the use of a known technique – using a curvilinear arrangement of bearings, as taught by Socwell – to improve similar devices (treadmills), in the same way, i.e., to produce a curved running surface.” *Id.* at 40.

Patent Owner contends that Petitioner’s characterization of the arrangement of Schonenberger’s rollers is inaccurate. Prelim. Resp. 14–20. Further, Patent Owner contends that “Petitioner relies on hindsight bias” in modifying Schonenberger’s treadmill to have a curved running surface as allegedly taught by Socwell. *Id.* at 13, 20–22.

First, Patent Owner alleges that Schonenberger “describes the rollers as being arranged to have a substantially flat profile even when the terminal rollers are positioned below the remaining rollers. Simply flipping the orientation of the terminal rollers such that they are positioned above the remaining rollers does not transform this profile into a curve.” Prelim. Resp. 13–14. Patent Owner contends that in Figure 12, Schonenberger’s “rollers do not form a curved top profile at all;” rather, Schonenberger’s

device has “a flat top surface.” *Id.* at 15 (quoting Ex. 1010, Abstr.). Patent Owner asserts that the rollers do not form a curved top profile but are shown in Figures 2 and 12 and described as fixedly located in the frame such that ***“there is practically no bowing or hanging-through of the belts 5 [the form surface 1] since downward vertical forces applied to the step slats 4 are accepted by the rollers 12.*** Thus, ***the surface is practically flat*** while being slightly springy and resembles that of a natural soft grass, or other soft surface athletic track.” Prelim. Resp. 15–16 (quoting Ex. 1010, 5:51–6:4 (adding emphases and bracketing)).

Patent Owner also asserts that “effectively flipping the orientation of the terminal rollers . . . such that they are positioned above the remaining roller would not results in a concave curvature to the running surface” but in a substantially flat or planar surface “as a POSA would expect since the remaining rollers are all of an identical size and shape.” Prelim. Resp. 18. Further, even if the slats forming the running belt were flexible and spaced apart to bring them into contact with the rollers, Petitioner alleges that “the central surface formed by running belt 1, i.e., the portion that forms the ‘running surface’ where a user would actually stand, walk, or run when using the treadmill, would still be substantially flat.” *Id.* at 19.

Further, Patent Owner contends that “a POSA still would not have been motivated to modify Schonenberger as described in the Petition” because “Schoenenberger teaches away from the combination Petitioner proposes.” Prelim. Resp. 20. Specifically, Patent Owner contends that one object of Schonenberger’s invention, “to provide a treadmill with ‘a pleasant, springy feel when being stepped or jumped on without, however, being excessively stressed by bending or bowing,’” (*id.* at 21 (quoting Ex. 1010, 1:63–2:1)) is accomplished by having “a small amount of space

(e.g., ½ cm) between running belt 1 and support belts 13/rollers 12 while, when the surface is loaded, it comes into contact with the support belts 13/rollers 12” (*id.* (citing Ex. 1010, 5:51–6:4)). As contended above, Patent Owner alleges that Petitioner’s modified version omits that space and “[w]ith nothing but gravity to bring running belt 1 in contact with support belts 13/rollers 12, Petitioner’s modifications to Schonenberger would no longer function for its intended purpose.” *Id.* at 22.

We note that Petitioner does not appear solely to rely on the teachings of Schonenberger for teaching a curvature in the running surface but on the teachings of Socwell to modify Schonenberger. Patent Owner does not allege that Socwell does not teach a curvature on its running surface. Rather, Patent Owner argues that Schonenberger’s arrangement of rollers having a substantially flat profile would not have been modifiable to allow for a curved top profile, and even assuming they would be, the portion that forms the running surface would still be flat. Prelim. Resp. 13–20. Yet, Patent Owner, at this stage does not provide sufficient evidence that one of ordinary skill in the art would or could not modify Schonenberger’s arrangement of rollers to have at least a portion of the running surface curved. And, mere attorney argument is entitled to little weight. *See Elbit Sys. of Am., LLC v. Thales Visionix, Inc.*, 881 F.3d 1354, 1359 (Fed. Cir. 2018) (rejecting attorney argument as to the alleged understanding of one of skill in the art on an issue when no evidence was presented); *see also Icon Health & Fitness, Inc. v. Strava, Inc.*, 849 F.3d 1034, 1043 (Fed. Cir. 2017) (“Attorney argument is not evidence.”).

Nor does Patent Owner, at this stage, provide sufficient evidence that person of ordinary skill in the art, upon reading the Schonenberger reference, “would be discouraged from following the path set out in the

[Schonenberger] reference, or would be led in a direction divergent from the path that was taken by the [Patent Owner].” Prelim. Resp. 20 (quoting *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1327 (Fed. Cir. 2009)). Schonenberger’s objectives to avoid excessive stress from “bending or bowing” and to have a surface having “characteristics of a yielding yet firm support similar, for example, to walking on moss-covered ground or a needle-covered path” do not appear to be contrary to having some curvature, as may normally appear on a ground surface or path.

Based on the current record at this stage, we find there is a reasonable likelihood of Petitioner establishing that the cited portions of Socwell disclose a curved running surface and why it would have been obvious to a person of ordinary skill in the art “to combine the flat manual treadmill topology of Schonenberger with the curved manual treadmill topology of Socwell.” Pet. 33. After considering the parties’ arguments and evidence as presented, we determine that at this stage, Petitioner has provided sufficient arguments and evidence that (1) a person of ordinary skill in the art would have had motivation and a reasonable expectation of success for the proposed combination of the Schonenberger and Socwell references’ disclosures and (2) the proposed combination would meet this limitation of the challenged claim.

(5) *Limitations 1.7/10.4/18.4/21.5 — “a safety device coupled to the running belt, the safety device at least partially supported by the support element, wherein the safety device includes a first safety race element and a second safety race element, wherein at least one of the first and second safety race elements is adapted for rotation relative to the frame, and wherein one of the first and second safety race elements substantially*

surrounds the other of the one of the first and second safety race elements,” and a “first safety race element and a second safety race element, both of which are coupled to the running belt, wherein at least one of the first and second safety race elements is adapted for rotation relative to the frame, and wherein one of the first and second safety race elements substantially surrounds the other of the one of the first and second safety race elements.”

Petitioner contends Magid teaches a safety device in disclosing “mounting a one-way ratchet clutch (unidirectional control means 6,6’) . . . to a front shaft assembly . . . or a rear shaft assembly . . . of a treadmill to ‘prevent[] bidirectional movement of’ the treadmill belt.” Pet. 42, 48 (citing Ex 1012, 4:46–59, Figs. 2, 5; Ex. 1003 ¶¶ 163–165, 226, 251). Petitioner also contends Magid teaches the safety device partially supported by a support element in disclosing “that the ratchet gear 61 is supported by the front or rear shaft.” *Id.* Petitioner asserts that “[a] POSA would have known that mounting a one-way clutch in this manner improves the stability of the treadmill by preventing forward treadmill belt motion, thereby providing a ‘safety device.’” *Id.* at 43 (citing Ex. 1003 ¶ 166).

Petitioner contends that “[i]t would have been obvious to a POSA to combine the manual treadmill with a curved running surface of Schonenberger in view of Socwell (“the modified Schonenberger treadmill”), with the known technique of a one-way clutch to prevent treadmill belt motion in a forward direction as disclosed in Magid.” Pet. 46 (citing Ex. 1003 ¶ 175). Acknowledging that “the modified treadmill of Schonenberger in view of Socwell does not fully address the risk of a user falling forward due to reverse rotation of the running surface” (*id.* at 48), Petitioner asserts that a person of ordinary skill in the art would combine

Magid’s one-way clutch control means that is mounted to the front or rear shaft assembly with the Schonenberger treadmill “to prevent the risk of a user stepping onto the belt and losing their balance when the belt unexpectedly moves forward.” *Id.* at 48–49 (citing Ex. 1003 ¶¶ 182–183). This would be “a simple combination of known elements in the prior art,” “the use of a known technique,” and would “obtain predictable results, *e.g.*, reduced noise and improved durability.” *Id.* at 50.

Petitioner relies on Sclater to teach the “first safety race element and a second safety race element, wherein at least one of the first and second safety race elements is adapted for rotation relative to the frame, and wherein one of the first and second safety race elements substantially surrounds the other of the one of the first and second safety race elements.” Pet. 44–46. Specifically, Petitioner asserts that this limitation is taught by Sclater’s sprag-type one-way bearing assembly that includes sprags with rolling elements, such as cylindrical rollers or balls, an inner race, and an outer race surrounding the inner race. *Id.* at 44–45 (citing Ex. 1017, 312, 318; Ex. 1003 ¶ 170). Petitioner further asserts that “wedging between the sprags and the inner and outer races prevents rotation of the inner race in an opposite direction, which prevents the movable surface 1 (*‘running belt’*) from moving forward.” *Id.* at 45–46 (citing Ex. 1017, 318; Ex. 1003 ¶¶ 68–174).

Petitioner further modifies Magid’s “[r]atchet-and-pawl clutch” that makes noise during operation with Sclater’s quieter “friction-type clutch.” Pet. 51. Petitioner contends a “POSA would have considered a sprag-type one-way clutch bearing for an exercise equipment application, such as a treadmill” and “would have known how to replace Magid’s control means with Sclater’s one-way bearing assembly.” Pet. 52. Petitioner further

asserts that “[a] POSA would have considered a sprag-type one-way clutch bearing for an exercise equipment application, such as a treadmill.” Pet. 52 (citing Ex. 1018, 52–53; Ex. 1003 ¶190).

Patent Owner does not dispute that Magid discloses a safety device in the form of a one-way ratchet clutch of unidirectional control means coupled to the running belt and supported by a support element. Nor does Patent Owner dispute that Sclater discloses a sprag-type one way bearing assembly having “an inner race[□], an outer race surrounding the inner race, and a plurality of sprags and rolling elements disposed between the inner race and the outer race,” as alleged by Petitioner (Pet. 43–44).

Rather, Patent Owner contends that Petitioner’s motivations to combine Sclater with Magid are based on hindsight. Prelim. Resp. 5. Patent Owner contends that “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,” but “relies on conclusory arguments that are fraught with hindsight bias and ignore key structural aspects of the asserted references.” *Id.* at 4. Specifically, Patent Owner alleges “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.” *Id.* at 7; *see also* 8–9.

Patent Owner alleges that the “reduced noise and improved durability” are not ascribed to the specific sprag-type clutch Petitioner identifies. Prelim. Resp. 7 (quoting Pet. 50, 98). Similarly, Patent Owner asserts that Sclater does not discuss “durability” of sprag-type clutches. *Id.* at 8. Patent Owner also alleges that “[a] POSA would readily recognize that the same benefits also apply to the countless other mechanisms and devices

that Sclater discloses in equal detail,” and that the Petitioner and their expert Dr. Giachetti does not explain why a POSA would use the specific sprag-clutch relied upon. *Id.* at 9 (citing Pet. 50–55, 71, 98–102; Ex. 1003 ¶¶ 187–194, 348–355). Thus, Patent Owner alleges that Petitioner relies on impermissible hindsight for its “arbitrary selection of the specific clutch it references.” *Id.* at 10.

Patent Owner also contends that a POSA would not combine Schonenberger and Socwell with Magid. Prelim. Resp. 11. Specifically, Patent Owner asserts that “a POSA would immediately recognize that Magid is focused on a two-belt therapeutic walker device” whereas Schonenberger and Socwell “are focused solely on a single running belt exercise treadmill—the precise kind of device Magid rejects.” *Id.* (citing Ex. 1010; Ex. 1011). Further, Patent Owner alleges, “a POSA would not be motivated to combine the curved running surface of Socwell with the flat, planar walker device of Magid because the thus-modified piece of equipment would be unsuited for Magid’s intended purpose” of “therapeutic use by ‘people with uncoordinated feet movement, such as small children, physically handicapped people and old people.’” *Id.* at 12 (quoting Ex. 1012, 1:30–35, 5:52–55). Patent Owner alleges that “a POSA would examine the teachings of other treadmills having curved running surfaces, and not a walker device with a flat or planar surface, such as in Magid,” because of the differences in design and engineering requirements between a treadmill having a curved running surface and one with the flat surface and would thus avoid combining Schonenberger and Socwell with Magid. *Id.* at 12–13.

Yet, on this record, Patent Owner provides insufficient evidence that a person of ordinary skill in the art would recognize that “[a] curved running surface like that of Socwell, however, would be difficult to adapt for

therapeutic use for a similar population” and thus “would not be motivated to combine the curved running surface of Socwell with the flat, planar walker device of Magid because the thus-modified piece of equipment would be unsuited for Magid’s intended purpose.” *Id.* at 12. And, on this record, Patent Owner’s arguments as to the design and engineering requirements of treadmills and as to what a POSA would have known or examined are unsupported by any declarant testimony and are mere attorney argument. *See Elbit Sys.*, 881 F.3d at 1359; *Icon Health*, 849 F.3d at 1043. For example, Patent Owner, at this stage of the proceeding, has not provided any evidence that there is no such noise reduction nor increased durability. Nor has Patent Owner, at this stage, provided evidence that a person of ordinary skill in the art of treadmills would not have looked to Magid’s single belt treadmill or to Sclater’s clutch whereas Petitioner does provide evidence of the opposite in the form of the Declaration.

After considering the parties’ arguments and evidence, we determine that based on the record at this stage of the proceeding, Petitioner has provided sufficient arguments and evidence that (1) a person of ordinary skill in the art would have had motivation and a reasonable expectation of success for the proposed combination of the Schonenberger, Socwell, Magid, and Sclater references’ disclosures and (2) the proposed combination would meet this limitation of the challenged claim.

(6) *Limitations 1.8/10.5/18.5/ and 18.6/21.6—
“wherein one of the first and second safety race
elements and the running belt freely rotates in a
first direction of rotation relative to the frame,
however, in a second direction of rotation,
opposite the first direction of rotation, the one of
the first and second safety race elements is
substantially prevented from rotation relative to
the frame to substantially prevent rotation of the
running belt relative to the frame.”*

Petitioner contends that in the modified Schonenberger treadmill, the inner race of the one-way bearing (i.e., safety element) and the movable surface 1 (i.e., movable belt) are coupled and can rotate in unison relative to the housing 2 (i.e., frame) in the rearward (i.e., first) direction, and the sprags (i.e., part of the safety element) prevent rotation of the inner race and movable surface 1 in the forward direction relative to the frame 12. Pet. 56. Petitioner also asserts that Sclater’s “sprag-type bearing assembly functions as a one-way bearing by providing ‘one-direction only torque transmission in an overrunning clutch’” (*id.* (quoting Ex. 1017, 312)) and that the “[p]recision sprags act as wedges” (*id.* (citing Ex. 1017, 316, 318)).

Patent Owner does not specifically dispute Petitioner’s contention but relies on the arguments presented above (in section III.G.1.a(5)) regarding the use of Magid and Sclater and the allegedly flawed reasoning for combining Schonenberger, Socwell, Magid, and Sclater. Prelim. Resp. 5–13.

After considering the parties’ arguments and evidence, we determine that based on the record at this stage of the proceeding, for the reasons discussed above Petitioner has provided sufficient arguments and evidence to show that (1) a person of ordinary skill in the art would have had motivation and a reasonable expectation of success for the proposed

combination of the Schonenberger, Socwell, Magid, and Sclater references' disclosures and (2) the proposed combination would meet this limitation of the challenged claim.

2. *Summary—Alleged Obviousness of Claims 1, 10, 18, and 21 over Schonenberger, Socwell, Magid, and Sclater*

Having considered the parties' arguments and evidence, we find, with the evidence presented at this stage of the proceeding, Petitioner has demonstrated a reasonable likelihood of prevailing on its assertion that claims 1, 10, 18, and 21 would have been obvious over Schonenberger, Socwell, Magid, and Sclater to support institution.

3. *Dependent claims 4, 7–9, 11, 12, 14, 17, 20, and 22–27*

Petitioner contends that dependent claims 4, 7–9, 11, 12, 14, 17, 20, and 22–27 each depending from one of claims 1, 10, 18, and 21, would have been obvious over Schonenberger, Socwell, Magid, and Sclater for the reasons provided above for the independent claims. Pet. 57–68. Given Petitioner's demonstration of a reasonable likelihood of demonstrating obviousness of independent claims 1, 10, 18, and 21, we find it warranted to institute inter partes review with respect to all claims challenged in Ground 1. *See SAS*, 138 S. Ct. at 1359–60; 37 C.F.R. § 42.108(a).

4. *Conclusion*

Having considered the parties' arguments and evidence, we find, based on the evidence presented at this stage of the proceeding, Petitioner has demonstrated a reasonable likelihood of prevailing on its assertion that claims 1, 4, 7–12, 14, 17, 18, and 20–27 would have been obvious over Schonenberger, Socwell, Magid, and Sclater to support institution under Ground 1.

H. GROUND 2 – ALLEGED OBVIOUSNESS OVER SCHONENBERGER, SOCWELL, MAGID, AND SCLATER — CLAIMS 1, 4, 7–12, 14, 17, 18, AND 20–27

1. *Discussion*

Petitioner presents the challenge to claims 1, 4, 7–12, 13, 17, 18, and 20–27 as presented under Ground 1 (section III.G) except that Petitioner applies alternative claim constructions from the '492 litigation. Petitioner contends that the term “safety device” when construed as a “device having two ring-shaped components” is taught as explained in the analysis and rationales of limitation 1.7 as presented under Ground 1. Pet. 70–71. As for limitation 1.8, Petitioner alleges that when the term “substantially prevent rotation” is construed as “prevent any movement after allowing no or minimal movement,” Sclater’s “sprag-type one-way bearing allows minimal movement before the sprags rotate into a locked position.” Pet. 70–71. For dependent claim 2, Petitioner asserts that the term “shaft” when construed as “a rotating element used to transmit power from one part to another” is disclosed by Schonenberger’s “front shaft assembly (pulley 10 and shaft 26) . . . coupled to the rear shaft assembly (pulley 10 and shaft 26) by the movable surface 1.” Pet. 69.

Relying on arguments and evidence cited in Ground 1 (section III.G), Petitioner, in Ground 2, argues that it would have been obvious to combine Schonenberger’s teachings with those of Socwell, Magid, and Sclater for the same “rationales as explained in Ground 1.” Pet. 68–71.

We, thus, consider these to be alternative grounds that we do not need to reach.

I. GROUND 3 – ALLEGED OBVIOUSNESS OVER SOCWELL, MAGID,
AND SCLATER

1. *Discussion*

Petitioner challenges claims 1, 4, 7–12, 14, 17, 18, and 20–27 as unpatentable under 35 U.S.C. § 103 over Socwell, Magid, and Sclater. Pet. 72–103.

Petitioner alleges Socwell discloses a treadmill comprising a frame having front and rear ends, and a front pulley, rear belt pulley, bearing, a support element coupled to the frame, and a running belt having a running surface of which at least a portion is curved. Pet. 72–85. Petitioner repeats the contention under Ground 1 (section III.G) that Magid teaches a safety device coupled to the running belt and at least partially supported by the support element and Sclater teaches inner and outer race elements, one of which is prevented from rotating in a second direction opposite a first direction of rotation and wherein one of the elements substantially surrounds the other. *Id.* at 85–93. Petitioner argues, as also argued under Ground 1 (section III.G), that a person of ordinary skill in the art would have had motivation to combine Magid’s teaching with Socwell’s treadmill and to combine Sclater’s teachings with the Socwell and Magid treadmill as well as a reasonable expectation of success in doing so. *Id.* at 93–102. Petitioner maps the disclosures of Socwell, Magid, and Sclater to the challenged claims. *Id.* at 72–103.

Patent Owner makes the same allegations as under Ground 1 that Petitioner’s position that claims 1, 4, 7–12, 14, 17, 18, and 20–27 would have been obvious over Socwell, Magid, and Sclater is based on hindsight and Petitioner does not demonstrate that a person of ordinary skill in the art would have had motivation to combine the teachings of Socwell, Magid, and

Sclater, or a reasonable expectation of successfully doing so. Prelim. Resp. 4–22.

After considering the parties’ arguments and evidence, we determine that at this stage, Petitioner has demonstrated a reasonable likelihood of establishing obviousness of at least independent claim 1 over Socwell, Magid, and Sclater to support institution of Ground 3. We turn now to detailed discussions of the disputes raised by the parties’ arguments at this stage.

a) Independent Claims 1, 10, 18, and 21

(1) Limitations 1.0/10.0/18.0/21.0 and 1.1/10.1/18.1/21.1 — A treadmill, comprising: “a frame”, “a frame having a front end and a rear end.”

Petitioner asserts that Socwell discloses a curved treadmill comprising a support frame 12 having a front and rear end, i.e., a frame, as recited in limitations 1.0, 10.0, 18.0, 21.0, 1.1, 10.1, 18.1, and 21.1. Pet. 72–74 (citing Ex. 1011 Abstr., 3:26–29, 5:23–26, 6:23–25, 9:57–65, 11:34–38, 11:53–61, Fig. 1; Ex. 1003 ¶¶ 302–305, 375, 376, 412, 413, 398–400).

Patent Owner does not present argument against this assertion. After considering the parties’ arguments and evidence as presented, we determine that at this stage, Petitioner has provided sufficient arguments and evidence that Socwell teaches these limitations.

(2) Limitations 1.2/1.3/10.2/21.2, and 1.6/21.4— “a front running belt pulley coupled to the frame,” “a rear running belt pulley coupled to the frame and spaced a distance from the front running belt pulley,” “a rotatable element coupled

to the frame,” and “a support element coupled to the frame.”

Regarding limitations 1.2, 1.3, 10.2, 21.2, 1.6, and 21.4, Petitioner contends that the claimed front running and rear running belt pulleys coupled to the frame is disclosed by Socwell’s first roller 78 at the front end (i.e., the front pulley and a rotatable element) and the second roller 86 at the rear end (i.e., the rear pulley and a rotatable element) that support a belt 16 and the journaled ends of which would be received into the frame’s journal housings, i.e., slots, 28 and 34. Pet. 74–76 (citing Ex. 1011, 5:33–41, 6:37–15, Figs. 2, 4; Ex. 1003 ¶¶ 306–309, 394).

Patent Owner does not present argument against this assertion. After considering the parties’ arguments and evidence as presented, we determine that at this stage, Petitioner has provided sufficient arguments and evidence that Socwell teaches these limitations.

(3) Limitations 1.4/18.2— “a plurality of bearings coupled to the frame.”

For limitations 1.4 and 18.2 of “a plurality of bearings coupled to the frame,” Petitioner alleges this is met by Socwell’s belt securing assemblies disposed along the right and left sides of the frame 12 having rollers 98 (i.e., the bearings) mounted on an axle 100 supported by bracket 96 to provide a connection with belt 16. Pet. 76–78 (citing Ex. 1011, 10:5–12, 10:17–26, 11:15–29, Figs. 2, 5; Ex. 1003 ¶¶ 68, 310–316, 401).

Patent Owner does not present argument against this assertion. After considering the parties’ arguments and evidence as presented, we determine that at this stage, Petitioner has provided sufficient arguments and evidence that Socwell teaches these limitations.

(4) Limitations 1.5/10.3/18.3/21.3— “a running belt at least partially supported by at least one of the front running belt pulley and the rear running belt pulley, wherein the running belt includes a running surface, at least a portion of which is curved,” “a running belt at least partially supported by the rotatable element, wherein the running belt includes a running surface, at least a portion of which is curved,” and “disposing a running belt on the plurality of bearings such that the curved top profile of the plurality of bearings define at least a portion of a curved running surface of the running belt.”

Petitioner asserts that Socwell discloses the claimed running belt supported by a belt pulley and including a curved running surface in disclosing a curved belt 16 (i.e., the running belt) secured on a curved deck 56 by the rollers 98 that ensure the deck 56 follows a curved surface. Pet. 83–84 (citing Ex. 1011, 4:13–18, 5:41–48, 10:17–26, Figs. 2, 3, 5; Ex. 1003 ¶¶ 317–319, 379–483, 415).

Patent Owner does not present argument against this assertion. After considering the parties’ arguments and evidence as presented, we determine that at this stage, Petitioner has provided sufficient arguments and evidence that Socwell teaches these limitations.

(5) Limitations 1.7/10.4/18.4/21.5— “a safety device coupled to the running belt, the safety device at least partially supported by the support element, wherein the safety device includes a first safety race element and a second safety race element, wherein at least one of the first and second safety race elements is adapted for rotation relative to the frame, and wherein one of the first and second safety race elements substantially surrounds the other of the one of the first and second safety race elements,” and a “first safety

race element and a second safety race element, both of which are coupled to the running belt, wherein at least one of the first and second safety race elements is adapted for rotation relative to the frame, and wherein one of the first and second safety race elements substantially surrounds the other of the one of the first and second safety race elements.”

Petitioner contends Magid teaches a safety device in disclosing “mounting a one-way ratchet clutch (unidirectional control means 6, 6’) . . . to a front shaft assembly . . . or a rear shaft assembly . . . of a treadmill to ‘prevent[] bidirectional movement of’ the treadmill belt.” Pet. 86 (citing Ex 1012, 4:46–59, Figs. 2, 5; Ex. 1003 ¶¶ 322–335, 384–386, 416, 417). Petitioner also contends Magid teaches the safety device partially supported by a support element in disclosing “that the ratchet gear 61 coupled to the shaft 411 and a pawl 62 coupled to the base 11” prevents the rear roller from rotating clockwise, or forward. *Id.* at 86–88 (citing Ex 1012, 4:46–59, Figs. 2, 5, 9; Ex. 1003 ¶¶ 322–335, 384–386, 416, 417).

Petitioner contends:

As explained above, it would have been obvious to a POSA to combine Socwell’s treadmill with Magid’s control means to permit only unidirectional movement of the running belt to reduce the risk of a user stepping onto the running belt of the treadmill and losing their balance when the belt moves in the forward direction. Magid’s control means 6, 6’ provide a “safety device” by preventing the left and right foot belts 4, 4’ from moving forward.”

Pet. 89, 97 (citing Ex. 1003 ¶¶ 326, 324–344). Similar to Ground 1 (section III.G.1.a(5)), Petitioner alleges that “the modification would have been a simple combination of known elements in the prior art: Socwell’s manual treadmill with a curved running surface and Magid’s one-way ratchet

clutch” that would “yield predictable results: allowing the ratchet gear to overrun counter-clockwise with rearward motion of the belt and providing the backstop clockwise to prevent forward motion of the belt.” *Id.* at 97–98 (citing Ex.1003 ¶¶ 82, 83, 346).

Acknowledging that the treadmill of Socwell as modified by Magid does not teach “first and second safety elements with one surrounding the other,” Petitioner relies on Sclater’s sprag-type one-way bearing assembly that includes sprags with rolling elements, such as cylindrical rollers or balls, an inner race, and an outer race surrounding the inner race. *Id.* at 90–91 (citing Ex. 1017, 312, 318). Petitioner further asserts that “wedging between the sprags and the inner and outer races prevents rotation of the inner race in an opposite direction, which prevents the belt from moving forward.” *Id.* at 91–93 (citing Ex. 1017, 318; Ex.1003 ¶¶ 331–335).

As proposed under Ground 1 (section III.G.1.a(5)), Petitioner further modifies Magid’s “[r]atchet-and-pawl clutch” that makes noise during operation with Sclater’s quieter “friction-type clutch.” Pet. 98. Petitioner similarly contends (as under Ground 1) that a “POSA would have considered a sprag-type one-way clutch bearing for an exercise equipment application, such as a treadmill” and “would have known how to replace Magid’s control means with Sclater’s one-way bearing assembly.” Pet. 99 (citing Ex. 1018, 52–53; Ex. 1003 ¶190).

Patent Owner relies on the same arguments as presented for Ground 1 (section III.G.1.a(5)). Prelim. Resp. 4–13. That is, Patent Owner contends that Petitioner’s motivations to combine Sclater with Magid are based on hindsight and that a person of ordinary skill in the art would not combine Socwell’s curved surface with Magid’s flat, planar walker device because it would render the modified equipment unsuitable for Magid’s intended

purpose and because of the differences in design and engineering requirements. *Id.*

As discussed above under Ground 1 (section III.G.1.a(5)), at this stage of the proceeding, we find Patent Owner’s arguments unpersuasive.

After considering the parties’ arguments and evidence, we determine, based on the record at this stage of the proceeding, that Petitioner has provided sufficient arguments and evidence that (1) a person of ordinary skill in the art would have had motivation and a reasonable expectation of success for the proposed combination of the Socwell, Magid, and Sclater references’ disclosures and (2) the proposed combination would meet this limitation of the challenged claim.

(6) *Limitations 1.8/10.5/18.5/ and 18.6/21.6 — “wherein one of the first and second safety race elements and the running belt freely rotates in a first direction of rotation relative to the frame, however, in a second direction of rotation, opposite the first direction of rotation, the one of the first and second safety race elements is substantially prevented from rotation relative to the frame to substantially prevent rotation of the running belt relative to the frame.”*

Petitioner contends that in the modified Socwell treadmill, the inner race of the one-way bearing (i.e., safety element) and the movable surface 1 (i.e., movable belt) are coupled and can rotate in unison relative to the housing 2 (i.e., frame) in the rearward (i.e., first) direction, and the sprags (i.e., part of the safety element) prevent rotation of the inner race and movable surface 1 in the forward direction relative to the frame 12. Pet. 102–103 (citing Ex. 1017, 316, 318; Ex. 1003 ¶¶ 356, 357, 387, 406, 418).

Patent Owner does not specifically dispute Petitioner's contention but relies on the arguments presented above (section III.G.1.a.(6)) regarding the use of Magid and Sclater and the flawed reasoning for combining Schonenberger, Socwell, Magid, and Sclater. Prelim. Resp. 5–13.

After considering the parties' arguments and evidence, we determine, based on the record before us at this stage and for the reasons discussed above, that Petitioner has provided sufficient arguments and evidence that (1) a person of ordinary skill in the art would have had motivation and a reasonable expectation of success for the proposed combination of the Schonenberger, Socwell, Magid, and Sclater references' disclosures and (2) the proposed combination would meet this limitation of the challenged claim.

2. Summary—Alleged Obviousness of Claims 1, 10, 18, and 21 over Socwell, Magid, and Sclater

Having considered the parties' arguments and evidence, we find that, at this stage with the evidence presented, Petitioner has demonstrated a reasonable likelihood of prevailing on its assertion that claims 1, 10, 18, and 21 would have been obvious over Socwell, Magid, and Sclater to support institution.

3. Dependent claims 4, 7–9, 11, 12, 14, 17, 20, and 22–25

Petitioner contends that dependent claims 4, 7–9, 11, 12, 14, 17, 20, and 22–25, each depending from one of claims 1, 10, 18, and 21, would have been obvious over Socwell, Magid, and Sclater. Pet. 103–111.

Claims 4, 12, and 25 further define the safety race elements as at least partly forming a one-way bearing. Ex. 1001, 33:29–31, 34:6–8, 36:8–11. Claims 7, 11, and 20 narrow the treadmill to a manually powered, non-motorized treadmill. *Id.* at 33:39–40, 34:4–5, 55–56. Claim 8 adds the

element to independent claim 1 of a support foot couple to the frame. *Id.* at 33:41–45. Claim 9 further defines the frame as comprising left, right, and cross members. *Id.* at 33:46–49. Claims 14, 22, and 24 further define the rotatable element as comprising a belt coupled to the frame. *Id.* at 34:13–15, 35:14–17; 36:5–7. Claim 17 further defines the rotatable element as comprising bearings coupled to the frame. *Id.* at 34:23–26. Claim 23 further defines the rotatable element as comprising a rotatable shaft coupled to the frame. *Id.* at 36:1–4.

We have reviewed the evidence and arguments presented in the Petition and determine that, at this stage and based on the record, Petitioner has shown sufficiently how it contends the asserted combination of Socwell, Magid, and Sclater teaches every limitation of claims 4, 7–9, 11, 12, 14, 17, 20, and 22–25, and why one of ordinary skill in the art would have had sufficient reason to combine Socwell, Magid, and Sclater, with a reasonable expectation of success in doing so, to support institution. Pet. 103–111. Patent Owner does not present separate argument for the dependent claims.

After considering the parties’ arguments and evidence, we determine that, at this stage and based on the record, Petitioner has provided sufficient argument that the asserted combination of Socwell, Magid, and Sclater teaches every limitation of claims 4, 7–9, 11, 12, 14, 17, 20, and 22–25, and why one of ordinary skill in the art would have had sufficient reason to combine Socwell, Magid, and Sclater, with a reasonable expectation of success in doing so, to support institution.

4. Conclusion

Having considered the parties’ arguments and evidence, we find that, at this stage with the evidence presented, Petitioner has demonstrated a

reasonable likelihood of prevailing on its assertion that claims 1, 4, 7–12, 14, 17, 18, and 20–25 would have been obvious over Socwell, Magid, and Sclater to support institution under Ground 3.

IV. CONCLUSION

For the foregoing reasons, we determine that Petitioner demonstrates a reasonable likelihood of prevailing with respect to at least one of the claims challenged in the Petition. Accordingly, *inter partes* review of the ’745 patent shall proceed in this case on all of the grounds raised in the Petition. *See SAS*, 138 S. Ct. at 1359–60; *PGS Geophysical*, 891 F.3d at 1360.

Our determination in this Decision is not a final determination on either the patentability of any Challenged Claims or the construction of any claim term. The factual findings set forth in this Decision are preliminary and provided for the sole purpose of deciding whether to institute a review. Our final decision will be based on the record as fully developed during trial, including all arguments and evidence in the Patent Owner’s Response, Petitioner’s Prelim. Resp., Patent Owner’s Sur-Prelim. Resp., or submitted otherwise during trial, as permitted by our rules. *See Trivascular, Inc. v. Samuels*, 812 F.3d 1056, 1068 (Fed. Cir. 2016) (noting that “there is a significant difference between a petitioner’s burden to establish a ‘reasonable likelihood of success’ at institution, and actually proving invalidity by a preponderance of the evidence at trial”) (quoting 35 U.S.C. § 314(a) and comparing *id.* with § 316(e)).

V. ORDER

Upon consideration of the record before us, it is:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an inter partes review of claims 1, 4, 7–12, 14, 17, 18, and 20–27 of U.S. Patent No. 10,799,745 B2 is instituted with respect to all grounds set forth in the Petition; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4(b), inter partes review of U.S. Patent No. 10,799,745 B2 shall commence on the entry date of this Order, and notice is hereby given of the institution of a trial.

IPR2023-00849
Patent 10,799,745 B2

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