

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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THERABODY, INC.,  
Petitioner,

v.

HYPERICE IP SUBCO, LLC,  
Patent Owner.

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Case PGR2024-00053  
Patent 11,857,482 B2

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Before JEFFREY N. FREDMAN, RICHARD H. MARSCHALL, and  
ALYSSA A. FINAMORE, *Administrative Patent Judges*.

FREDMAN, *Administrative Patent Judge*.

DECISION  
Institution of Post-Grant Review  
*35 U.S.C. § 324*

## I. INTRODUCTION

### A. *Background*

Therabody, Inc. (“Petitioner”) filed a Petition (Paper 2, “Pet.”) requesting post-grant review of claims 34–38, 40, 41, 43–46, and 58–60 (the “challenged claims”) of U.S. Patent No. 11,857,482 B2 (Ex. 1001, “the ’482 patent”). Hyperice IP Subco, LLC (“Patent Owner”) filed a Preliminary Response. Paper 7 (“Prelim. Resp.”).

We have authority to determine whether to institute a post-grant review under 35 U.S.C. § 324. Institution of a post-grant review is authorized by statute when “the information presented in the petition . . . would demonstrate that it is more likely than not that at least 1 of the claims challenged in the petition is unpatentable.” 35 U.S.C. § 324(a) (2018). Upon consideration of the Petition, Preliminary Response, and the evidence of record, we determine that the information presented shows that it is more likely than not that Petitioner would prevail in establishing unpatentability of at least one of claims 34–38, 40, 41, 43–46, and 58–60 of the ’482 patent.

### B. *Related Proceedings*

Petitioner indicates that the ’482 patent was asserted in *Hyper Ice, Inc. v. Therabody, Inc.*, 8:24-cv-00390 (C.D. Cal.) (consolidated into Case No. 8-24-cv-00098). Pet. 1. Petitioner also indicates that the ’482 patent was asserted in a number of other litigations involving at least sixteen other parties. *See* Pet. 1–2.

### C. *The ’482 Patent (Ex. 1001)*

The ’482 patent states the invention relates “to a deep muscle-stimulating device used to increase muscle metabolism, increase the lactic

acid cycle and relieve pain.” Ex. 1001, 1:23–25. Figure 1 of the ’482 patent is reproduced below:

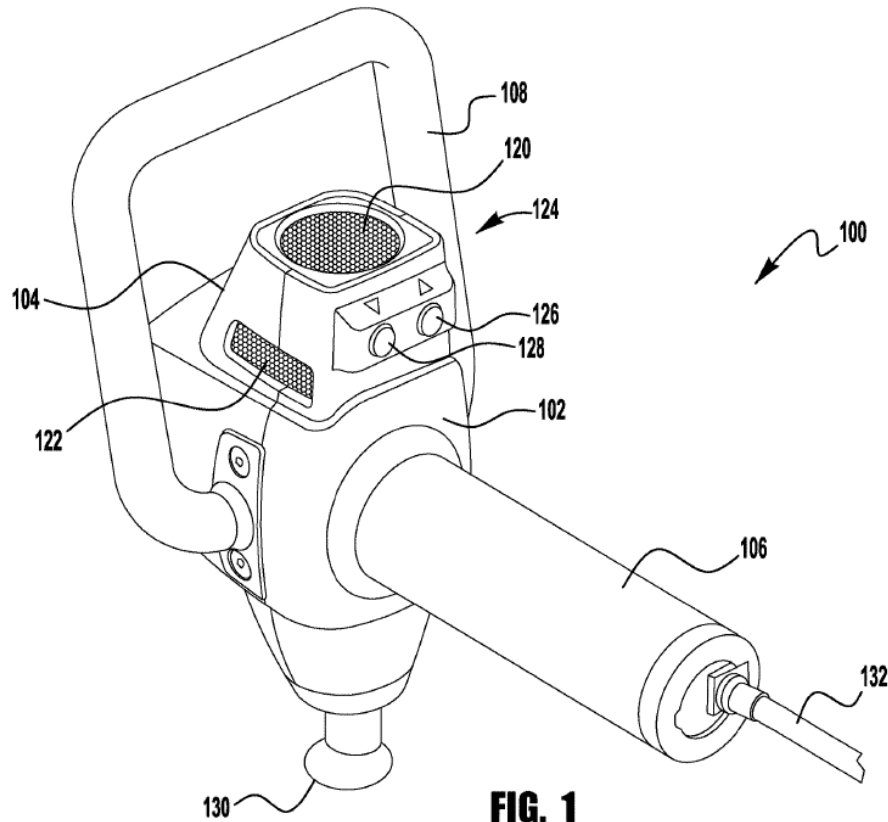
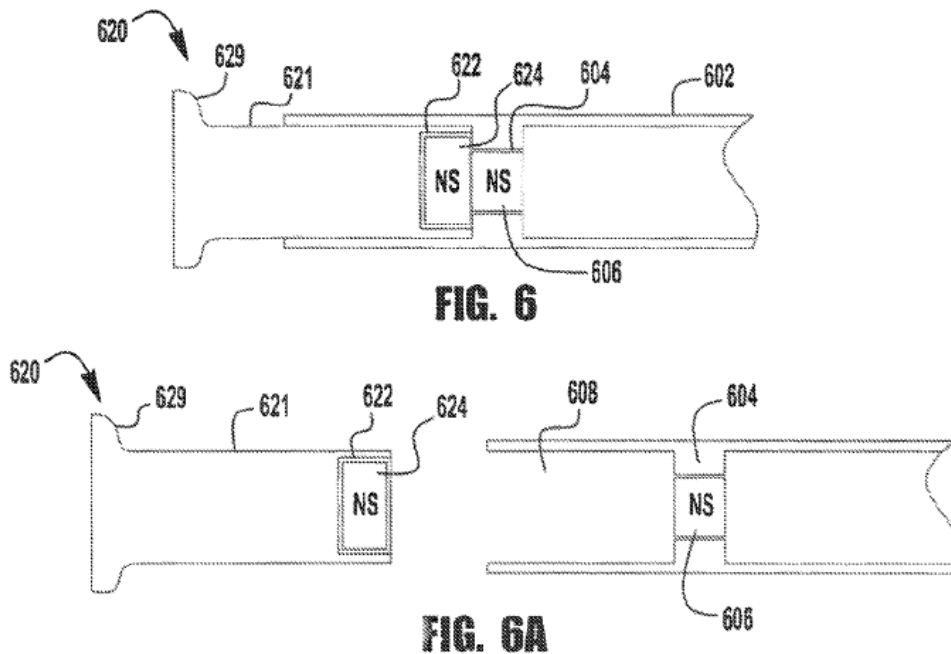


FIG. 1 is a perspective view of an exemplary embodiment of a hand-held massaging device 100. The exemplary massaging device 100 includes a main housing 102 that houses a motor and a drive unit and an upper housing 104 that includes a heat sink and a fan. In addition, massaging device 100 includes a first handle 106, and a second optional handle 108. Handle 106 has a longitudinal axis that extends away from the housing 102. The massaging device 100 also includes a massaging head 130.

*Id.* at 3:33–41. Figures 6 and 6A of the ’482 patent are reproduced below:



“F[igures] 6 and 6A illustrate an exemplary embodiment of a quick-connect system 600 for connecting a massaging head 620 to a piston 602.” *Id.* at 6:47–49. The ’482 patent explains that “[w]hen providing a deep tissue massage using a massaging device, such as, for example, massaging device 100, it may be desirable to switch massaging heads to work on different muscles or different portions of muscles during the massage.” *Id.* at 6:49–53. The ’482 patent states the “exemplary quick-connect system 600 allows a user to quickly switch massaging heads 620. Moreover, the exemplary quick-connect system 600 may be used without turning off the massaging device 100.” *Id.* at 6:53–56.

*D. Illustrative Claim*

Claim 34 is illustrative of the challenged claims and recites:

34. [pre] A percussive massager comprising:

[a] a housing;

[b] a piston in the housing having a proximal end and a distal end;

- [c] a motor at least partially within the housing and operatively connected to the proximal end of the piston, wherein the motor is configured to cause the piston to reciprocate at a first speed;
- [d] a drive mechanism between the motor and the piston that controls a predetermined stroke length of the piston; and
- [e] a quick release connector at the distal end of the piston, wherein the quick release connector is configured to secure a first massaging head while the piston reciprocates a predetermined stroke length at the first speed, wherein the first massaging head has a substantially cylindrical pocket to receive the quick release connector.

Ex. 1001, 11:64–12:14 (formatting modified and brackets added corresponding to Petitioner’s labeling of elements of claim 34).

*E. The Asserted Grounds of Unpatentability*

Petitioner contends that the challenged claims are unpatentable based on a number of grounds, as set forth in the following table. Pet. 4–5.

Ground	References	35 U.S.C. § <sup>1</sup>	Claims Challenged
1	Written Description	§ 112(a)	34–38, 40, 41, 43–46, 58–60
2	Indefiniteness	§ 112(b)	34–38, 40, 41, 43–46, 58–60
3	Mabuchi <sup>2</sup>	§ 103	34, 35, 58–60
4	Mabuchi, Harris <sup>3</sup>	§ 103	36–38, 40, 41, 43–46

<sup>1</sup> The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112–29, 125 Stat. 284, 285–88 (2011), revised 35 U.S.C. §§ 102, 103 effective March 16, 2013. Based on the uncontested assertion that July 1, 2013 is the earliest possible priority date for the ’482 patent, we apply the AIA versions of §§ 102 and 103 in this Decision. *See* Pet. 4.

<sup>2</sup> Mabuchi, US 4,513,737, issued Apr. 30, 1985. Ex. 1005.

<sup>3</sup> Harris et al., US 6,432,072 B1, issued Aug. 13, 2002. Ex. 1006.

5	Mabuchi, Harris, Pivaroff <sup>4</sup>	§ 103	37, 38
6	Pivaroff, Mabuchi	§ 103	34, 35, 58–60
7	Pivaroff, Mabuchi, Harris	§ 103	36–38, 40, 41, 43–46

Petitioner also relies on the Declaration of Dr. John Pratt. Ex. 1002.

## II. DISCRETIONARY DENIAL

### A. 35 U.S.C. § 325(d)

Patent Owner argues the Board should exercise its discretion to deny institution of post-grant review under 35 U.S.C. § 325(d), because several of Petitioner’s asserted prior art references, namely Mabuchi, Harris, and Pivaroff were previously presented to the Office during prosecution of the ’482 patent, and allegedly Petitioner has not demonstrated that the Office erred in allowing the ’482 patent over that prior art. Prelim. Resp. 18–34. Based on the record before us, we decline to deny institution of post-grant review under § 325(d), for the reasons discussed below.

Section 325(d) provides that, in determining whether to institute a post-grant review, “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.” 35 U.S.C. § 325(d). The Board uses a two-part framework in determining whether to exercise its discretion under § 325(d), specifically:

- (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 [the] first part of the framework is satisfied, whether the petitioner has demonstrated that the Office

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<sup>4</sup> Pivaroff, US 6,682,496 B1, issued Jan. 27, 2004. Ex. 1007.

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) (“*Advanced Bionics*”).

In applying the two-part framework, we consider the non-exclusive factors set forth in *Becton, Dickinson and Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8 (PTAB Dec. 15, 2017) (precedential in relevant part), which “provide useful insight into how to apply the framework” under § 325(d). *Advanced Bionics* at 9. Those non-exclusive factors include:

- (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*, Paper 8 at 17–18. “If, after review of factors (a), (b), and (d), it is determined that the same or substantially the same art or arguments previously were presented to the Office, then factors (c), (e), and (f) relate to whether the petitioner has demonstrated a material error by the Office.”

*Advanced Bionics* at 10.

Under the first part of the § 325(d) framework, the evidence demonstrates that the same references relied upon in the Petition, namely Mabuchi, Harris, and Pivaroff, were previously presented to the Office during prosecution of the '482 patent. Ex. 1001, code (56). Petitioner asserts “for these new claims [added during prosecution], the Examiner instead only considered the two prior art references that had been cited against the other claims of the application in the immediately previous Office Action.” *Id.* at 76.

Because we determine that the same art was before the Examiner during examination, we need not consider *Becton, Dickinson* factors (b) and (d), and instead turn to the second prong of the *Advanced Bionics* framework (i.e., *Becton, Dickinson* factors (c), (e), and (f)). See *Ocado Group, PLC v. AutoStore Technology AS*, IPR2021-00398, Paper 10 at 20 (PTAB July 21, 2021).

*Becton, Dickinson* factor (c) considers “the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection.” *Becton, Dickinson*, Paper 8 at 17. Petitioner asserts that it was “material error for the Office to not consider the Mabuchi reference against the newly added claims [including issued claim 34 and its dependents].” Pet. 76. Patent Owner asserts Petitioner “does not provide any evidence that Examiner Stanis was unaware of, or failed to consider, the teachings of Mabuchi.” Prelim. Resp. 24–25. Patent Owner asserts “Examiner Stanis generated 18 pages of search queries run against all the cited references, including specifically the teachings of Mabuchi.” *Id.* at 26 (citing Ex.1004, 2248–2265).

Mabuchi is relied upon in all of the obviousness grounds in the current proceeding. The Examiner did not address the Mabuchi reference directly, and did not include it in art that the Examiner considered pertinent. *See, e.g.*, Ex. 1004, 2246. Claim 34 first appeared in prosecution before the Examiner as claim 38 of an Amendment filed Aug. 10, 2023. *See* Ex. 1004, 2528. The Examiner's next action was an allowance, and claim 34 was never subject to a rejection. In the Reasons for Allowance mailed Dec. 6, 2023, the Examiner stated

Pivaroff does not disclose a quick-connect system configured to allow a massaging head to be secured or connected to the percussive massager while the piston reciprocates as required by . . . claim 38 . . . . Rhoades does not disclose the claimed structure of the quick release connection system - namely . . . a substantially cylindrical pocket at the first massaging head to receive a quick release connector (claim 38).

Ex. 1004, 2593–94. Despite Mabuchi being presented during prosecution, the fact that Mabuchi was not used as the basis of rejection weighs against exercising discretion to deny institution under § 325(d). *See Intel Corp. v. Qualcomm Inc.*, IPR2019-00128, Paper 9 at 16 (PTAB May 29, 2019).

*Becton, Dickinson* factor (e) considers “whether Petitioner has pointed out sufficiently how the Examiner erred in its evaluation of the asserted prior art.” *Becton, Dickinson*, Paper 8 at 18. Petitioner asserts “Mabuchi discloses a percussive massage device and attachment with the same concept of utilizing magnets for a ‘quick release connector’ that was later disclosed in the ‘482 Patent, and having the same cylindrical pocket in the massaging head that is recited in Claim 34 and its dependent claims.” Pet. 76 (citing Ex. 1005, Figs. 6, 6A, 18, 19).

Patent Owner asserts “Mabuchi was known to the Examiner, and substantially the same prior art and arguments were considered and overcome during prosecution. Thus, the Petition has not made, and cannot make, the ‘showing that the Examiner misapprehended or overlooked *specific teachings* in the relevant prior art.[’]” Prelim. Resp. 32.

We agree with Petitioner that the Examiner did not identify the pertinence of Mabuchi’s disclosure and did not issue a rejection based on such disclosure or combined teachings, and that this constitutes Examiner error.<sup>5</sup> As discussed below, we determine that Petitioner has established that it is more likely than not that at least claims 34, 35, 58–60 of the ’482 patent are unpatentable over Mabuchi.<sup>6</sup> Accordingly, *Becton, Dickinson* factor (e) weighs against exercising discretion to deny institution under § 325(d).

*Becton, Dickinson* factor (f) considers “the extent to which additional evidence and facts presented in the Petition warrant reconsideration of the prior art or arguments.” *Becton, Dickinson*, Paper 8 at 18. Petitioner identifies the Declaration of Dr. John Pratt as new evidence that was not presented to the Examiner and that warrants consideration. *See, e.g.*, Pet. 4. Patent Owner does not challenge that the Pratt Declaration is new evidence. *See generally* Prelim. Resp. As cited below in our discussion of the prior art, we find the Pratt Declaration probative to issues of patentability and helpful to our consideration of the prior art combinations that were not addressed by

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<sup>5</sup> The elements taught by Mabuchi are discussed below in the obviousness grounds.

<sup>6</sup> *See Advanced Bionics*, Paper 6 at 8 n.9 (“An example of a material error may include misapprehending or overlooking specific teachings of the relevant prior art where those teachings impact patentability of the challenged claims.”)

the Examiner. Accordingly, *Becton, Dickinson* factor (f) weighs against exercising discretion to deny institution under § 325(d).

Upon review of the relevant prosecution history, the art at issue, and the parties' evidence and arguments, we find that Petitioner has demonstrated that the Office erred in a manner material to the patentability of the challenged claims in the '482 patent, and that the *Becton, Dickinson* factors, when considered as a whole, do not weigh in favor of denying institution of post-grant review under 35 U.S.C. § 325(d). Accordingly, we decline to exercise discretion to deny institution under § 325(d).

*B. 35 U.S.C. § 324(a)*

Patent Owner asserts the "Board should exercise its discretion to deny institution under Section 324(a), because fairness and efficiency dictate that this Petition, which recycles the same art and arguments previously considered and overcome, should be denied as a whole." Prelim. Resp. 34. Patent Owner asserts "[i]nstituting a trial with respect to all challenged claims would not be an efficient use of the Board's time and resources given the duplicity and significant substantive weaknesses in the Grounds presented in the Petition." *Id.* at 35. Patent Owner asserts "[e]ach of the individual Grounds suffers from flawed technical analyses of the prior art and flawed applications of the statutory bases for invalidity. In addition, the Grounds generally amount to nothing more than an attempt to reconsider arguments previously overcome during prosecution of the '482 Patent." *Id.* at 36.

Institution of a *post-grant* review is discretionary. *See* 35 U.S.C. § 324(a); *SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1356 (2018). Other than Petitioner's asserted unpatentability grounds allegedly being before the

Office already, which we address above with respect to 35 U.S.C. § 325(d), Patent Owner does not point to any circumstance that would make our consideration of the grounds an inefficient use of our resources. That said, we understand that there is parallel litigation involving the parties and the '482 patent. Pet. 1. When determining whether to exercise discretion to deny institution in view of a parallel litigation, we consider the six factors set forth in the Board's precedential "*Fintiv*" case. *See Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 at 6 (PTAB Mar. 20, 2020) (precedential) ("*Fintiv*"). We address each factor in turn below:

1. *Whether the Court Granted a Stay or Evidence Exists that One may be Granted if a Proceeding is Instituted*

Patent Owner asserts that Petitioner did not seek a stay. Prelim. Resp. 63. Neither party indicates that the Parallel Litigation has been stayed. Accordingly, this factor weighs is neutral with regard to exercising discretion to deny institution.

2. *Proximity of the Court's Trial Date to the Board's Projected Statutory Deadline for a Final Written Decision*

Patent Owner asserts that "the trial date in the district court action will likely occur very close in time to the Board's projected statutory deadline for a final written decision. . . . the claim construction hearing will occur on April 16, 2025" Prelim. Resp. 63. Neither party identifies a date for trial in the Parallel Litigation. On review of the Pacer record, it appears that the claim construction hearing was continued to April 23, 2025. There is no indication that the trial will be completed prior to a PTAB Final Written Decision, much less a court decision. Accordingly, this factor weighs against exercising discretion to deny institution.

3. *Investment in the Parallel Proceeding by the Court and the Parties*

Patent Owner asserts the “parties have already made a substantial investment in the district court litigation” including “extensive pleading practice, prepared and served infringement contentions and invalidity contentions, and served and responded to written discovery.” Prelim. Resp. 64. Accordingly, this factor weighs in favor of exercising discretion to deny institution.

4. *Overlap Between Issues Raised in the Petition and in the Parallel Litigation*

Patent Owner asserts “there is a substantial overlap between issues raised in the Petition and in the parallel district court proceeding.” Prelim. Resp. 64. Accordingly, this factor weighs in favor exercising discretion to deny institution.

5. *Whether the Petitioner and the Defendant in the Parallel Litigation are the Same Party*

The parties are the same in this post-grant review and the Parallel Litigation. Pet. 1. Accordingly, this factor weighs in favor of exercising discretion to deny institution.

6. *Other Circumstances that Impact the Board’s Exercise of Discretion, Including the Merits*

The parties dispute whether the merits favor discretionary denial. *See, e.g.*, Pet. 33–46; Prelim. Resp. 34–36. As discussed below, we determine it is more likely than not that Petitioner would prevail in demonstrating unpatentability of at least one of the challenged claims. Because, as discussed below, we find that the obviousness ground over the Mabuchi

reference is very strong, we treat this factor as weighing in opposition to exercising discretion to deny institution.

### 7. *Conclusion*

In view of the *Fintiv* factors as presented in this case, and taking “a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review” (*Fintiv* at 6), we are not persuaded that the interests of efficiency and integrity of the system would be best served by invoking 35 U.S.C. § 324(a) to deny institution of a potentially meritorious Petition. Based on the record before us, we determine the facts of this case do not warrant discretionary denial.

### III. LEVEL OF ORDINARY SKILL IN THE ART

We consider the grounds of unpatentability in view of the understanding of a person having ordinary skill in the art (“PHOSITA”) as of the effective filing date of the challenged claims. Petitioner contends that

[a] person of ordinary skill in the art at the relevant time (“POSITA”) would have had a bachelor’s degree in mechanical engineering, or a related field, and two-to-three years of experience in the research, design, development, or testing of rotating or reciprocating mechanisms, with additional education substituting for experience and vice versa.

Pet. 15 (citing Ex. 1002 ¶ 37). Patent Owner contends that

[a] person of ordinary skill in the art (“POSITA”) at the time of the invention would have a working knowledge of product development, and would likely have a degree in engineering and/or industrial design, and/or at least three to five years of experience in conceiving, designing, engineering, and/or modifying such products and devices.

Prelim. Resp. 16.

While we appreciate that the parties differ slightly on the details of experience that an ordinary artisan would possess, we do not find a difference that affects our Decision. For purposes of this Decision, we rely on Patent Owner’s proposed level of ordinary skill in the art. The parties may provide briefing at trial, if appropriate, to explain why adoption of one definition over the other changes the remaining analysis.

We also note the level of ordinary skill in the art usually is evidenced by the prior art references themselves. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001); *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995).

#### IV. CLAIM CONSTRUCTION

In a *post-grant* review, we interpret a claim “using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b).” 37 C.F.R. § 42.200(b). Under this standard, we construe the claim “in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” *Id.*

Neither party identifies any term that requires construction. Pet. 15; Prelim. Resp. 17. Accordingly, we need not construe any term at the present time.

#### V. GROUND 1 - WRITTEN DESCRIPTION

##### A. *Principles of Law*

“A specification that ‘reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date’ has adequate written description of the claimed invention.” *Novartis Pharm. Corp. v. Accord Healthcare, Inc.*, 21 F.4<sup>th</sup> 1362, 1368 (Fed. Cir.

2022) (citing *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010)). “[T]he test requires an objective inquiry into the four corners of the specification from the perspective of a person of ordinary skill in the art.” *Id.* at 1368–69.

We analyze the asserted ground of unpatentability in accordance with the above-stated principles.

*B. Petitioner’s Position*

Petitioner contends that “[m]ultiple aspects of the configuration recited in Element 34[e] of Claim 34, however, are not disclosed anywhere in the written description and figures.” Pet. 16.

*1. “Cylindrical Pocket to Receive the Quick Release Connector”*

Petitioner asserts that the “’482 Patent fails to disclose any instance of a massaging head having a pocket to receive the ‘quick release connector.’ Instead, the only disclosed embodiment in the ’482 Patent shows the opposite configuration.” *Id.* at 18 (citing Ex. 1002 ¶¶ 79–83). Petitioner asserts that:

[t]he only disclosure of a “pocket” ***in the massaging head***, on the other hand, is the pocket 622 located in the massaging head’s shaft for holding magnet 624. *See* Ex-1001 at 6:63-65 (“Massaging head 620 includes a shaft 621 having a cylindrical pocket 622 at the distal end. Located within the cylindrical pocket 622 is a magnet 624.”). This “pocket” in the massaging head ***does not and cannot*** “receive the quick release connector at the distal end of the piston,” as recited in challenged Claim 34 and its dependents. Rather, this pocket 622 merely holds the magnet 624, and the pocket, magnet, and massage head shaft 621 ***are all slid into a pocket (“bore 608”) in the piston 602, i.e., the opposite*** of what is required by Claim 34.

*Id.* at 19–20 (citing Ex. 1001, 6:67–7:3).

Petitioner also asserts, as to the pocket, that “neither the specification nor the figures contain any disclosure of a ‘substantially cylindrical’ bore.” *Id.* at 21. Rather, Petitioner asserts that “a POSITA would understand that the pocket is cylindrical (not “***substantially*** cylindrical”) so as to receive the connector ‘while the piston reciprocates,’ ***without the need for alignment.***” *Id.* (citing Ex. 1002 ¶¶ 85–87).

2. “*Quick Release Connector*”

Petitioner asserts that

Claim 34 purports to broadly claim ***any*** species of connector that is a “quick release connector . . . configured to secure a first massaging head while the piston reciprocates a predetermined stroke length at the first speed.” But at most, the ’482 Patent discloses only a single working example: the “quick-connect system” with corresponding magnets in the shaft of a massaging head and within the bore of the piston.

Pet. 24 (citing Ex. 1001, 6:47–7:19). Petitioner relies on Dr. Pratt to state that “there are a wide range of connectors known in the art that, depending on the context and specific application of the connector, could be argued to be ‘quick release connectors.’ Most having nothing to do with magnets.” *Id.* at 25 (citing Ex. 1002 ¶¶ 53–58).

C. *Patent Owner’s Position*

1. “*Cylindrical Pocket to Receive the Quick Release Connector*”

Patent Owner asserts “Figures 6A and 6B illustrate two embodiments of massaging heads 620 and 630. Each of these massaging heads has a ‘cylindrical pocket 622 at the distal end,’ and the pocket receives the quick release connector, magnets 608 and 624.” Prelim. Resp. 38 (citing Ex. 1001, 6:64–65, Figs. 6A, 6B). Patent Owner cites to the ’482 patent for disclosure

of the details of this quick-connect system. *See id.* at 38–39 (citing Ex. 1001, 6:57–7:3).

Patent Owner asserts that “[i]f the Board determines that Figure 6 of the ‘482 Patent does not literally show a pocket to receive the quick release connector . . . The specification shows a ‘female’ bore 608 (which is the same as pocket) in the piston, and that bore 608 receives the ‘male’ massaging head 620.” *Id.* at 40–41. Patent Owner asserts a “skilled artisan could easily swap these, so that a ‘male’ portion of the piston could be inserted into a ‘female’ bore/pocket in the massaging head” or “a skilled artisan could accomplish something similar by revising the structure.” *Id.* at 41.

Patent Owner also asserts a “POSITA would understand that the pocket of the massaging head needs to be substantially cylindrical so that the massaging head could be attached while the device is reciprocating, but it need not be perfectly cylindrical to achieve this.” *Id.* at 43–44.

## 2. “Quick Release Connector”

Patent Owner asserts “the specification explicitly describes and illustrates one embodiment of the quick release connector, in which magnets assist in securing the connection.” Prelim. Resp. 44. Patent Owner asserts that “a simple quick-release connector would be known to a POSITA to include a number of different mechanical configurations.” *Id.* at 46–47.

### D. Analysis

Based on the current record, we find that the evidence of record better supports a finding that claims 34–38, 40, 41, 43–46, 58–60 comply with the written description requirement.

1. “Cylindrical Pocket to Receive the Quick Release Connector”

Figure 6 of the '482 patent is reproduced below:

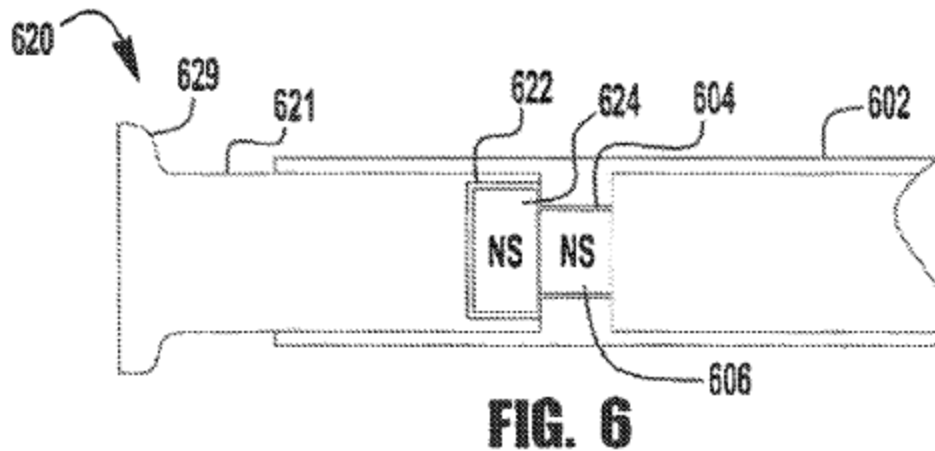


Figure 6 of the '482 patent describes “an exemplary embodiment of a quick-connect system 600 for connecting a massaging head 620 to a piston 602.” Ex. 1001, 6:47–49. The '482 patent discloses that “[m]assaging head 620 includes a shaft 621 having a cylindrical pocket 622 at the distal end. Located within the cylindrical pocket 622 is a magnet 624.” *Id.* at 6:63–65. The '482 patent explains “when the shaft 621 of massaging head 620 is slid into opening in bore 608, the magnets 606 and 624 are attracted to one another and magnetically hold massaging head 620 firmly in place.” *Id.* at 6:67–7:3.

Based on the current record and these descriptions in the '482 patent, we agree with Patent Owner that the evidence better shows possession of a massage head with a cylindrical pocket that receives the quick release connector. As the '482 patent explains, magnet 624 is located in cylindrical pocket 622 which itself is part of massaging head 620, and this description reasonably satisfies the recitation in claim 34 requiring that “the first massaging head has a substantially cylindrical pocket to receive the quick

release connector.” Petitioner does not, on this record, persuade us otherwise.

We also agree with Patent Owner that the current evidence demonstrates possession of a “substantially cylindrical pocket.” We are not persuaded by Petitioner’s assertion that the “‘pocket’ in the massaging head **does not and cannot** ‘receive the quick release connector at the distal end of the piston’” (Pet. 20), because we find that the term “receive” in claim 34 reasonably encompasses the physical insertion of magnet 624, a portion of the magnetic quick release connector, into cylinder 622. Claim 34 does not require that the entire quick release connector be contained within the cylindrical pocket, but only that a portion is within the pocket.

## 2. “*Quick Release Connector*”

We are not persuaded that, on the current record, the ’482 patent lacks written description of a “quick release connector” solely because it provides only a single example. We recognize that one purpose of the written description requirement “is to ensure that the scope of the right to exclude . . . does not overreach the scope of the inventor's contribution to the field of art as described in the patent specification.” *Reiffin v. Microsoft Corp.*, 214 F.3d 1342, 1345–46 (Fed. Cir. 2000). However, “written description is about whether the skilled reader of the patent disclosure can recognize that what was claimed corresponds to what was described; it is not about whether the patentee has proven to the skilled reader that the invention works, or how to make it work, which is an enablement issue.” *Alcon Research Ltd. v. Barr Labs., Inc.*, 745 F.3d 1180, 1191 (Fed. Cir. 2014). That is, the “‘written description’ requirement must be applied in the context of the particular

invention and the state of the knowledge.” *Capon v. Eshhar*, 418 F.3d 1349, 1358 (Fed. Cir. 2005).

Dr. Pratt states “[a]t the time the ’482 Patent was filed, many different types of connectors not requiring a tool were known, including spring-biased ball detents (‘Pip Pins’), magnets, threaded fasteners, bayonet connectors, quarter-turn mechanisms, over-toggle hook mechanisms and hook & loop fasteners.” Ex. 1002 ¶ 53. This supports Patent Owner’s position that the broad scope of “quick release connector” represents information known to the person of ordinary skill.

We therefore agree with Patent Owner that, consistent with *Capon*, an ordinary artisan would have understood before the time of filing of the instant claims that a variety of equivalent “quick release connectors” were known. “It is not necessary that every permutation within a generally operable invention be effective in order for an inventor to obtain a generic claim, provided that the effect is sufficiently demonstrated to characterize a generic invention.” *Capon*, 418 F.3d. at 1359.

Accordingly, we find that Petitioner has not successfully shown, on the current record, that it is more likely than not that it would prevail on this ground.

## VI. GROUND 2 - INDEFINITENESS

### A. *Principles of Law*

Under *Nautilus*, “[a] patent is invalid for indefiniteness if its claims, read in light of the patent’s specification and prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 899 (2014). “[A] patent must be precise enough to afford clear notice of what is

claimed, thereby apprising the public of what is still open to them,” but the present standard recognizes that “absolute precision is unattainable.” *Id.* (internal quotation marks omitted).

*B. Petitioner’s Position*

*1. “Substantially Cylindrical”*

Petitioner asserts the “’482 Patent provides no such standard for measuring whether a pocket is ‘substantially cylindrical.’ Presumably, there is some difference, as the specification describes both the seat 604 in the bore 608 of the piston and the pocket 622 in the shaft 621 of the massaging head as ‘cylindrical.’” Pet. 26. Petitioner asserts “there is no guidance in the claims, the specification, or the file history that would allow a POSITA to determine the difference between the two, or to determine what amount of deviation from a perfect cylinder is still ‘substantially cylindrical.’” *Id.* at 27 (citing Ex. 1002 ¶ 96).

*C. Patent Owner’s Position*

*1. “Substantially Cylindrical”*

Patent Owner asserts “[w]ords of degree like ‘substantially’ are not ‘inherently indefinite,’ but ‘the court must determine whether the patent provides some standard for measuring that degree.’” Prelim. Resp. 48 (quoting *Biosig Instruments, Inc. v. Nautilus, Inc.*, 783 F.3d 1374, 1378 (Fed. Cir. 2015)). Patent Owner asserts “a person of ordinary skill in the art would know when the pocket in a massaging head is substantially cylindrical enough – *i.e.*, sufficiently cylindrical – to accomplish the function identified in the patent: receiving the quick release connector while the piston reciprocates.” *Id.* at 49–50. Patent Owner further asserts:

In other words, the pocket of the massaging head needs to be sufficiently cylindrical to enable the massaging head to be attached while the massage device's piston is reciprocating. If the massaging head can be attached while the massage device's piston is reciprocating, the pocket is substantially cylindrical. Thus, the term "substantially cylindrical pocket to receive the quick release connector" is not indefinite.

*Id.* at 50.

*D. Analysis*

We are not persuaded that, on the current record, that the term "substantially cylindrical" is indefinite. While the '482 patent does not provide a definition for "substantially cylindrical," the figures in the '482 patent do exemplify cylindrical pockets containing magnets for quick release of massaging heads. *See, e.g.*, Ex. 1001, Fig. 6.

We appreciate that Dr. Pratt states

if the pocket is not cylindrical enough, then a perfectly cylindrical piston would either not fit in that "substantially" cylindrical pocket, or else would not be securely held by that pocket. If, on the other hand, both the piston and the pocket had the same non-cylindrical shape, a user would be required to align the two when securing the massaging head to the piston.

Ex. 1002 ¶ 97. However, Dr. Pratt also acknowledges that "[m]agnetic connectors comprise a magnet on at least one of the two objects to be joined. These types of connectors are ubiquitous even today for driving threaded fasteners." *Id.* ¶ 55. Thus, the current evidence of record shows that magnetic connectors were well known and that the ordinary artisan would have the capacity to determine whether a pocket was sufficiently "substantially cylindrical" for a secure connection of a massage head or not. *See Enzo Biochem, Inc. v. Applera Corp.*, 599 F.3d 1325, 1335 (Fed. Cir. 2010) ("Because the intrinsic evidence here provides a general guideline and

examples sufficient to enable a person of ordinary skill in the art to determine [the scope of the claims], the claims are not indefinite even though the construction of the term ‘not interfering substantially’ defines the term without reference to a precise numerical measurement.” (alteration in original)); *SmithKline Beecham Corp. v. Apotex Corp.*, 403 F.3d 1331, 1340–41 (Fed. Cir. 2005) (“The test for indefiniteness does not depend on a potential infringer's ability to ascertain the nature of its own accused product to determine infringement, but instead on whether the claim delineates to a skilled artisan the bounds of the invention.”).

Accordingly, based on the current record, we find that Petitioner has not successfully shown it is more likely than not that it would prevail on this ground.

## VII. GROUNDS 3–7 - OBVIOUSNESS

### A. *Principles of Law*

The Supreme Court in *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398 (2007) reaffirmed the framework for determining obviousness set forth in *Graham v. John Deere Co.*, 383 U.S. 1 (1966). In *KSR*, the Court summarized the four factual inquiries set forth in *Graham* (383 U.S. at 17–18) that are applied in determining whether a claim is unpatentable as obvious under 35 U.S.C. § 103 as follows: (1) determining the scope and content of the prior art; (2) ascertaining the differences between the prior art and the claims at issue; (3) resolving the level of ordinary skill in the art;<sup>7</sup>

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<sup>7</sup> See *supra* Section III.

and (4) considering objective evidence indicating obviousness or non-obviousness.<sup>8</sup> *KSR*, 550 U.S. at 406.

“The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *Id.* at 416. “[W]hen the question is whether a patent claiming the combination of elements of prior art is obvious,” the answer depends on “whether the improvement is more than the predictable use of prior art elements according to their established functions.” *Id.* at 417.

The motivation-to-combine analysis is a flexible one. “[A]ny need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed,” [but the] “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.’”

*Intel Corp. v. PACT XXP Schweiz AG*, 61 F.4th 1373, 1379–80 (Fed. Cir. 2023) (quoting *KSR*, 550 U.S. at 418, 420 (emphasis added)). “[I]f there’s a known technique to address a known problem using ‘prior art elements according to their established functions,’ then there is a motivation to combine,” because *KSR* explains that “‘if a technique has been used to improve one device [or method], and a person of ordinary skill in the art would recognize that it would improve similar devices [or methods] in the same way, using the technique is obvious unless its actual application is beyond his or her skill.’” *Id.* at 1380 (quoting *KSR*, 550 U.S. at 417 and *Intel Corp. v. Qualcomm Inc.*, 21 F.4th 784, 797 (Fed. Cir. 2021)). If

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<sup>8</sup> There is no asserted evidence pertaining to objective indicia of non-obviousness. *See generally* Prelim. Resp.

addressing a known problem, the prior art combination need not be “the *best* option, only . . . a *suitable* option.” *Id.* (quoting *Intel Corp. v. Qualcomm Inc.*, 21 F.4th at 800).

*B. Overview of the Asserted Prior Art*

We review and summarize the asserted prior art below. There is currently no dispute that each asserted reference is prior art.

*1. Mabuchi (Ex. 1005)*

Mabuchi is a United States patent that discloses a “a beauty treatment device having a space guide that permits an actuator to repeatedly reciprocate and controls the motion of the actuator wherein a patten repeatedly pats a skin surface being treated at a given rate.” Ex. 1005, 1:8–12. Figure 1 of Mabuchi is reproduced below:

FIG. 1

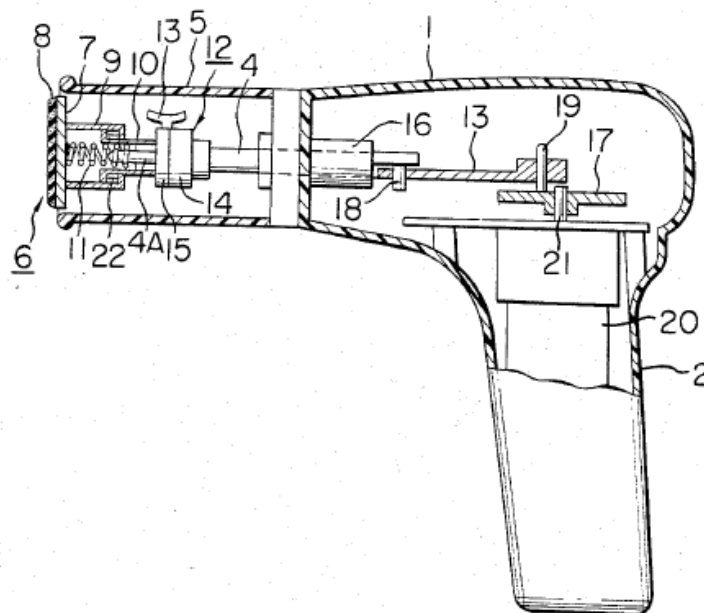


Figure 1 illustrates a beauty treatment device with a handle that houses “a motor 20 which causes a motor output shaft 21 to rotate via a reduction gear” that

causes the rotating disc 17 to rotate. A rod 3 is fitted at an end thereof to a crankshaft 19 provided on the rotating disc 17, the other end thereof being connected to an actuator 4 via a rod shaft 18. Consequently, as the rotating disc 17 rotates, the actuator 4 is caused to reciprocate within an actuator bearing 16 via the rod 3. . . . The patten assembly 6 is connected to the actuator 4 by means of a patten connecting mechanism 12.

*Id.* at 2:40–57.

Mabuchi states an “object of this invention to provide a beauty treatment device having patters of different shapes which are interchangeably used in accordance with the skin portions being treated.” *Id.* at 1:47–50. Mabuchi states the “connecting mechanism 12 utilizing the different pola[r]ities of the magnets 43 and 44 ensures positive connection of the actuator 4 and the patten assembly 6, both of which are subjected to vibrations caused by high-speed reciprocating motion.” *Id.* at 8:33–37. Mabuchi states the “changing of the patten assembly 6 can be easily accomplished since the actuator 4 and the patten assembly 6 are automatically disconnected merely by turning each other.” *Id.* at 8:40–43.

## 2. *Harris (Ex. 1006)*

Harris is a United States patent that discloses “a hand-held combination vibratory/percussive massager having a pair of adjustable width percussion massage nodes.” Ex. 1006, 1:6–8. Figure 2 of Harris is reproduced below:

FIG. 2

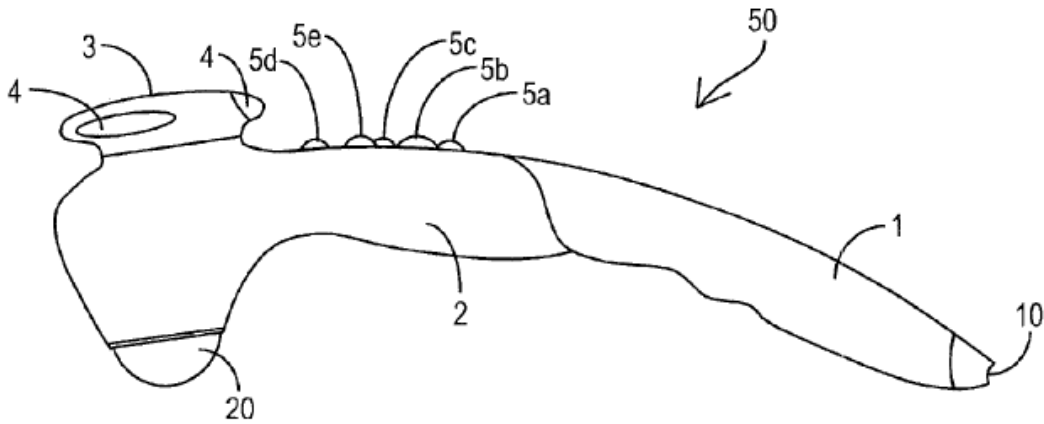


Figure 2 of Harris illustrates

a hand-held massager 50 comprises an elongated handle 1 contoured so as to be comfortable grasped in the hand of the user. The handle 1 is connected to the massager body 2 which includes control panel 5, a first vibratory massaging element comprising a generally flat rounded massage head 3, and a second percussive massaging element comprising two substantially semi-spherical shaped adjustable massage nodes 20.

*Id.* at 2:42–49. Harris states that “control panel 5 preferably comprises a capacitive switch . . . covering a plurality of touch sensitive control buttons or switches, including power control button 5*a*, speed setting control button 5*b*, LED speed indicator 5*c*, and various massage program buttons 5*d*-*g* for setting massage sensation, intensity and frequency.” *Id.* at 2:50–56.

3. *Pivaroff (Ex. 1007)*

Pivaroff is a United States patent that discloses “a deep muscle stimulator device to increase muscle metabolism, increase the lactic acid cycle and to relieve pain.” Ex. 1007, 1:8–10. Figure 6 of Pivaroff is reproduced below:



C. *Ground 3 - Obviousness over Mabuchi*

1. *Petitioner's Position*

a) *Element 34[pre]: "A percussive massager comprising"*

As to the preamble, Petitioner asserts

Mabuchi discloses that it "relates generally to a beauty treatment device, and more specifically to a beauty treatment device having a space guide that permits an actuator to repeatedly reciprocate and controls the motion of the actuator wherein a patten repeatedly pats a skin surface being treated at a given rate."

Pet. 33–34 (citing Ex. 1005, 1:6–12).

b) *Element 34[a]: "a housing"*

Petitioner asserts "Mabuchi discloses that the 'invention comprises a housing 2.'" Pet. 34 (citing Ex. 1005, 4:58, Fig. 1).

c) *Element 34[b]: "a piston in the housing having a proximal end and a distal end"*

Petitioner asserts "Mabuchi's actuator 4 is a piston having proximal and distal ends." Pet. 34. Petitioner asserts that a "POSITA would understand the 'proximal end' of the piston to refer to the region near an interior end of the piston, and the 'distal end' of the piston to refer to the region near an exterior end of the piston." *Id.* (citing Ex. 1002 ¶ 103). Petitioner asserts "[a]ctuator 4 is within housing 2." *Id.* (citing Ex. 1005, Fig. 1).

d) *Element 34[c]: "a motor at least partially within the housing and operatively connected to the proximal end of the piston, wherein the motor is configured to cause the piston to reciprocate at a first speed"*

Petitioner asserts "as shown in Mabuchi's Figure 1, a motor 20, with motor output shaft 21, is contained within housing 2." Pet. 35 (citing Ex. 1005, Fig. 1). Petitioner asserts Mabuchi teaches "that the motor 20 causes

actuator 4 to reciprocate at a first speed. ‘Consequently, as the rotating disc 17 rotates, the actuator 4 is caused to reciprocate within an actuator bearing 16 via the rod 3.’” *Id.* at 36 (quoting Ex. 1005, 2:50–52).

e) *Element 34[d]: “a drive mechanism between the motor and the piston that controls a predetermined stroke length of the piston”*

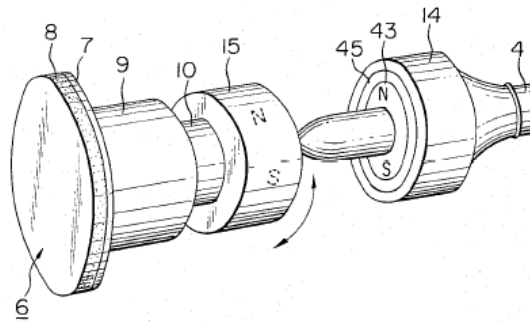
Petitioner asserts

Mabuchi discloses a drive mechanism including rotating disc 17, crankshaft 19, and rod 3. The drive mechanism is between the motor and the piston: the motor output shaft 21 is connected to rotating disc 17, while one end of rod 3 is fitted to crankshaft 19 on rotating disc 17, and the other end of rod 3 is connected to actuator 4.

Pet. 36 (citing Ex. 1005, 2:45–50; Ex. 1002 ¶¶ 106–107). Petitioner asserts that a “POSITA would understand that the location of crankshaft 19 on rotating disk 17 and rod 3 controls the predetermined stroke length of actuator 4.” *Id.* at 36–37 (citing Ex. 1002 ¶ 107).

f) *Element 34[e]: “a quick release connector at the distal end of the piston, wherein the quick release connector is configured to secure a first massaging head while the piston reciprocates a predetermined stroke length at the first speed, wherein the first massaging head has a substantially cylindrical pocket to receive the quick release connector.”*

Petitioner asserts that “the ‘patter connecting mechanism’ in Mabuchi’s Figures 18 and 19 . . . includes magnet 43 implanted in the coupling 14 and the protruding actuator head, all located at the distal end of actuator 4.” Pet. 37 (citing Ex. 1005, 7:67–8:10). Petitioner cites to Mabuchi’s Figure 19, and Petitioner’s copy of Figure 19 is reproduced below:



**Ex-1005, Fig. 19**

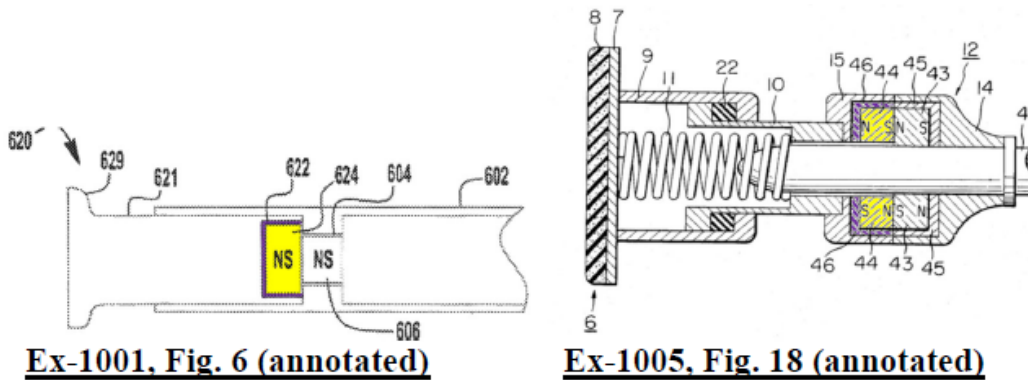
Petitioner asserts that “Mabuchi teaches that this design prevents the pater assembly 6 from unintentionally separating from the actuator 4 during use, yet allows a user to quickly remove and replace the pater assembly 6.” *Id.* at 38 (citing Ex. 1005, 8:33–39). Petitioner asserts Mabuchi

discloses that pater assembly 6 (i.e., the “first massaging head”) has a substantially cylindrical pocket to receive the quick release connector. As shown in Figure 19 (above), on pater assembly 6, the proximal end of pater slide tube 10 includes a flange 15 with an implanted magnet 44. Ex-1005, 8:5-7. Meanwhile, the distal end of actuator 4 includes a substantially cylindrical protrusion, described in other embodiments as the “actuator head” (*id.* 6:1-6), that extends from the coupling 14 and magnet 43 at the distal end of actuator 4.

*Id.* at 40–41 (citing Ex. 1005, Fig. 19).

Petitioner asserts that “to the extent Patent Owner contends that the ’482 Patent’s disclosure of cylindrical pocket 622 holding magnet 624 at the distal end of shaft 621 is a ‘substantially cylindrical pocket to receive the quick release connector,’ Mabuchi discloses the same arrangement.” *Id.* at 41.

Petitioner's annotated versions of Mabuchi's Figures 6 and 18 are reproduced below:



Annotated Figure 6 highlights the magnet 624 in the pocket 622 in yellow while Figure 18 shows an alternative with the magnet 44 in pocket 46. Petitioner asserts that just as the '482 patent shows a substantially cylindrical pocket, so to “Mabuchi similarly discloses a pocket (yoke core 46) holding magnet 44 in flange 15 of the pater assembly 6.” *Id.* (citing Ex. 1002 ¶ 118).

## 2. Patent Owner's Position

Patent Owner asserts “Mabuchi does not disclose, teach, or suggest at least the recitation of Claim 34[e] of ‘a quick release connector . . . wherein the quick release connector is configured to secure a first massaging head while the piston reciprocates a predetermined stroke length at the first speed.’” Prelim. Resp. 51. Patent Owner asserts that “Mabuchi teaches that the space guide 5 fully encompasses the pater assembly 6 in all embodiments and is required for operation of the disclosed beauty treatment device.” *Id.* at 52 (citing Ex. 1005, 1:6–11, 4:6–16). Patent Owner asserts the “constant contact of the space guide 5 is fundamental to the operation of the disclosed ‘beauty treatment device.’” *Id.* at 53 (citing Ex. 1005, 5:38–51, 4:12–18).

Patent Owner asserts the “Petition relies on a disclosure of one specific embodiment of a connection mechanism 12, illustrated in Figures 18-19, in which magnetic forces may be utilized to releasably secure the pater assembly 6 to the actuator mechanism 4.” *Id.* at 54. Patent Owner asserts that “the Petition does not identify any specific teaching in Mabuchi that states that the ‘design’ enables ‘a user to quickly remove and replace pater assembly.’ No such teaching exists.” *Id.*

Patent Owner asserts “[i]n accordance with the teachings of Mabuchi, the space guide 5 fully encompasses the connection mechanism 12 (regardless of form or variation) and therefore must be fully removed in order for a user to access the connection mechanism.” *Id.* at 55. Patent Owner asserts the

Petition has ignored that all the embodiments of the connection mechanisms 12 cannot operate outside of being fully encompassed within the space guide 5 and would not be suitable for securing the pater assembly during operation of the beauty treatment device. Such a line of argument, as suggested in the Petition, would require a substantial reconstruction and redesign of the beauty treatment device disclosed in Mabuchi and cannot support a prima facie case of obviousness.

*Id.* at 55–56. Patent Owner asserts that the prosecution history “is clear that a line of reasoning in which a connection mechanism requires some form of physical manipulation (*e.g.*, thread and screw connection mechanisms, removing a housing, etc.) does not meet the burden of establishing a prima facie case of obviousness.” *Id.* at 56.

3. *Analysis*

a) *Claim 34*

On the current record, we find Patent Owner's arguments unpersuasive. Contrary to Patent Owner's argument, Mabuchi expressly states that the "changing of the patter assembly 6 can be easily accomplished since the actuator 4 and the patter assembly 6 are automatically disconnected merely by turning each other." Ex. 1005, 8:40–43. Mabuchi's use of "easily accomplished" is reasonably understood to satisfy the recitation in claim 34 for a massage assembly with a "quick release connector." Patent Owner provides no evidence, just attorney argument, that removal of patter assembly 6 consistent with Mabuchi's disclosure in Figures 18 and 19 would require any modification to space guide 5. Indeed, Mabuchi states that changing the patter assembly would be "easily accomplished" and does not identify any changes, redesign, or reconstruction that would be necessary for the device in order to function. *See* Ex. 1005, 8:11–43.

This understanding is further supported by Dr. Pratt, who states a "POSITA would have understood that the Mabuchi patter connecting mechanism is configured to secure the massage head while the piston reciprocates a predetermined stroke length at a first speed" and also that "Mabuchi discloses that the purpose of the patter connecting mechanism is to allow for it to be quickly changed during treatment." Ex. 1002 ¶¶ 111–112 (citing Ex. 1005, 5:52–64). Dr. Pratt states "[b]ecause the connecting mechanism is configured such that a user does not need to carefully control the angular orientation or spatial positioning of the patter assembly in relation to head of the actuator during attachment, a POSITA would understand that it is configured to secure while the actuator was

reciprocating.” *Id.* ¶ 113. Dr. Pratt states a “POSITA would have understood that these interchangeable assemblies would be configured to connect to a patten connecting mechanism like the one shown in Mabuchi’s Figures 18 and 19, to allow for fast removal and replacement of the different patten assemblies using the magnetic connection.” *Id.* ¶ 119.

Dr. Pratt also states that this understanding is consistent with the prosecution history of the ’482 patent where Patent Owner “argued ‘Miller is silent regarding the ability for its impact heads to be connected to the coupler during reciprocation of the reciprocating rod.’” *Id.* ¶ 115 (citing Ex. 1004, 2357). Dr. Pratt states:

A POSITA would understand that the Applicants were arguing that Miller’s coupler would not be understood to be configured to secure the massage head while the piston reciprocates a predetermined stroke length at a first speed because it was instead designed to be aligned with the piston in order to be secured. Conversely, Mabuchi teaches that a patten connecting mechanism using magnets (like the one later disclosed in the ’482 Patent) can be secured without such alignment.

*Id.* ¶ 116.

The current evidence of record better supports a determination that Mabuchi teaches a quick release connector as required by claim 34 and that Mabuchi’s quick release connector is configured to secure a massaging head while the piston reciprocates at a predetermined stroke length, at a first speed, and with a substantially cylindrical pocket as further required by claim 34. We do not find, on this record, Patent Owner’s arguments to the contrary persuasive.

Accordingly, we find that on the current record Petitioner has successfully shown it is more likely than not that it would prevail on this ground.

b) *Claims 35 and 58–60*

We find on this record that Petitioner comes forward with sufficient argument and evidence to show it is more likely than not that claims 35 and 58–60 would have been obvious over Mabuchi. *See* Pet. 42–46. Patent Owner does not, at this time, separately argue any of the dependent claims. *See* Prelim. Resp. 56.

D. *Ground 4 - Obviousness over Mabuchi and Harris*

1. *Petitioner’s Position*

a) *Claims 36–38, 40, 41, and 43–46*

Petitioner asserts “Mabuchi in view of Harris teaches or suggests Claim 36.” Pet. 48 (citing Ex. 1002 ¶¶ 136–137). Petitioner asserts as to claim 36 that:

To the extent that Mabuchi does not expressly disclose that the motor is configured to cause the piston to reciprocate the predetermined stroke length at a second speed, Harris discloses a percussive massager with a control panel 5 that includes “speed setting control button 5b” and “LED speed indicator 5c.”

*Id.* at 48–49 (citing Ex. 1006, 2:49–57).

As to claims 37 and 38 that address the stroke speed of the device, Petitioner asserts that a “POSITA would have understood that the selection of particular speeds . . . corresponding to approximately the same rotations per minute of the motor, would be a readily available design choice.” *Id.* at 49–50 (citing Ex. 1002 ¶¶ 138–139).

As to claims 40, 41, and 43–46 that address a control panel with inputs and indicators, Petitioner asserts

Harris discloses a percussive massager with a “control panel 5” that is “sealed to the handle” (i.e., the exterior of the housing) and includes “a plurality of touch sensitive control buttons or switches.” Ex-1006, 2:49-57. A POSITA would understand that

the control panel should be similarly located on the exterior of the housing 2 of Mabuchi's device to be accessible to a user. Ex.-1002 ¶140.

*Id.* at 50.

Petitioner asserts that a "POSITA would have been motivated to improve Mabuchi by adding Harris's teaching of a control panel that allows the motor to be driven at multiple speeds, resulting in multiple different selectable speeds of the percussive massage." Pet. 47–48 (citing Ex. 1002 ¶ 132). Petitioner asserts that "because Mabuchi and Harris provide percussive massage devices that operate in similar ways, including controlling the speed of a percussive effect through the rotational speed of a motor, a POSITA would have understood that their teachings could be combined with little to no change in their respective functions." *Id.* at 48 (citing Ex. 1002 ¶ 134).

## 2. *Patent Owner's Position*

Patent Owner asserts "the deficiencies and failure to establish a prima facie case of obviousness with regard to Ground 3 carry over with regard to Petitioner's arguments in Ground 4." Prelim. Resp. 57. Patent Owner asserts a "POSITA would not find the necessary motivation to combine the teachings of Harris and Mabuchi." *Id.* Patent Owner asserts

Harris is directed to a therapeutic massaging device for addressing deep muscle stimulation. *See* Ex. 1006 at 1:5-12. Mabuchi is directed to a beauty apparatus in which the skin is gently stimulated, namely, to repeatedly pat "the skin by causing a pater or pater assembly to hit the skin at a given rate to impact the skin surface." Ex. 1005 at 1:10-20. Additionally, Mabuchi expressly identifies that there are different categories of massaging devices based on intended outcomes, *e.g.*, a pattering of the skin surface vs. kneading of the user. *See* Ex. 1005 at 1:20-

30. The forces exerted by each device would inherently be different.

*Id.* at 57–58. Patent Owner asserts “just because cited art ‘could’ be combined, does not mean a POSITA *would have been motivated* to combine cited art features. As such, the Petition further fails to meet the burden with regard to Ground 4.” *Id.* at 58.

### 3. *Analysis*

On the current record, we find Patent Owner’s arguments unpersuasive. We did not find deficiencies in Ground 3. *See supra* Section VII.C.3. The combination of Mabuchi and Harris is the situation where “a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.” *KSR*, 550 U.S. at 417. We agree with Petitioner that the ordinary artisan, interested in improving the Mabuchi patting device by allowing control and selection of particular speeds of the motor, would have reasonably looked to other known prior art such as Harris that teach both how to control motor speeds and control panels and display devices that permit the user to select desirable motor speeds.

We do not agree with Patent Owner that this is a “could be combined” situation, but rather agree, on this record, with Dr. Pratt that a “POSITA would have been motivated to improve Mabuchi by adding Harris’s teaching of a control panel that allows the motor to be driven at multiple speeds, resulting in multiple different selectable speeds of the percussive massage.” Ex. 1002 ¶ 132. We further agree with Dr. Pratt that a “POSITA would have had a reasonable expectation of success in combining the teachings of

Mabuchi and Harris because they teach compatible systems—namely, they both include similar motor and drive systems, both of which power percussive massage devices for similar purposes.” *Id.* ¶ 133.

Accordingly, we find that on the current record Petitioner has successfully shown it is more likely than not that it would prevail on this ground. Petitioner has shown that claims 36–38, 40, 41, and 43–46 would have been obvious over Mabuchi and Harris.

*E. Ground 5 - Obviousness over Mabuchi, Harris, and Pivaroff*

*1. Petitioner’s Position*

*a) Claims 37 and 38*

Petitioner asserts “Pivaroff complements Mabuchi and Harris by expressly teaching preferred speeds of the motor, and that those speeds correlate to the speed of the percussive movement of the piston.” Pet. 53. Petitioner asserts “Pivaroff describes that ‘[p]referably, the electric motor operates at a speed of between about 2000 to 3600 RPM, so as to rotate the shaft 26 and coupling system 28 at that speed.’” *Id.* (citing Ex. 1007, 3:44–46).

Petitioner asserts that one reason for selecting the speeds in Pivaroff is because Pivaroff “discloses that providing percussion at this speed ‘stimulates the proprioceptive functions and provides relief in increasing strength for a person suffering from chronic pain and restricted movement to under conditioned and/or damaged muscle tissue.’” *Id.* at 54 (quoting Ex. 1007, 3:54–58). Petitioner asserts that “because Mabuchi, Harris, and Pivaroff all provide percussive massage devices that operate in similar ways, a POSITA would have understood that their teachings could be combined

with little to no change in their respective functions.” *Id.* at 54–55 (citing Ex. 1002 ¶ 152).

## 2. *Patent Owner’s Position*

Patent Owner asserts “the deficiencies with regard to Ground 3 carry over with regard to Petitioner’s arguments in Ground 5.” Prelim. Resp. 59. Patent Owner asserts the “Petition does not even attempt to argue that Mabuchi or Harris disclose a percussive device that operates at two speeds, each of which are less than or equal to 3600 strokes per minute.” *Id.* Patent Owner asserts “just because cited art ‘could’ be combined, does not mean a POSITA *would have been* motivated to combine cited art features.” *Id.*

## 3. *Analysis*

On the current record, we find Patent Owner’s arguments unpersuasive. We note that the current analysis is for obviousness, not anticipation, and thus Patent Owner’s arguments that individual references lack particular teachings is of no moment. “Non-obviousness cannot be established by attacking references individually where the rejection is based upon the teachings of a combination of references.” *In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986).

Dr. Pratt persuasively explains that “like Mabuchi and Harris, Pivaroff’s massage device includes an internal rotary electric motor that drives a flywheel-type device to provide the massaging effect” and that “Pivaroff complements Mabuchi and Harris by expressly teaching preferred speeds of the motor, and that those speeds correlate to the speed of the percussive movement of the piston.” Ex. 1002 ¶¶ 148–149.

Accordingly, we find that on the current record Petitioner has successfully shown it is more likely than not that it would prevail on this

ground. Petitioner has shown that claims 37 and 38 would have been obvious over Mabuchi and Harris.

*F. Ground 6 - Obviousness over Pivaroff and Mabuchi*

*1. Petitioner's Position*

*a) Claims 34, 35, and 58–60*

Petitioner asserts “Pivaroff and Mabuchi both describe percussive massage devices, and are directed to solving similar technical problems.” Pet. 56 (citing Ex. 1002 ¶¶ 157–158). Petitioner also asserts “both massage devices include an internal rotary electric motor that drives a flywheel-type device to provide the massaging effect.” *Id.* (citing Ex. 1002 ¶ 160). Petitioner identifies specific teachings in Pivaroff and Mabuchi regarding claims 34, 35, and 58–60. *See* Pet. 58–68.

Petitioner asserts that “both Pivaroff and Mabuchi teach removable massaging heads to provide the percussive massage.” *Id.* (citing Ex. 1002 ¶ 159). Petitioner asserts “Mabuchi complements Pivaroff by teaching a connecting mechanism 12 comprised of coupling 14 and magnet 43 and the corresponding flange 15 and magnet 44 of pater assembly 6.” *Id.* at 57.

Petitioner asserts a “POSITA would have been motivated to apply Mabuchi’s teaching of a connection mechanism 12 and corresponding attachment 6 to Pivaroff’s teachings” because

Mabuchi teaches that beneficial effects are “enhanced” by “changing the shape or patting intensity . . . in accordance with the portion being treated or the purpose of treatment,” and thus that the attachment (pater assembly 6) must be “interchangeable” and “securely connected to the actuator 4 to prevent unwanted disengagement.”

*Id.* at 57–58 (alteration in original) (citing Ex. 1005, 5:52–64).

## 2. *Patent Owner's Position*

Patent Owner asserts the “Petition does not attempt to correct the deficiencies associated with the teachings of Mabuchi based on Pivaroff. Rather, it appears that Ground 6 is simply a repeat of the arguments overcome in prosecution.” Prelim. Resp. 60. Patent Owner asserts

the teachings of Pivaroff and Mabuchi are not appropriately combinable. Just as with Grounds 4 and 5, a POSITA would not find the necessary motivation to combine the teachings of Pivaroff and Mabuchi. In addition, as with the prior grounds, the Petition does not address the multitude of significant modifications that would be required for such two references to be properly combined in order to be integrated in the manner suggested by the Petition. Moreover, just because cited art “could” be combined, does not mean a POSITA *would have been* motivated to combine cited art features.

*Id.* Patent Owner asserts as “previously described, a POSITA with an appropriate understanding of the teachings of Mabuchi would understand that the removable and interchangeable aspect of a patten assembly 6 requires complete removal of the space guide 5 and its reattachment prior to operation of the disclosed beauty treatment device.” *Id.* at 61. Patent Owner asserts the “Petition fails to address in any manner how the connection mechanism 12 in Mabuchi would be incorporated into the hollow body massaging heads taught in Pivaroff without substantial degradation of either the therapeutic muscle treatment function disclosed in Pivaroff or the intentional soft patten beauty treatment disclosed in Mabuchi.” *Id.*

## 3. *Analysis*

On the current record, we find Patent Owner’s arguments unpersuasive. We find Petitioner has provided sufficient evidence to support a finding that an ordinary artisan would have had reason to combine Pivaroff

and Mabuchi. *See* Ex. 1002 ¶¶ 161–162. Specifically, because “Mabuchi discloses the benefits of [the magnetic] connecting mechanism for devices like that of Pivaroff.” *Id.* ¶ 161.

We also are unpersuaded by Patent Owner’s arguments that substantial and significant modifications would be necessary to combine Pivaroff and Mabuchi. We note that Mabuchi was not discussed by the Examiner, and thus nothing regarding the Examiner’s view can be gleaned regarding Mabuchi.

Patent Owner has, on the current record, provided no evidence supporting its argument as to the need for substantial modifications. In contrast, Dr. Pratt states a “POSITA would have had a reasonable expectation of success in combining Pivaroff’s teachings with those of Mabuchi because they teach compatible systems—namely, both include similar motor and drive systems, both of which power percussive massage devices for similar purposes.” Ex. 1002 ¶ 163.

We remain unpersuaded Patent Owner’s argument about the space guide 5 issue because Patent Owner provides no evidence that removal of the patter assembly 6 consistent with Mabuchi’s disclosure in Figures 18 and 19 would require any modification to the space guide 5. Indeed, Mabuchi states that changing the patter assembly would be “easily accomplished” and does not identify any changes, redesign, or reconstruction that would be necessary for the device in order to function. *See* Ex. 1005, 8:11–43. Lastly, we are unpersuaded by Patent Owner’s assertion that the combination would degrade Pivaroff’s muscle treatment function in the absence of any evidence. “[U]nsworn attorney argument . . . is not evidence.” *Icon Health & Fitness, Inc. v. Strava, Inc.*, 849 F.3d 1034, 1043 (Fed. Cir. 2017).

Accordingly, we find that on the current record Petitioner has successfully shown it is more likely than not that it would prevail on this ground. Petitioner has shown that claims 34, 35, and 58–60 would have been obvious over Pivaroff and Mabuchi.

*G. Ground 7 - Obviousness over Pivaroff, Mabuchi, and Harris*

*1. Petitioner's Position*

*a) Claims 36–38, 40, 41, and 43–46*

Petitioner identifies specific teachings in Pivaroff and Mabuchi regarding claims 36–38, 40, 41, and 43–46. *See* Pet. 70–73. Petitioner asserts

Harris complements the Pivaroff/Mabuchi combination by expressly teaching a “control panel 5” that includes a “plurality of touch sensitive control buttons or switches, including power control button 5a, speed setting control button 5b, LED speed indicator 5c, and various massage program buttons 5d-g for setting massage sensation, intensity and frequency of the vibrations of the percussive massage nodes 20 and vibratory massage head 3.”

Pet. 68 (citing Ex. 1006, 2:49–57; Ex. 1002 ¶ 192). Petitioner asserts that a “POSITA would have been motivated to improve the Pivaroff/Mabuchi combination by adding Harris’s teaching of a control panel that allows the motor to be driven at multiple speeds, resulting in multiple different selectable speeds of the percussive massage.” *Id.* at 68–69 (citing Ex. 1002 ¶ 193).

*2. Patent Owner's Position*

Patent Owner asserts “the deficiencies and failure to establish a prima facie case of obviousness with regard to Ground 6 carries over with regard to Petitioner’s arguments in Ground 7. Again, just because cited art ‘could’ be

combined, does not mean a POSITA *would have been* motivated to combine cited art features.” Prelim. Resp. 62.

### 3. *Analysis*

As discussed above, we find that, on the current record, Ground 6 has established the obviousness of the claims at issue in the ground. *See supra* Section VII.F.3. Patent Owner does not identify any specific deficiency in Ground 7, and neither do we.

Accordingly, we find that on the current record Petitioner has successfully shown it is more likely than not that it would prevail on this ground. Petitioner has shown that claims 36–38, 40, 41, and 43–46 would have been obvious over Pivaroff, Mabuchi, and Harris.

## VIII. CONCLUSION

After reviewing the information presented in the Petition and the Preliminary Response, as well as the evidence of record, we determine that Petitioner has established it is more likely than not that it will prevail in showing that at least one claim of the ’482 patent is unpatentable.

## IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 324(a) post-grant review of claims 34–38, 40, 41, 43–46, and 58–60 of the ’482 patent is hereby instituted on the grounds set forth in the Petition, commencing on the entry date of this Order, and pursuant to 35 U.S.C. § 324(c) and 37 C.F.R. § 42.4(c), notice is hereby given of the institution of a trial.

FURTHER ORDERED that the trial will be conducted in accordance with a separately issued Scheduling Order.

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PETITIONER:

Marc J. Pensabene  
Cameron W. Westin  
O'MELVENY & MYERS LLP  
mpensabene@omm.com  
cwestin@omm.com

PATENT OWNER:

Mauricio Uribe  
KNOBBE MARTENS OLSON & BEAR LLP  
mauricio.uribe@knobbe.com

Lawrence LaPorte  
LEWIS BRISBOIS BISGAARD and SMITH LLP  
lawrence.laporte@lewisbrisbois.com