

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 No. PGR2025-00013  
Patent No. 11,938,082

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**PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE TO  
PETITION FOR POST-GRANT REVIEW  
OF U.S. PATENT NO. 11,938,082**

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**LIST OF EXHIBITS<sup>1</sup>**

| <b>Ex. No.</b> | <b>Description</b>                                                                                                                                                                      |
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| Ex-1001        | U.S. Patent No. 11,938,082 (“the ’082 Patent”)                                                                                                                                          |
| Ex-1002        | Declaration of John D. Pratt, Ph.D., In Support of Petition for Post Grant Review of U.S. Patent No. 11,938,082                                                                         |
| Ex-1003        | Curriculum Vitae of Dr. John Pratt                                                                                                                                                      |
| Ex-1004        | Prosecution History of the ’082 Patent (Application No. 18/515,112)                                                                                                                     |
| Ex-1005        | U.S. Patent No. 4,513,737 (“Mabuchi”)                                                                                                                                                   |
| Ex-1006        | U.S. Patent No. 6,432,072 (“Harris”)                                                                                                                                                    |
| Ex-1007        | U.S. Patent No. 6,682,496 (“Pivaroff”)                                                                                                                                                  |
| Ex-1008        | U.S. Publication No. 2003/0195443 (“Miller”)                                                                                                                                            |
| Ex-1009        | U.S. Publication No. 2007/0150004 (“Colloca”)                                                                                                                                           |
| Ex-1010        | Taiwanese Patent Number 9,720,7752U (“Wang”)                                                                                                                                            |
| Ex-1011        | Certified English Translation of Taiwanese Patent Number 9,720,7752U (“Wang”)                                                                                                           |
| Ex-1012        | U.S. Patent No. 2,550,775 (“Clark”)                                                                                                                                                     |
| Ex-1013        | Prosecution History of U.S. Patent No. 11,857,482 (Application No. 17/681,367)                                                                                                          |
| Ex-1014        | U.S. Patent No. 3,007,504 (“Clark”)                                                                                                                                                     |
| Ex-1015        | Hyperice’s P.R. 4.2 Exchange of Claim Terms for Construction and Extrinsic Evidence, <i>Hyper Ice Inc. v. Joicom Corporation</i> , No. 8:24- cv-00098-JWH-DFM (C.D. Cal. Nov. 25, 2024) |

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<sup>1</sup> Four-digit pin citations that begin with “0” are to the page stamps added by Petitioner in the bottom right corner of the exhibits. All other pin citations are to original page, column, paragraph, and/or line numbers.

| Ex. No. | Description                                                                                                                                                                                                |
|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ex-1016 | Defendant Therabody, Inc.’s First Amended P.R. 4-2 Identification of Preliminary Claim Constructions, <i>Hyper Ice, Inc. et al v. Therabody, Inc.</i> , No. 8:24-cv-00390-JWH-DFM (C.D. Cal Dec. 17, 2024) |
| Ex-1017 | Appendix B1 – Claim Mapping Chart                                                                                                                                                                          |
| Ex-1018 | Appendix B2 – Claim Mapping Chart                                                                                                                                                                          |
| Ex-1019 | Declaration of Bradley M. Berg in Support of Petitioner’s Motion for Pro Hac Vice Admission Pursuant to 37 C.F.R. § 42.10(c)                                                                               |
| Ex-1020 | Declaration of Brett J. Williamson in Support of Petitioner’s Motion for Pro Hac Vice Admission Pursuant to 37 C.F.R. § 42.10(c)                                                                           |
| Ex-1021 | INTENTIONALLY LEFT BLANK                                                                                                                                                                                   |
| Ex-1022 | Hyperice Press Release, “Hyperice Introduces Hypervolt, a State-of-the-Art Vibration, Massage Device for Muscle Relief”, published February 26, 2018                                                       |
| Ex-1023 | Hypervolt Website – “About Hypervolt”                                                                                                                                                                      |
| Ex-1024 | Transcript of the Deposition of Nathan Morrill                                                                                                                                                             |
| Ex-1025 | Hyperice’s Amended Responses to Therabody Interrogatories (February 28, 2025) in Case No. 8:24-cv-00390-JWH-DFMx                                                                                           |
| Ex-1026 | Stedman’s Medical Dictionary (28th ed. 2006)                                                                                                                                                               |
| Ex-1027 | Oxford Dictionary of English (Angus Stevenson ed., 3d ed. 2010)                                                                                                                                            |
| Ex-1028 | Mosby’s Medical Dictionary (8th ed. 2009)                                                                                                                                                                  |
| Ex-1029 | INTENTIONALLY LEFT BLANK                                                                                                                                                                                   |
| Ex-1030 | INTENTIONALLY LEFT BLANK                                                                                                                                                                                   |
| Ex-1031 | U.S. Patent No. 8,101,843                                                                                                                                                                                  |
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| Ex-1033 | Declaration of John D. Pratt, Ph.D., In Support of Petitioner’s                                                                                                                                            |

| Ex. No. | Description                                                                                 |
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|         | Reply                                                                                       |
| Ex-1034 | Hyperice's Opening Claim Construction Brief (Dkt. No. 53) in Case No. 8-24-cv-00098-JWH-DFM |

## **I. INTRODUCTION**

The Patent Owner Response (“POR”) fails to distinguish the Challenged Claims from the prior art and does not show that the Challenged Claims are adequately described and definite. Accordingly, the Challenged Claims should be cancelled.

## **II. PROSECUTION HISTORY**

As the Patent Owner (“PO”) concedes, there were no substantive prior art rejections during prosecution of the ’082 Patent. POR 7.

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

PO offers an overbroad definition encompassing any “device[] for human use and interaction.” POR 19. Its expert confirmed the breadth, testifying it would cover a mechanical engineer who had designed brooms, forklifts, roller coasters, and basketballs, until eventually conceding that someone “strictly meeting the definition” would “probably need a little broader experience.” Ex-1024, 31:8–32:9, 34:5–35:1.

The Board should adopt Petitioner’s POSITA definition. Pet. 13.

In any event, Dr. Pratt satisfies PO’s definition, as PO’s expert concedes. *See, e.g.,* Ex-1024, 35:25-36:5; Ex-1033, ¶4.

#### IV. CLAIM CONSTRUCTION

##### A. Preamble is Not Limiting

PO now contends for the first time that the preamble (“a percussive massager”) limits the claims. POR 21. That contention should be viewed skeptically, particularly given PO’s failure to identify the preamble as limiting in the district court claim construction. Ex-1034, 3-4.

On the merits, the argument fails. Preambles generally are not limiting unless they recite essential structure/steps or are necessary to give life and meaning to the claim. *Catalina Mktg. Int’l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002). Use-oriented preambles do not limit apparatus claims because patentability turns on claimed structure, not purpose. *Id.*, 808.

Here, *Catalina*’s exacting standard—that intended-use preamble language limits “only if the applicant clearly and unmistakably relied on those uses or benefits to distinguish prior art”—is not met. 289 F.3d at 809. “A percussive massager” merely describes intended use. The challenged claims define a structurally complete device—“a housing ... a piston ... a motor ... a drive mechanism ... [and] a quick release connector”—that is not tethered to any particular use.

PO points to (i) prosecution amendments for the ’482 patent and (ii) use of “the percussive massager” in claims with a different context than is at issue here. Both are misplaced.

**First**, contrary to PO’s assertions, Applicant never relied on the preamble to distinguish prior art for any claims of the ’482 Patent. POR 22-24. Instead, for Claim 1 of that patent, Applicant amended both the preamble and the body to recite “the percussive massager,” and then argued prior art failed to disclose the claimed quick-connect system **in the body** of the claim. Ex-1013, 2524-2536. Applicant’s argument was about this body limitation, not the preamble. By contrast, Claim 34 (prosecution Claim 38) and its dependents were added as new claims. Although Claim 34’s preamble recites a “percussive massager,” the body of Claim 34 does not. *Id.*, 2524–2531. Applicant’s arguments on Claim 34 never mentioned the preamble; they focused exclusively on the “quick release connector,” including its “substantially cylindrical pocket.” *Id.*, 2537–2538. The Examiner allowed the claims based on the quick-connect system, not because the prior art failed to disclose a percussive massager. *Id.*, 2593-2594; 2563.

**Second**, PO’s reliance on other claims from the ’482 Patent that use “the percussive massager” in the body (Claims 1, 13, 18, 46, 51) is backwards. *Catalina* addressed this precise scenario: where a phrase appears only in the preamble of one claim but in both the preamble and body of another, it limits the latter but not the former. 289 F.3d at 810-11. In the ’082 Patent, **none** of the claims use the phrase “percussive massager” in the body of the claim.

**Third**, even in the context of the '482 Patent, PO's antecedent-basis theory for dependent Claims 46 and 51 fails. PO's lone case, *Pacing Techs., LLC v. Garmin Int'l, Inc.*, is inapposite. In *Pacing*, the Federal Circuit held the preamble limiting because the preamble terms supplied antecedent basis and were "necessary to understand positive limitations in the body of claims." 778 F.3d 1021, 1024 (Fed. Cir. 2015). By contrast in the '482 Patent, "percussive massager" is not recited in, or necessary to understand, any positive limitation in the body of the dependent claims. Claim 46 recites a positive limitation related to "a first selection of the one or more inputs" and Claim 51 recites a positive limitation related to "the first data." Both use "percussive massager" in the body in a merely ancillary way to refer to the apparatus generally. Further, in *Pacing*, the specification repeatedly described a "repetitive motion pacing system" and tied the invention to a data storage for that system. Ex-1031, 4:53–5:13; 5:59–61; 6:45–56. Here, by contrast, the term "percussive massager" is not disclosed or described in the specification at all.

**Finally**, because the '082 Patent specification does not disclose "percussive massagers" at all, there would be no written description or enablement support if the preamble was limiting.

**B. Construction of “Percussive Massager”**

**1. PO’s construction rests on the wrong time period and lacks intrinsic support**

Even if limiting, PO’s construction—“a device that provides a high-speed, long stroke action to massage deep muscle tissue”—should be rejected. *Phillips* requires that claim terms carry their ordinary meaning to a POSITA *at the time of the invention*, and the *specification* is the single best guide to determining that meaning. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1313-14 (Fed. Cir. 2005). PO violates both principles.<sup>2</sup>

*First*, PO’s construction is derived from extrinsic sources that all post-date the ’082 Patent by nearly a decade. Ex-2018 (Feb. 2022); Ex-2019 (Oct. 2023); Ex-2020 (July 2021); Ex-2021 (Sept. 2024); Ex-2028 (post-2022). Neither PO nor its expert cites contemporaneous references from around 2013. Although Mr. Morrill acknowledged that the relevant lens is a POSITA “from that time,” Ex-1024, 42:21-23, and further conceded that dictionaries from 2013 “could help,” he “did not look at a dictionary at that time.” *Id.* 45:11-24.

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<sup>2</sup> PO’s “plain and ordinary meaning” label does not alter the analysis. *Trs. of Columbia Univ. v. Symantec Corp.*, 811 F.3d 1359, 1363 (Fed. Cir. 2016); *Netword, LLC v. Centraal Corp.*, 242 F.3d 1347, 1352 (Fed. Cir. 2001).

*Second*, the intrinsic record does not support the “high-speed, long stroke action,” or “deep tissue” limitations PO would put on “percussive massager.” Notably, the specification never uses “percussive” outside the claims, and those claim usages were added 2023 (when the application was filed).

PO’s reliance on the background’s statement of purpose—“a deep muscle-stimulating device used to increase muscle metabolism, increase the lactic acid cycle and relieve pain” (Ex-1001, 1:25-28)—says nothing about “high-speed, long stroke action.” The only other cited passage states *stroke length may be adjusted* for “larger or smaller muscle groups, or deeper or shallower points.” Ex-1001, 7:20-23 (emphasis added). That language undercuts any rigid “long stroke” or “deep tissue” requirement. Even Mr. Morrill agreed that shorter strokes would fall within the claim if they “provide relief on the muscle,” deep or not. Ex-1024, 75:9-76:13.

PO’s expert identified no intrinsic support for “high-speed.” He testified the term came from his “review of the different documents,” but agreed that the cited passages do “not ... say[] anything about speed,” and the patent nowhere uses “high speed.” Ex-1024, 48:3-7; 51:9-16. When asked for objective boundaries, he offered only that it could be determined through experimentation and whether a particular speed yielded the therapeutic benefit. *Id.*, 54:8-19, 54:25-56:19; 60:22-25.<sup>3</sup>

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<sup>3</sup> Even setting aside indefiniteness, tying “high speed” to therapeutic outcomes is

Similarly, with respect to “long stroke action,” Mr. Morrill could not identify any support in the specification for his understanding. *Id.*, 61:2-17, 62:23-63:5. Again, Mr. Morrill resorted to pointing to whether a particular stroke length gave the intended therapeutic benefits. *Id.*, 64:5-24, 71:20-73:15.

Claims should be construed to preserve validity. *Rhine v. Casio, Inc.*, 183 F.3d 1342, 1345 (Fed. Cir. 1999). Construing the preamble “percussive massager” (not in the specification) to impose therapeutic-outcome-based, requirements (also not in the specification) invites indefiniteness and written-description problems, particularly since there is no evidence of a settled meaning in 2013.

**2. The '082 Patent draws no clear dividing vibration/percussion line, and a POSITA in 2013 would not have relied on one**

Trying to avoid prior art, PO argues there is a distinction between “percussive” and “vibration” massage. POR 2-3. But this distinction is not found anywhere in the '082 specification. PO attempts to manufacture it from on post-2013 materials. *Id.*; Ex-1033, ¶¶7-15. But PO’s own materials use the terms interchangeably years later. Ex-1022, 0001 (2018 press release describing Hypervolt as a “vibration device” that “helps relieve muscle pain” and facilitates “massage”);

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illogical since those outcomes depend on multiple variables, not speed alone. *See* Ex-1024, 56:20-24.

Ex-1023, 0005 (PO’s website: “Building on ... vibration technology ... introduced ... percussion massage”). And despite calling its Hypervolt a “vibration device,” PO also asserts that Hypervolt practices the ’482 Patent. *See* Ex-1025, 38; Ex-1033, ¶16. PO cannot, on this record, rely on a vibration/percussion distinction that is absent from the intrinsic evidence and not shown to exist as of 2013.

**3. If construed, “percussive massager” means a massage device whose piston and head reciprocate back and forth**

“Percussive massager” requires no construction because the preamble is non-limiting. The specification contains no “percussive” terminology; “percussive massager” is merely a possible use of the claimed invention added long after the priority date, and PO identifies no contemporaneous extrinsic meaning. Ex-1033, ¶¶17-20.

Nevertheless, if the Board construes “percussive massager,” the construction should track the patent’s disclosure and 2013-era usage: “a massage device whose piston and massage head reciprocate back and forth.”

The patent describes massaging devices with a “drive mechanism for moving the piston and massage head,” converting rotary motor motion to linear motion, causing the piston and head to move “back and forth in a reciprocating motion.” Ex-1001, 1:42-48; 5:2. Stroke length is adjustable for different muscle groups and depths, and speeds can be preset, *id.*, 7:20-23; 7:45-8:3, values are determined as

needed “for a particular massaging device,” *id.*, 3:29-31. Moreover, contemporaneous dictionaries likewise define “percussion” as repeated tapping or striking and “massage” as manipulation of soft tissue, with no rigid force, speed, or stroke thresholds. Ex-1026, 0004; Ex-1027, 0004; Ex-1028, 0003.

**C. “Massaging Head” Requires No Construction and Should Be Given Its Plain and Ordinary Meaning**

PO nominally endorses the plain meaning of “massaging head” but in substance seeks to reinsert “percussive massager” as a limitation. Ex-1033, ¶¶21-25. Its proposed construction—“the end piece of the percussive massager that contacts the user’s body to provide percussive massage” (POR 27)—merely repackages its improper percussive limitation. PO’s expert conceded that any “percussive” aspect derives from the preamble rather than the term “massaging head” itself. Ex-1024, 110:1-114:2.

As explained in Section IV.A, the ’082 Patent does not disclose percussive massagers and importing an intended use into an apparatus claim is improper. PO again disregards intrinsic evidence and relies on post-2013 publications. Ex-2020 (2021); Ex-2022 (2022).

By PO’s own expert’s admission, the plain meaning of “massaging head” is broader and, if construed at all, should be “the part of the massager that makes contact with the body.” Ex-1024, 108:9-11; 110:1-114:2.

## V. THE CHALLENGED CLAIMS LACK WRITTEN DESCRIPTION

### A. Ground 1A

Claim 1's broad "quick-connect system" lacks written description because the specification does not show possession of the full scope, including asserted "equivalents." A patentee cannot disclose one embodiment yet claim a broader genus. *LizardTech v. Earth Resource Mapping, Inc.*, 424 F.3d 1336, 1346 (Fed. Cir. 2005). Written description for a genus requires a representative number of species or identifying characteristics. MPEP 2163 II.A.3.a.ii.

Here, the specification discloses and depicts only one species—magnets. It provides no relevant identifying characteristics defining the broader genus of "quick release connector," and does not support the full breadth of Claim 1.

The Board cited Dr. Pratt's list of connector types to suggest a POSITA would know possible quick-connect options. However, Claim 1 requires the quick-release system operate to secure the massage head while the piston reciprocates, which PO asserts indicates that no alignment is needed. But many of Dr. Pratt's examples require alignment and would not satisfy the claim as PO understands it. Ex-1033, ¶¶26-29. In any case, "a description that merely renders the invention obvious does not satisfy the [written description] requirement." *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1352 (Fed. Cir. 2010). Dr. Pratt's knowledge of other types of quick-release options cannot supply written description.

**B. Ground 1B**

Where precision is material, the specification must reflect it. *Capon v. Eshhar*, 418 F.3d 1349, 1358 (Fed. Cir. 2005). Applicant argued no careful alignment is needed to attach the connector to the piston, conceding the connection must remain secure without alignment. That premise requires a pocket geometry precise enough to retain the magnet under misalignment and reciprocating loads; a mismatched pocket–magnet interface would not. Ex-1033, ¶¶30-31.

PO’s reliance on Dr. Pratt is misplaced. He did not testify that all cylindrical parts commonly allow shape variance. POR 37. Rather, he said only that there “may be” tolerances on cylindrical parts in developing fasteners. Ex-2033, 24:17–20. The existence of tolerances in some contexts does not show that variance is acceptable here, where any misfit risks detachment during piston reciprocation. Ex-1033, ¶32.

**VI. THE CHALLENGED CLAIMS ARE INDEFINITE**

**A. Ground 2**

The claims fail to specify how much deviation from a true cylinder is permissible while still ensuring a secure connection between the massaging head and piston. Ex-1033, ¶¶33-34. Without guidance on the pocket’s precise shape or the allowable variance, a POSITA cannot determine claim scope with reasonable certainty.

PO's own authorities confirm that context and purpose govern definiteness. *Ironburg Inventions Ltd. v. Valve Corp.*, 64 F.4th 1274, 1288 (Fed. Cir. 2023); *Grace Instrument Indus., LLC v. Chandler Instruments Co.*, 57 F.4th 1001, 1009 (Fed. Cir. 2023). Here, the pocket's purpose is to provide a secure attachment during reciprocation, and during prosecution the Applicant emphasized that no alignment is required to distinguish the prior art. In this context, the claims must inform a POSITA, with reasonable certainty, of the exact shape or permissible variance that achieves a secure attachment.

PO's reliance on Petitioner's U.S. Patent No. 10,557,490 and Dr. Pratt's U.S. Patent No. 8,348,566 is misplaced since those patents involve entirely different records, as Dr. Pratt explained during his deposition. Ex-2033, 18:23–23:3; Ex-1033, ¶¶35-36.

## **VII. MABUCHI IN VIEW OF COLLOCA INVALIDATES CLAIMS 1, 7, 9-11, 13, AND 18 (GROUND 3)<sup>4</sup>**

### **A. A POSITA Would Have Been Motivated to Combine Mabuchi and Colloca**

Patent Owner argues a POSITA would not modify Mabuchi with Colloca because the references target different field, are incompatible, address different

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<sup>4</sup> PO did not dispute Petitioner's arguments regarding Mabuchi and Colloca's teaching of claim elements 1[a], [c], and [d] or the dependent claims. Petitioner also

problems, and are non-analogous. POR 43-50. The Board has already rejected these framing arguments; both references disclose instruments used to apply controlled dynamic forces to the human body. DI 29. A POSITA would view adopting Colloca's distal bore in Mabuchi's actuator as a routine, predictable design choice supported, yielding concrete benefits without changing Mabuchi's fundamental operation. Ex-1033, ¶37.

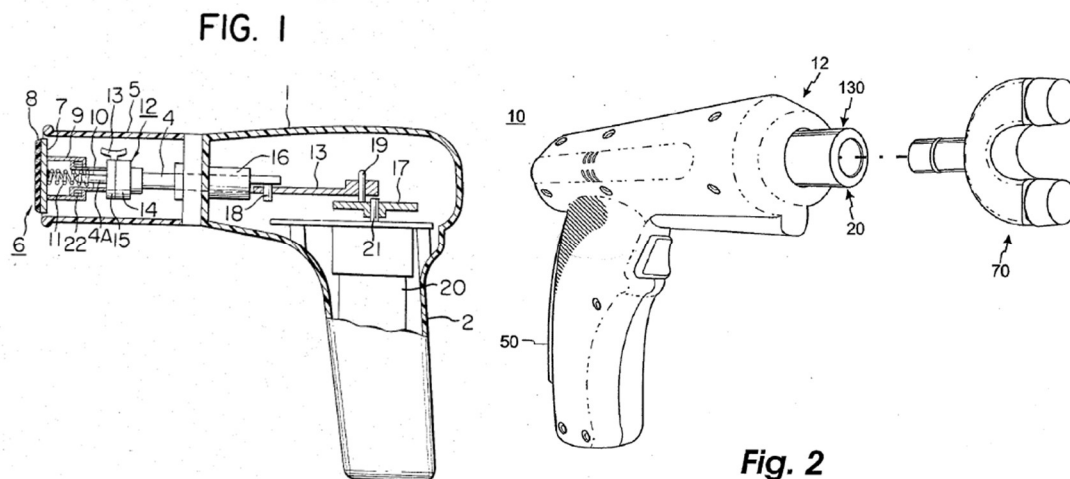
Both Mabuchi and Colloca disclose handheld, motor-driven devices that convert rotary motion into reciprocation to deliver controlled impacts to the human body using different attachments. Ex-1002, ¶¶13-14. They address similar technical problems—facilitating quick interchange of heads and controlling percussive delivery. DI. 29-30; Ex-1002, ¶¶13-14, Ex-1005, 1:42-49, Ex-1009, [0010], [0034]. A POSITA would have been motivate to implement Colloca's bore at the distal end of Mabuchi's piston to accept a shank of an interchangeable head. Ex-1002, ¶116; Ex-1033, ¶38. The Board agreed this is a straightforward substitution that preserves function and yields a familiar result. DI 29-30.

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incorporates its arguments regarding claim elements 1[pre], 1[b], and 1[e] for claim elements 18[pre], 18[a], and 18[c] and does not provide additional arguments. .Accordingly, Petitioner's Reply discusses only the limitations substantively addressed in the POR.

The Board rejected PO's attempt to confine Mabuchi to beauty devices and Colloca to chiropractic devices, noting that the preamble "percussive massager" does not impose structural differences beyond what the art already discloses. DI 30. Functionally, both references disclose reciprocating actuators driving impact with interchangeable heads. Ex-1033, ¶39. Nor do space-guide or preload features render the teachings irreconcilable. DI 30-31; Ex-1033, ¶39. The Board recognized that the proposed combination would allow the device to accept the shanks of interchangeable impact heads as taught by Colloca. DI 29; Ex-1033, ¶39.

Finally, PO misconstrues Petitioner's arguments during prosecution of the '668 Patent. POR 44-46. Applicant Therabody was arguing that a *chiropractic adjustment feature* would not have been incorporated into Mabuchi. *Id.*, 45. Here, Petitioner is looking to Colloca for how a removable head of a treatment device is attached. Ex-1033, ¶41. In this respect a combination is obvious. Ex-1033, ¶¶40-41.



**Mabuchi Fig. 1 (left); Colloca Fig. 2 (right)**

**B. Mabuchi in view of Colloca teaches or suggests all of the claim limitations.**

**1. 1 [pre]: “A percussive massager”**

PO’s challenge turns on the preamble being both limiting and construed under PO’s results-oriented reading. For the reasons in Section IV, neither premise is correct and the Board can disregard PO’s arguments at pp. 50-60. Ex-1033, ¶42. But even if the preamble were limiting, Mabuchi teaches it under either proposed construction.

**a. Mabuchi teaches a percussive massager.**

Mabuchi discloses an actuator that “repeatedly reciprocate[s]... to stimulate subcutaneous muscular tissues,” and a padder assembly tailored by “shape or size... according to the portion or purpose of treatment.” Ex-1005, 1:8–9; 9:15–16; 9:20–24. A POSITA would understand that such reciprocation and purpose-specific patters encompass percussive massage. Ex-1024, 120:13-121:6; 126:22-127:3 (agreeing that Mabuchi converts rotational motion into linear reciprocation of an actuator connected to a padder that repeatedly contacts the skin at a given rate); Ex-1033, ¶¶43-44.

PO’s assertion that Mabuchi “expressly confirms it is not a percussive massager” (POR 51) ignores this disclosure, and also misreads Mabuchi’s beauty-device context. Mabuchi “relates generally to a beauty treatment device” that “repeatedly pats a skin surface,” but explains that conventional “patting” devices—

“intended mainly for the massage of the muscular tissues”—“belong[] to the category of massager.” Ex-1005, 1:6–12, 2:14–28. Mabuchi’s actuator that “repeatedly reciprocate[s]... to stimulate subcutaneous muscular tissues” and “impact[s] the skin surface.” *Id.*, 1:8-9, 1:31–41. Thus, a POSITA would recognize Mabuchi as a patten-type massager, with beauty-specific features layered onto a percussive platform. Ex-1024, 124:17–25 (agreeing that “[Mabuchi] is a patten device.”); Ex-1033, ¶45.

That Mabuchi is a percussive massager with *additional* beauty-related features is confirmed by Mabuchi’s teaching that, without those features, its device would operate with greater force and stroke length, as required by PO’s construction. Ex-1033, ¶¶46-49. For example, Mabuchi discloses that, when the device is operated without the space guide, the head “exert[s] a pushing force onto the skin surface, rather than patting the skin.” Ex-1005, 5:48–50. And while Mabuchi also cautions against doing so, disclosure accompanied by caution is still disclosure; even teachings that “teach away” remain probative and must be weighed in substance. *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994); *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1550 (Fed. Cir. 1983). Dr. Pratt likewise explained that a percussive effect depends on the application surface: compliant anatomy permits the patten to extend beyond the guide, while hard surfaces act as a stop. Ex-2033, 38:14–22; 39:6–13; 43:6–12; 44:16–17; Ex-1033, ¶50.

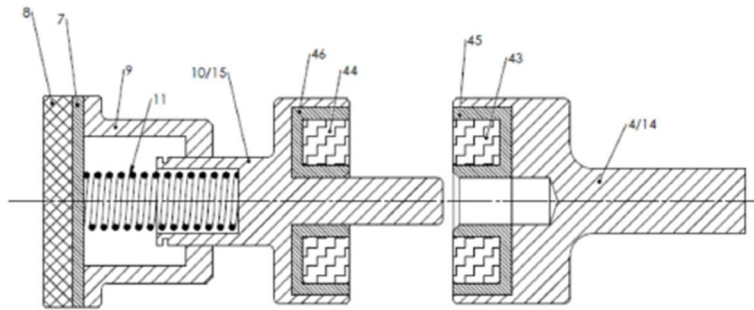
Mabuchi also suggests adjusting the patten assembly's resilient member 11 either by modifying its stiffness or removing it, and a POSITA would understand that doing so would increase impact force. Ex-1019, ¶¶51-52; Ex-1005, 5:10-38; Ex-1024, 127:4-8; 128:12-19; 130:11-16; 131:14-132:7; 136:4-6; 136:15-137:4; 138:18-23. PO's arguments pointing to these features and acknowledging their disclosures concede that Mabuchi's device itself is percussive. POR 46-47.

**b. PO misreads Petitioner's statements from an unrelated prosecution**

U.S. Patent No. 11,730,668 ("the '668 Patent") concerns a vibration therapy device with interchangeable attachments and different claim requirements; neither the claims nor the cited amendments use "percussive massager," and Petitioner never stated that Mabuchi is not percussive. Ex-2014, 1028; Ex-1019 ¶¶53-54. Petitioner's separate point—that Fuhr is not designed for treating the face and thus would not be used to achieve a claimed linear velocity—does not imply that a POSITA would avoid modifying Mabuchi to achieve greater percussive force. Ex-2014, 1022. The Examiner allowed claims after amending an "attachment member" limitation and expressly relied on a flexible sleeve surrounding the reciprocating shaft—features irrelevant to whether Mabuchi teaches a percussive massager. *Id.*, 2421, 2430.

**2. 1[b]: “a piston having a proximal end and a distal end, the distal end of the piston having a bore”**

PO’s arguments overlook Petitioner’s explanation of the motivation to modify Mabuchi. *See* Pet. 34-35, 36-39; Ex-1002, ¶¶113-114, 124.



**Mabuchi Fig. 18 modified in view of Colloca**

Specifically, Mabuchi and Colloca are directed to solving similar technical problems (applying force to a body part using interchangeable assemblies) known in the art at the time of the invention. Ex-1033 ¶55. Because modifying Mabuchi with Colloca’s thrust nose piece would have improved Mabuchi for the same reasons, a POSITA, at the time of the invention, would have been motivated to make the combination. Ex-1033, ¶55; Ex-1009, [0010]; Ex-1005, 5:57-67; DI 31.

PO cites no support for its mischaracterization of Mabuchi’s reciprocating assembly as a “complex” two-element system, or that removing actuator 4 from inside the pater body 9 and spring 11 would “reduce stability.” POR 62-63. A POSITA would understand the rod that extends from the pater assembly 6 (and inserted into the bore) stabilizes the reciprocating tube 10. Ex-1033, ¶¶55-56. A

POSITA in modifying Mabuchi would consider the strength of the magnetic connection 43 and 44 in designing the patter device. Ex-1033, ¶56.

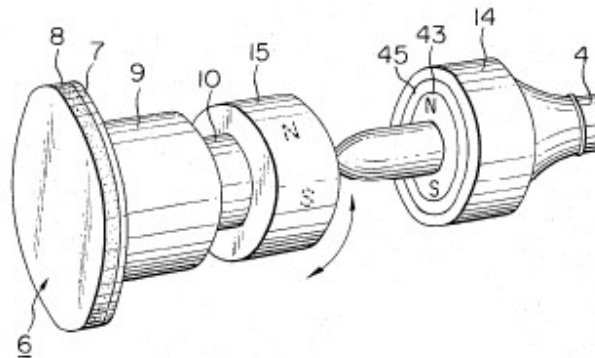
Finally, PO misconstrues Petitioner’s arguments during prosecution of the ’668 Patent. POR 64-66. Petitioner’s argument concerned a proposal to move the actuator 4 so that it would not engage with the resilient member. Ex-2014, 1021. This is *not* the modification than proposed by Petitioner. Instead, as shown by Figure 18 above, a POSITA would recognize that in Petitioner’s modified Mabuchi Figure 18, the resilient member still performs the same function and, in alternative embodiments, could be entirely removed. Ex-1033, ¶58; Ex-1005, 5:10-22. In either case, the result is the same—the modification to Mabuchi results in predictable operation. Ex-1033, ¶58.

**3. 1[e]: “a quick-connect system . . . .”**

PO argues that (1) Mabuchi’s patter assembly cannot be secured while the actuator reciprocates, (2) Mabuchi’s magnetic connector requires particular alignment, (3) Colloca’s impact head cannot be changed while the piston reciprocates, and (4) Mabuchi’s patter assembly is not a massaging head. POR 67-79. None has merit.

**a. Mabuchi discloses easy interchange of the patter assembly**

Mabuchi expressly teaches that, in the magnetic embodiment (Fig. 19), the patter assembly 6 can be “easily” changed because the actuator and patter assembly “are automatically disconnected merely by turning each other.” Ex-1005, 8:40-43; Ex-1033, ¶¶59-61. In PGR2024-00053, the Board noted that “Mabuchi’s use of ‘easily accomplished’ is reasonably understood to satisfy” this limitation, particularly given that Mabuchi does not identify any changes that would be necessary for the device to function. DI 35.



**Ex-1005, Fig. 19**

Mabuchi further explains that treatment effects are enhanced by changing patter shape/intensity the patter assembly must be interchangeable, and it must be securely connected to prevent disengagement. Ex-1005, 5:56-64; Ex-1024, 144:4-9; 146:9-12; 155:9-15 (agreeing that Mabuchi discloses magnetic connections that allow changing attachments and disconnection by simple rotation). As the Board

recognized, PO's proposed "changes, redesign, or reconstruction," such as removing space guide 5 (POR 54), are unnecessary. DI 35.

PO concedes the patter assembly extends beyond the space guide "when the user's skin is not present," which is when a user would change heads. POR 68. PO identifies no disclosure quantifying the extension as "slight," and nothing undermines Dr. Pratt's opinion that a POSITA would view the extension as sufficient for grasping and removal. Ex-1033, ¶62.

PO's pinch-risk argument concedes that Mabuchi's patter assembly can be removed during reciprocation. PO's speculation about the risk of doing so does not negate Mabuchi's disclosure. A POSITA would be motivated and able to implement an in-operation quick-release in a predictable way. Indeed, managing finger clearance is a routine, predictable design choice (e.g., adding a small guard lip, extending the flange beyond the guide, providing finger tabs, using a soft face, or specifying hand positions). Ex-1033, ¶63. POSITAs routinely mitigate such risks without altering the underlying connection principle. *Id.*

PO's focus on Figure 4's "patter connecting mechanisms" (including non-magnetic options) ignores Figure 19's magnetic embodiment. In Figure 19, the piston's tapered portion facilitates sliding the patter head into place; even without direct visibility due to the space guide, inserting the head into the guide is sufficient

to connect it. Ex-1005, 8:11-43; Ex-1024, 166:7-16 (admitting that the tapered shape of the piston helps with alignment); Ex-1033, ¶64.

**b. Mabuchi's magnetic connectors do not require a particular alignment.**

Mabuchi teaches that the magnetic connection ensures a “positive connection... *without positioning* the actuator 4 and the patter assembly 6.” Ex-1005, 8:33-39. A POSITA would understand that magnets self-align, consistent with Mabuchi. Ex-1033, ¶65; *see also* Ex-1024, 148:19-149:8; 150:8-25 (acknowledging that magnets often self-align). PO's assertion that “the patter assembly 6 must be positioned” contradicts Mabuchi's express “without positioning” disclosure. Ex-1005, 8:33-39. References to turning patter assembly 6 relate to detachment; separation could also be achieved by pulling apart. Ex-1033, ¶66.

PO's criticism of wording in the Petition and Dr. Pratt's declaration is unfounded. The Petition states the head can be secured without aligning it to the piston. Pet. 43-44. Dr. Pratt's phrasing—no need to “carefully control the angular orientation or spatial positioning”—conveys the same point. Ex-1002, ¶132. In deposition, Dr. Pratt confirmed that a user “doesn't have to control the angular orientation.” Ex-2033, 48:10-18; 51:1-12. Dr. Pratt did not “walk[] back his written testimony” (POR 74); all sources consistently state that proximity of magnets yields self-alignment, obviating user-controlled alignment. Ex-1033, ¶67.

PO's emphasis on a "magnet test" is irrelevant. Dr. Pratt did not rely on any such test in forming his opinions; it occurred after his '482 Declaration, which expresses the same substantive opinions as his '082 Declaration. Ex-1033, ¶68. In any event, the testing merely reflects what a POSITA (and any child who has played with magnets) would have already known—that magnets self-align, as admitted by PO's expert during deposition. Ex-1024, 148:19–153:14.

**c. Mabuchi teaches that an attachment can be exchanged while the piston reciprocates.**

While PO argues that Colloca does not disclose a quick release connector while the piston reciprocates due to a safety mechanism, this misunderstands the combination, which modifies Mabuchi to include the thrust nose connecting mechanism of Colloca. Mabuchi has no such safety mechanism and the combination would not incorporate that feature. Ex-1033, ¶69. The Federal Circuit has rejected attacking reference individually, as PO does here. *In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986) ("Non-obviousness cannot be established by attacking references individually where the rejection is based upon the teachings of a combination of references.").

**d. Mabuchi's patten assembly is a massaging head.**

Sections IV.A and IV.C *supra* explain that PO's argument hinges on whether the preamble is limiting, which it is not.

Mabuchi's padder assembly 6 discloses Claim 1's "massaging head." What specific force level this massaging head is designed to deliver is irrelevant. Ex-1033, ¶70. Even if force mattered, as discussed in Section VII.B.1.a, a POSITA would not read spring 11 as producing zero force; depending on positioning on the skin or surface, the padder assembly would apply greater or lesser force. PO's citation to Therabody's website to distinguish attachments for percussive versus vibration therapy is unpersuasive for the reasons in Section IV, including that it improperly imports a use restriction. POR 79.

**VIII. MABUCHI IN VIEW OF COLLOCA, FURTHER IN VIEW OF HARRIS INVALIDATES CLAIMS 2-4 (GROUND 4)**

PO relies on its positions for independent Claim 1 but does not otherwise refute Petitioner's arguments regarding dependent Claims 2-4. Thus, Petitioner does not further address these dependent claims and instead relies on its arguments in the Petition.

**IX. PIVAROFF IN VIEW OF CLARK INVALIDATES CLAIMS 1, 7, 9-11, 13, 18 (GROUND 5)**

As PO only substantively addresses Claim 1, Petitioner does not further address Claim 18 or the dependent claims and instead relies on its arguments in the Petition. The POR largely parrots the Board's preliminary findings that Pivaroff and Clark would not be combined for two reasons (1) Clark is non-analogous prior art, (2) no motivation to modify Pivaroff in view of Clark. POR 81-93. As explained

below, the Board should reconsider its position and the POR is wrong because, properly understood, Clark is analogous and a POSITA would have recognized the benefit and been motivated to combine Pivaroff and Clark. Ex-1033, ¶¶73-79.

**A. Clark is an analogous prior art.**

The Board preliminarily concluded that Clark is non-analogous because it concerns a magnetic screwdriver while the challenged claims concern a percussive massager. DI 37-38. The Board appears to have credited PO's argument that the applicable field is "a quick-connect system for a percussive massager." DI 37 (citing POPR 57). Even setting aside the non-limiting nature of the preamble, that formulation is too narrow. Two separate tests define the scope of analogous prior art: "(1) whether the art is from the same field of endeavor, regardless of the problem addressed and, (2) if the reference is not within the field of the inventor's endeavor, whether the reference still is reasonably pertinent to the particular problem with which the inventor is involved." *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004). Here, Clark qualifies as analogous under at least the second test.

A reference outside an inventor's field of endeavor is "reasonably pertinent" if its subject matter "logically would have commended itself to an inventor's attention in considering his problem." *In re Clay*, 966 F.2d 656, 659 (Fed. Cir. 1992). Thus, if "a person of ordinary skill would reasonably have consulted those references and applied their teachings in seeking a solution to the problem that the inventor was

attempting to solve,” it is reasonably pertinent. *In re GPAC Inc.*, 57 F.3d 1573, 1578 (Fed. Cir. 1995). Here, the ’082 Patent concerns problems related to a quick-connect system configured to permit insertion/removal of the head’s proximal end while the piston reciprocates. Ex-1001, 6:47-7:19. The engineering problems implicated are (i) secure retention under dynamic loading, (ii) alignment and guidance into a receiver, and (iii) fast, tool-free interchange. Ex-1033, ¶74. Clark addresses these problems by using a magnetized female receiver to retain different workpiece holders. Ex-1014, 1:1-25, 1:66-70, 4:1-3; Ex-1033, ¶74.

A POSITA developing a receiver of a percussive device would naturally consult designs for quick-change receivers used in hand-held tools. Ex-1033, ¶75. Clark’s teachings directly address the coupling problem addressed by the ’082 Patent. *Id.* A POSITA would view Clark as a blueprint for a magnetic, female-side receiver and would then dimension the magnet, seat, and geometry for the percussive load case using routine mechanical design. *Id.* Clark is therefore analogous prior art.

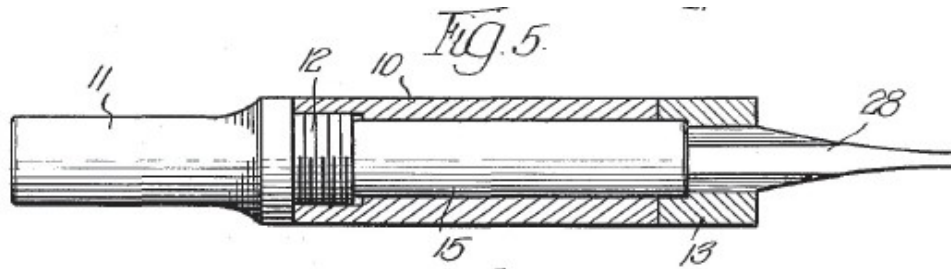
**B. A POSITA would have been motivated to modify Pivaroff in view of Clark.**

PO and the Board assume that because Pivaroff teaches a particular massage head that provides “exceptional results” that it teaches only a single non-removeable massage head. DI 39; POR 88. Instead, Pivaroff teaches that “[v]arious mixtures of these granular materials produce *improved and superior results.*” Ex-1007, 2:53-65.

Pivaroff then discloses *eleven* different “preferred mixtures.” *Id.*, 2:66-3:30; Ex-1024, 172:9-19.

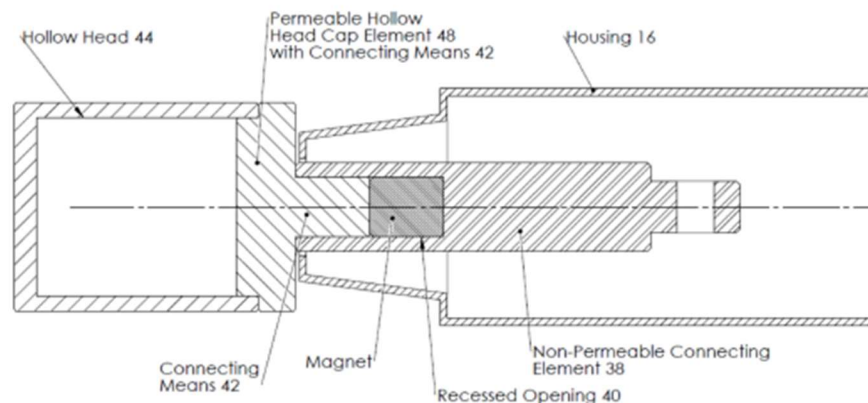
A POSITA would have understood that Pivaroff’s device uses these different heads for different applications, and the field broadly recognized user demand for quick-change attachments. Ex-1033, ¶¶76-78. Replacing a threaded connection with a magnet—as taught by Clark—predictably yields faster head changes, reduced thread wear, less contamination, and safer operation without loose fasteners. Magnetic female receivers were a well-established way to achieve rapid, tool-free interchange of driven heads while providing alignment, and robust axial retention. Indeed, a POSITA would have recognized that Pivaroff is not limited to a threaded connection. Ex-1024 176:15-19 (agreeing that a POSITA would understand there are other linkages in addition to threaded connections); Ex-1007 at Cl. 1, 4. A POSITA designing a receiver for a reciprocating piston would have looked to proven magnetic receivers like Clark’s and adopted its core features. ¶¶76-78.

In addition, PO’s argument that Clark’s solution requires cylindrical member 13, shell 18, *and* magnetically permeable membrane 19 (POR 92) is unsupported and contrary to Clark’s disclosure. Clark’s Fig. 5 omits shell 18 and magnetically permeable membrane 19. Ex-1033, ¶79. That Dr. Pratt did not specifically discuss Fig. 5 of Clark is irrelevant; he considered the entire disclosure for his opinions. *Id.*



**Ex-1007, Fig. 5**

PO does not explain why cylindrical member 13 is necessary for connecting an attachment; a POSITA would understand it is not and can be removed to modify Pivaroff as shown below. *Id.*



**Pivaroff Fig. 5 modified in view of Clark**

**X. PIVAROFF IN VIEW OF CLARK AND HARRIS INVALIDATES CLAIMS 2-4 (GROUND 6)**

PO does not provide any additional arguments for this combination and instead relies on its discussion of Pivaroff and Clark. POR 94. Thus, Petitioner incorporates its arguments above and in the Petition.

## **XI. CONCLUSION**

Petitioner respectfully requests that the Board enter a Final Written Decision invalidating the challenged claims.

Respectfully Submitted,

/s/ Marc J. Pensabene

**CERTIFICATE OF WORD COUNT**

Pursuant to 37 C.F.R. § 42.24(d), Petitioner certifies that this reply includes 5,582 words, as measured by Microsoft Word, exclusive of the table of contents, mandatory notices under § 42.8, certificates of service, word count, and exhibits.

**CERTIFICATE OF SERVICE**

I hereby certify that on December 5, 2025, I caused a true and correct copy of the foregoing PETITIONER’S REPLY TO PATENT OWNER’S RESPONSE TO PETITION FOR POST-GRANT REVIEW OF U.S. PATENT NO. 11,938,082 to be served electronically on counsel for Patent Owner at the following addresses:

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