

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

THERABODY, INC.,

Petitioner

v.

HYPERICE IP SUBCO, LLC,

Patent Owner.

Case No.: PGR2025-00013
U.S. Patent No. 11,938,082

PATENT OWNER'S RESPONSE

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PATENT OWNER’S EXHIBIT LIST

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2001	ECF Scheduling Notice entered January 1, 2025 in case 8:24-cv-00098-JWH-DFM	X
2002	Scheduling Order (Dkt. No. 26) entered June 21, 2024 in case 8:24-cv-00098-JWH-DFM	X
2003	Defendant Therabody, Inc.’s Disclosure of Invalidity Contentions served October 21, 2024	X
2004	Statutory Disclaimer of claim 17 of U.S. Patent No. 11,938,082 as filed with the USPTO on March 21, 2025	X
2005	Declaration of Nathan H. Morrill	
2006	Curriculum Vitae of Nathan H. Morrill	
2007	U.S. Patent No. 9,889,066 to Danby et al.	
2008	U.S. Patent No. 11,285,075 to Danby et al.	
2009	U.S. Pre-Grant Publication No. 2008/0243039 to Rhoades	
2010	U.S. Patent No. 10,557,490 to Wersland et al.	
2011	Name Change — Theragun, Inc. to Therabody, Inc.	
2012	U.S. Patent No. 8,348,566 to Pratt	
2013	Therabody’s Opening Claim Construction Brief in Case No. 8-24-cv-00098-JWH-DFM (Dkt. 50)	
2014	File History of U.S. Patent Application No. 17/705,300 (corresponds to Ex. 2022)	
2015	Capture of “Therabody Patents & Design Registrations” Webpage (captured June 30, 2025)	
2016	Webster’s Encyclopedic Unabridged Dictionary (published 2001), Definition of “Receive”	

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2017	Capture of “Engineering Essentials – GD&T – CYLINDRICITY ‘CIRCLE 1’” Webpage (captured July 8, 2025)	
2018	Capture of “UCLA Health: Considering a massage gun? Here’s what you need to know about percussive therapy” Webpage (captured Aug. 4, 2025)	
2019	Capture of “How Do Massage Guns Work? The Scientific Benefits Behind Percussive Therapy” Webpage (captured Aug. 4, 2025)	
2020	Capture of “Theragun: How to use it, what it does, and why you need one” Webpage (captured Aug. 10, 2025)	
2021	Capture of “The Synergistic Effects of Percussive Therapy With Heat and Near-Infrared Light – a Therabody Labs Study” Webpage (captured Aug. 4, 2025)	
2022	U.S. Pre-Grant Publication No. 2022/0211575 A1 to Wersland et al. (corresponds to Ex. 2014)	
2023	Capture of “Theragun PRO Plus” Webpage (captured Aug. 11, 2025)	
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2025	Capture of Wikipedia Article titled “Quick connect fitting” (captured Aug. 11, 2025)	
2026	Oxford – A Dictionary of Mechanical Engineering (2 ed.) definition of “quick coupling” (captured Aug. 11, 2025)	
2027	Capture of “What You Should Know About Theragun PRO Plus” Webpage (captured Aug. 12, 2025)	

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2030	Unused	
2031	Declaration of John Pratt dated December 20, 2024 in Case 8:24-cv-00098-JWH-DFM	
2032	Capture of “Amazing Magnets – Is Titanium Magnetic?” Webpage (captured Sept. 3, 2025)	
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¹ All citations to Exhibit 2033 are to the PTAB footer page numbers rather than the document or transcript page numbers.

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I. INTRODUCTION

Patent Owner Hyperice IP Subco, LLC (“Patent Owner”) submits its Patent Owner’s Response to the Petition for Post-Grant Review No. PGR2025-00013 (Paper 2, “Petition” or “Pet.”) filed on December 23, 2024, by Therabody, Inc. (“Therabody” or “Petitioner”) challenging claims 1-18 of U.S. Patent No. 11,938,082 (the “Challenged Claims”²) (Ex. 1001, the “’082 Patent”).

“[T]he petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016). That burden never shifts to Patent Owner. *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). “Failure to prove the matter as required by the applicable standard means that the party with the burden of persuasion loses on that point—thus, if the fact trier of the issue is left uncertain, the party with the burden loses.” *Id.* at 1378-79 (quoting *Tech. Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1327 (Fed. Cir. 2008)) (internal quotations omitted). As detailed herein, Petitioner fails to carry its burden as to any of its grounds of unpatentability.

² Patent Owner has disclaimed claim 17. Ex. 2004.

Regarding the §112 grounds, Petitioner ignores the clear disclosure and import of the '082 Patent as a whole to one skilled in the art, ignores the knowledge of a POSITA, and attempts to foist on the patentee an unreasonable and legally unsupported burden of disclosure. All features of the Challenged Claims are adequately described in the specification and apparent from the claims themselves. Regarding the §103 grounds, Mabuchi is not a percussive massager, nor does it disclose a quick-connect system as required by the Challenged Claims. In addition, Mabuchi is irreconcilable with Colloca, and Petitioner previously argued to the Patent Office that the same modification it proposes to Mabuchi here would render Mabuchi unsuitable for its intended purpose. Further, Pivaroff and Clark are entirely unrelated to each other, and Petitioner's strained analysis regarding why a POSITA would have combined these two references does not withstand scrutiny.

Accordingly, the Board should find that Petitioner failed to meet its burden to establish that the Challenged Claims are unpatentable.

II. THE '082 PATENT

A. Overview of Percussive Massage

Percussive massage (synonymous with percussive therapy) is characterized as a deep, penetrating application of rapid, repetitive force to a body part or area to distribute and thin fascia fluid within and around muscle tissue to increase flexibility and reduce muscle tightness. Ex. 2018 (UCLA Health article discussing percussive

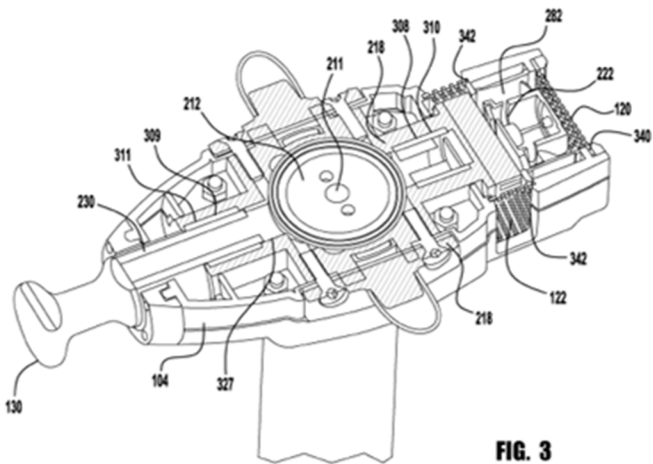
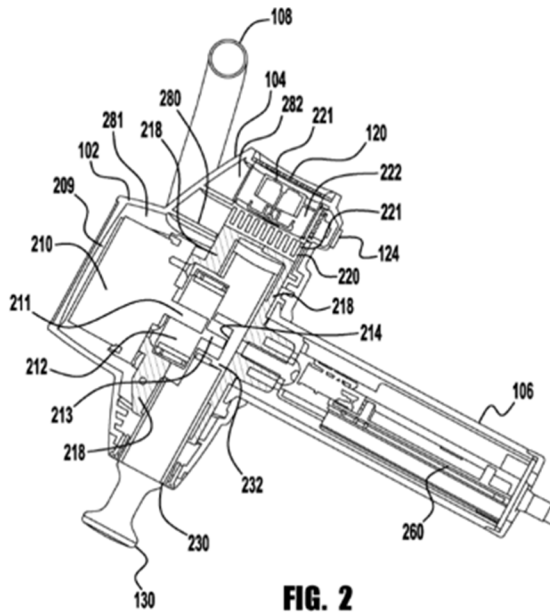
massage); Ex. 2019 (Therabody article titled “How Do Massage Guns Work?”). Percussive massage can also break up or relax adhesions or tensions within the fascia, promoting movement and reducing soreness, while releasing lactic acid stored in muscle fibers. Exs. 2018-19; *see also* Ex. 2020, p.3 (Therabody article describing percussive therapy as having “many benefits ... including hydrating your muscle tissue, improving mobility, decreasing lactic acid, increasing blood flow, and decreasing muscle soreness and stiffness”).

On the other hand, vibration therapy is a low amplitude, low impact, high-speed massage designed to increase blood flow to targeted areas. Ex. 2021, p.3 (Therabody article describing “vibration therapy” as having “a lower amplitude than percussive therapy” and “deliver[ing] lower-intensity pulses ... to the treatment area”).

A percussive massager is a device, most commonly electromechanical, that provides percussive massage or therapy. Ex. 2021, p.4 (“Percussive therapy is the primary modality used in massage guns...”); Ex. 2028, p.3 (Hyperice article stating that “[p]ercussion therapy devices deliver rapid, concentrated pulsations deep into muscle tissues. This is not just a surface-level treatment; it mimics the effects of a deep-tissue massage...”); Ex. 2005, ¶¶38-39.

B. Overview of the '082 Patent

The '082 Patent is directed to a deep muscle-stimulating, percussive massage device (*i.e.*, a percussive massager or percussive massage gun). Ex. 1001, Abstract, 1:25-28, FIGS. 1-3; Ex. 2005, ¶45. The '082 Patent explains that the described and claimed percussive massager is “used to increase muscle metabolism, increase the lactic acid cycle and relieve pain” and discloses and claims improvements to deep muscle-stimulating, percussive massage devices. *Id.*, 1:25-33, 6:47-51.

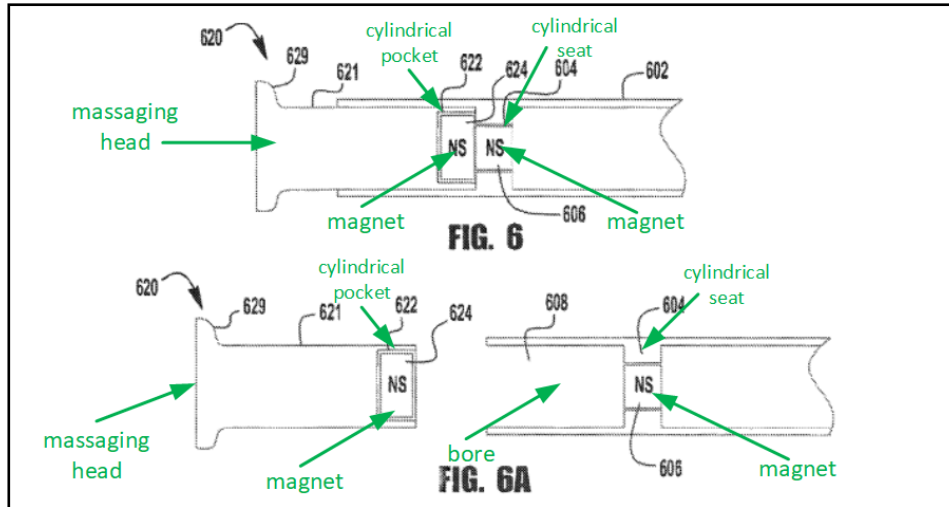


One disclosed improvement is “a massaging device [that] includes ... a quick-connection mechanism and one or more massaging heads releasably connectable to the piston by the quick-connection mechanism.” *Id.*, 2:7-12, 3:42-45, FIGS. 1-3,

6-6A. One embodiment describes a “quick-connect system 600 for connecting a massaging head 620 to a piston 602.” *Id.*, 6:47-49, FIGS. 6-6A.

The '082 Patent explains that, when providing a deep tissue massage using a percussive massager, it may be desirable to switch massaging heads to work on different muscles or different portions of muscles during the massage. *Id.*, 6:49-53. The exemplary quick-connect system allows a user to quickly switch massaging heads without turning off the massaging device. *Id.*, 3:42-45, 6:53-56.

One embodiment of the quick-connect system 600 includes a piston 602 that has a hollow-end bore 608 for receiving the shaft 621 of a massaging head 620. *Id.*, 6:57-59, FIGS. 6 and 6A (below with annotations). A cylindrical seat 604 is located within the bore 608 of the piston 602 and retains a magnet 606, which assists in holding the massaging head in place. *Id.*, 6:59-7:3. The massaging head 620 includes a shaft 621 having a cylindrical pocket 622 at the distal end retaining a magnet 624. *Id.*, 6:63-65. When the shaft 621 of massaging head 620 is slid into the bore 608, the magnets 606 and 624 are attracted to one another and magnetically hold massaging head 620 firmly in place. *Id.*, 6:67-7:3. The inventive design and configuration of the '082 Patent allows “a user to quickly remove and replace the massaging head” of a percussive massager during normal use, including “even while the piston 608 is moving.” *Id.*, 7:6-13.



C. Relevant Prosecution History

The '082 Patent was subject to thorough examination by primary Examiner Stanis, who was well versed in the subject matter of this patent, having examined each parent application³ of the '082 Patent beginning in July 2016.

The '082 Patent is a continuation of U.S. Patent No. 11,857,482 (the "'482 Patent"). Ex. 1001, code [63]. Petitioner characterizes the '482 Patent as being "related" to the '082 Patent and includes its prosecution history as Exhibit 1013. Pet., p.20. Accordingly, selected portions of the prosecution history of the '482 Patent are also discussed throughout. *See NTP, Inc. v. Research in Motion, Ltd.*, 418 F.3d 1282, 1293 (Fed. Cir. 2005) ("Because NTP's patents all derive from the same parent application and share many common terms, we must interpret the claims consistently across all asserted patents."); *Microsoft Corp. v. Multi-Tech Sys., Inc.*,

³ Exs. 2007-08.

357 F.3d 1340, 1350 (Fed. Cir. 2004) (“We likewise believe that Multi-Tech’s statement made during prosecution of the ’627 patent is relevant to an understanding of the common disclosure in the sibling ’649 and ’532 patents.”).

1. ’082 Patent

At the time of filing the ’082 Patent, Applicant filed an IDS citing most references relied upon in the Petition—Mabuchi, Colloca, Harris, and Pivaroff. Ex. 1004, pp.40, 43, and 47. Examiner Stanis considered the IDS on January 12, 2024. *Id.*, pp.97-114.

In response to the only Office action, Applicant amended claim 18 to overcome a §112(b) rejection and submitted a Terminal Disclaimer over the ’482 Patent, after which the application was allowed. *Id.*, pp.86-94, 117-22, 1893-96. In the Notice of Allowance, Examiner Stanis identified Pivaroff (Ex. 1007) and Colloca (Ex. 1009) as the closest prior art of record. *Id.*, p.1894.

With respect to Pivaroff, Examiner Stanis stated that:

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 claims 1 and 18. The quick connect system of Pivaroff uses a threading system between its piston and its massaging head which would prevent the user from inserting or removing the massaging head **while the piston reciprocates**.

Id. (emphasis in original).

With respect to Colloca, Examiner Stanis found that “Colloca does not disclose the bore as located at the distal end of a **piston**. Additionally, Colloca does not disclose inserting or removing the impact head from the **bore while a piston reciprocates**.” *Id.*, p.1895 (*emphasis* in original).

2. '482 Patent

In the July 6, 2023, Final Office Action—the last Office Action prior to allowance of the '482 Patent—Examiner Stanis cited Pivaroff in combination with Rhoades to address, *inter alia*, the use of magnetic attractive forces for connection mechanisms. Ex. 1013, pp.2458-59.

In response, Applicant amended the preamble of every claim from an “apparatus” to a “percussive massager” and added new claims 35-65, each also reciting the “percussive massager” preamble. *Id.*, pp.2524-31. In its remarks, Applicant relied on the amended preamble arguing that while “Pivaroff is directed to a deep muscle stimulation device,” “Rhoades is directed to a cosmetic instrument (e.g., a microderm abrasion device) that is not a percussive massager, as recited in the claims.” *Id.*, p.2534. Applicant reiterated that “Rhoades’ apparatus is a cosmetic instrument, not a ‘**percussive massager**.’” *Id.*, p.2536 (*emphasis* in original). Addressing new claims 38-65, Applicant stated that “Independent claim 38 recites a percussive massager” before addressing Pivaroff and Rhoades. *Id.*, pp.2537-38.

III. CITED PRIOR ART

Petitioner relies on Mabuchi, Colloca, Harris, Pivaroff, and Clark. Mabuchi (Ex. 1005) describes a beauty treatment device specifically designed to gently pat a user's face. Pivaroff (Ex. 1007) and Harris (Ex. 1006) describe deep muscle stimulating devices, *i.e.*, percussive massagers. Colloca (Ex. 1009) describes a chiropractic adjustment tool for aligning bones. Clark (Ex. 1014) describes a screwdriver.

A. Mabuchi

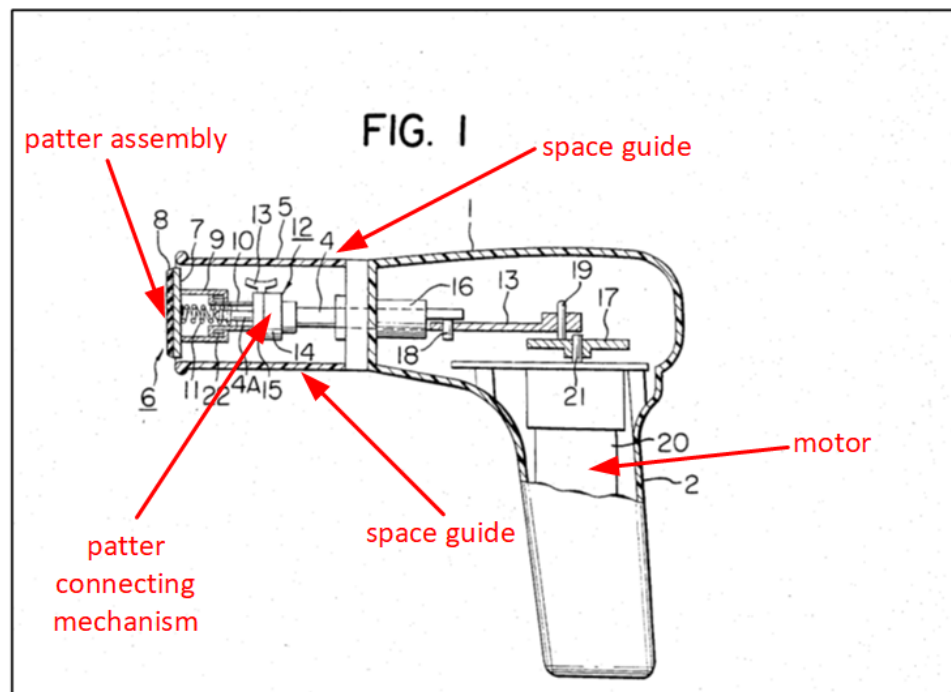
Mabuchi does not describe, teach, or suggest a percussive massager; rather, Mabuchi is explicitly directed to a “beauty treatment device.” Ex. 1005, Abstract, Ex. 2005, ¶70. In this respect, Mabuchi is similar to the cosmetic instrument of Rhoades, which Applicant distinguished and overcame during prosecution of the '482 Patent. *See* Ex. 2009, ¶[0021].

Mabuchi distinguishes its device for “beauty treatment to repeatedly tap or pat the skin surface” from both: (1) “[a] vibrator [that] only presses and/or kneads the skin, causing the skin to stretch;” and (2) a “conventional patting device, which is intended mainly for the massage of muscular tissues⁴, not for beauty treatment of the

⁴ The muscular system is composed of muscle fibers. *See* <https://training.seer.cancer.gov/anatomy/muscular/> (accessed April 8, 2025).

skin.” *Id.*, 1:13-29. In short, Mabuchi expressly distinguishes its “beauty treatment device ... [to] repeatedly pat[] a skin surface being treated” from a “massager” “intended mainly for the massage of the muscular tissues, not for beauty treatment.” *Id.*

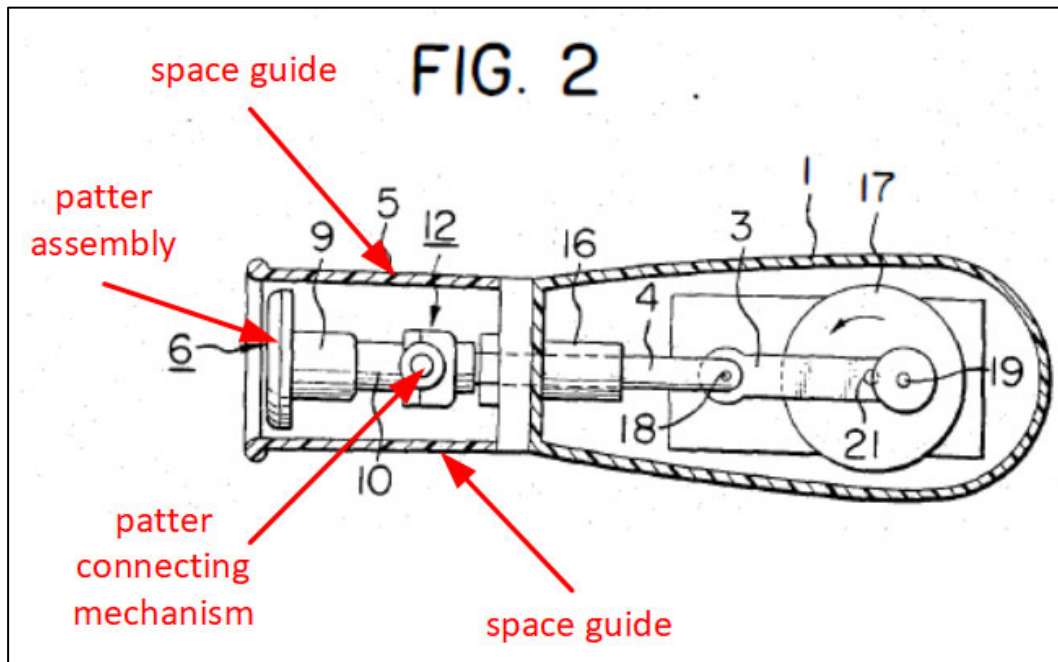
Figure 1 of Mabuchi (below with annotations) illustrates the fully assembled beauty treatment device.



Mabuchi teaches that interchangeability of the pater assembly 6 requires physical access to the connection mechanism 12. *Id.*, 5:65-67. However, in use, the space guide 5 fully encompasses the pater connection assembly 12. *Id.*, 1:36-39,

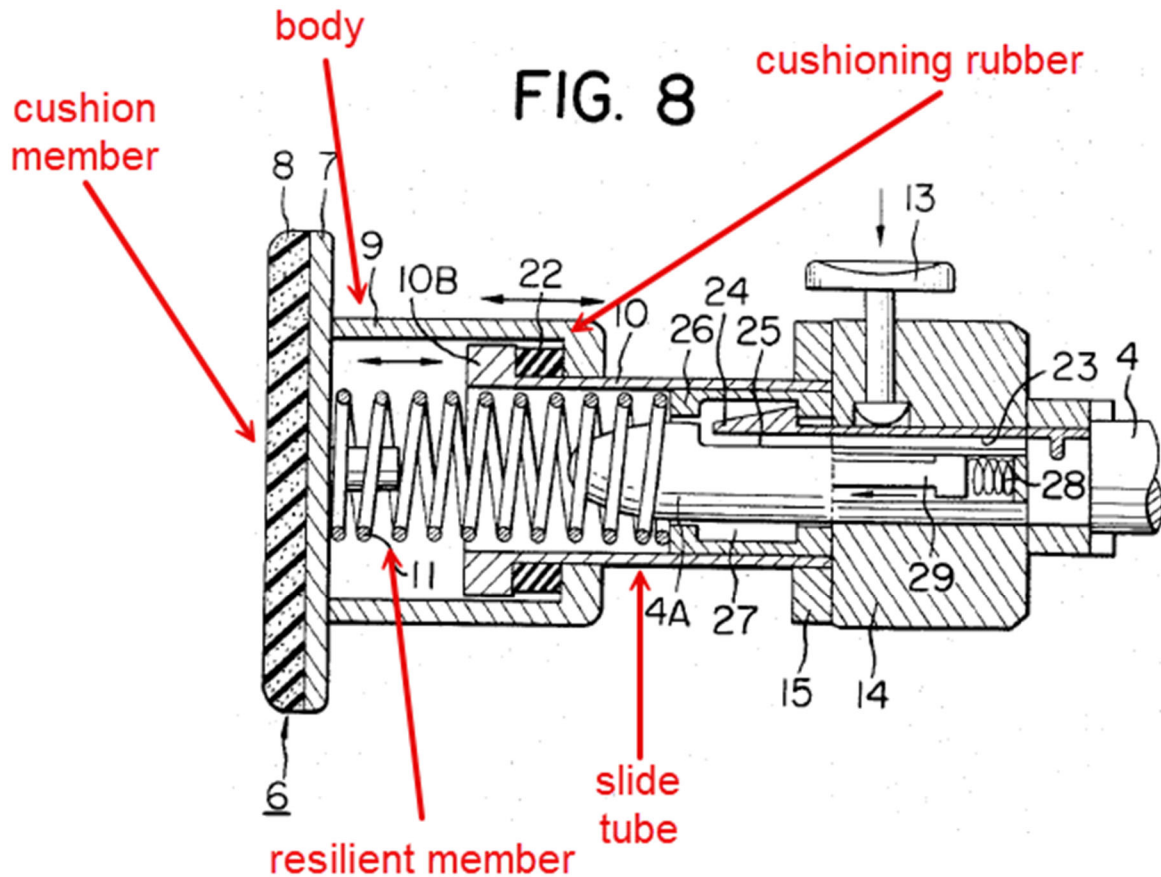
Thus, Mabuchi ’s reference to muscular tissue is equivalent to muscle fibers.

FIGS. 2-5. The space guide 5 must be removed for a user to access the patter connection mechanism 12. *See id.*, 2:53-67, FIG. 2 (below with annotations); Ex. 2005, ¶¶74-75.



Further, Mabuchi's end piece—the patter assembly 6—has a complex, multi-component configuration that acts in concert with the space guide 5 to avoid apply a pushing force to the user's skin. Ex. 1005, 4:37-57, 5:33-38; FIG. 8 (below with annotations); Ex. 2005, ¶76. In use, the actuator 4 moves the patter slide tube 10 to the left (in the figure), and the movement of the patter slide tube 10 is transmitted to the body 9 via the resilient member 11 (embodied as a spring) so that the cushioning member 8 is advanced to contact the skin surface. *Id.*, 2:58-3:5. On the return, the patter slide tube 10 moves to the right (in the figure), and the flange 10B of the patter

slide tube 10 contacts the patter body 9 to pull it away from the skin surface. *Id.*, 3:5-12.



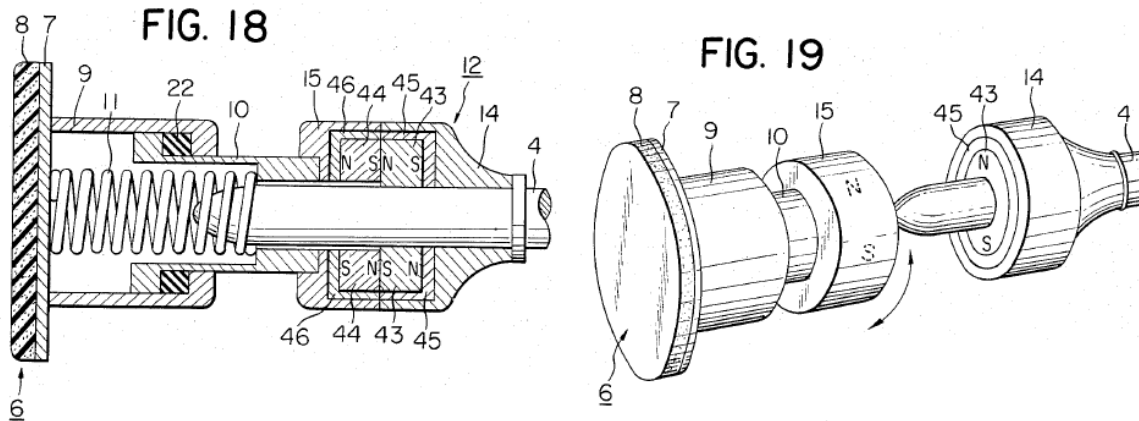
According to Mabuchi, the combination of the “distance adjusting” patten assembly 6 and the space guide 5 avoid “exert[ing] a pushing force onto the skin surface” and instead cause the cushion member 8 “to pat the skin surface.” *Id.*, 5:33-37, 46-50. To this end, Mabuchi explains the space guide 5, in combination with the stroke length of the actuator 4 and the resilient member 11 in the patten assembly 6, ensure that the cushion member 8 is “flush with or slightly above” the end of the space guide 5 when the user’s skin is present. *Id.*, 4:28-34. Mabuchi explains that

once the cushioning member 8 contacts the skin surface at the end of the space guide 5, the padder body 9 is “prevented from [sic] being moved leftward by the skin surface,” and the padder assembly 6 compresses via the resilient member 11. *Id.*, 4:48-57.

One embodiment of the padder connection mechanism includes “the magnets 43 implanted in the coupling 14 and the magnets implanted in the flange 15 [that] are connected to each other by attracting force caused by different polarities on the two magnets 43 and 44.” *Id.*, 8:11-15. According to Mabuchi, “[t]o change the padder assembly 6, the coupling 14 or the flange 15 or both are turned in either direction shown by arrows in FIG. 19. By turning 180° in FIG. 19, for example, the magnet 43 implanted in the coupling 14 and the magnet 44 implanted in the flange 15 are repulsed with each other due to repulsion force caused by the same polarities, causing the padder assembly 6 to separate from the actuator 4.” *Id.*, 8:18-25.

As can be seen in both Figures 18 and 19 of Mabuchi (below), the magnets 43 and 44 are radially oriented such that different poles (N/S) of the magnets 43/44 face the exposed end along the circumferential direction of the coupling 14 and the flange 15. Ex. 1002, ¶61; Ex. 2005, ¶79. Due to the radial pole arrangement, explained in Mabuchi, the rotational (or angular) alignment between the coupling 14 and the flange 15 determines whether the coupling 14 and the flange 15 are attracted to each other (for connection) or repulsed from each other (for disconnection). Ex. 1005,

8:18-25, 8:40-43. In other words, the angular orientation of the flange 15 with respect to the coupling 14 determines if the patten assembly 6 is attracted to or repulsed from the coupling 14.⁵ Ex. 2005, ¶79.



B. Colloca

Colloca is not directed to a percussive massager, nor is it directed to a cosmetic patting device. Ex. 2005, ¶81. According to Colloca:

Misalignment or other mis-adjustment [sic] or subluxation of the spine and bones of the human body can lead to musculoskeletal discomfort and a variety of related symptoms. Adjustment of the spine to a healthy alignment may have substantial therapeutic effects.

⁵ In embodiments of the '082 Patent, the magnets 606/624 are linearly arranged with their opposite poles facing in the assembly/disassembly direction such that they are connected regardless of rotational alignment. *See, e.g.*, Ex. 1001, 6:61-7:3, FIG. 6.

Ex. 1009, ¶[0002]. Colloca accordingly discloses a “chiropractic adjusting instrument” designed for “bone movement.” *Id.*, Abstract, ¶¶[0002]-[0003], [0009], [0012]. The commercial embodiment of Colloca is described and marketed at <https://neuromechanical.com/sciencetech/>. Consistent with Colloca’s disclosure, Dr. Colloca’s website explains that his device is a “mechanical adjustment instrument” to be used by chiropractic professionals to move bones, primarily vertebrae. Ex. 1009, ¶[0002]; Ex. 2005, ¶81.



Colloca criticizes prior art adjustment devices because “they do not have ... an interlock such that the device cannot be activated with an appropriate preload” and discloses “an interlock or safety device such that pulse system 200 cannot be

activated unless the switch 310 activated.” *Id.*, ¶¶[0006], [0008], [0054]. The solenoid-based drive mechanism must be preloaded “by placing the impact head on a body or surface” to activate the switch 310 such that the “that chiropractic adjusting instrument 10 may be fired by depressing the trigger 330.” *Id.*, ¶[0055].

The '082 Patent was expressly allowed over Colloca, with the Examiner stating that “Colloca does not disclose the bore as located at the distal end of a piston” and that it “does not disclose inserting or removing the impact head from the bore while a piston reciprocates.” Ex. 1004, p.1894.

C. Harris

Harris is directed to a “hand held percussive massager with adjustable nodes.” Ex. 1006, Title. Harris states that the “object of the present invention [is] to provide a hand-held massager having both vibratory and percussive massage capabilities ... to deliver an effective therapeutic massage.” *Id.*, 1:33-38; Ex. 2005, ¶85.

D. Pivaroff

Pivaroff discloses a deep muscle stimulator device “to increase muscle metabolism, increase the lactic acid cycle and to relieve pain.” Ex. 1007, 1:5-10. In other words, just like the '082 Patent, Pivaroff is directed to a percussive massager. *Compare* Ex. 1001 ('082 Patent), 1:25-28 (“This invention relates generally ... to a deep muscle-stimulating device used to increase muscle metabolism, increase the lactic acid cycle and relieve pain.”) *with* Ex. 1007 (Pivaroff), 1:5-49 (“This invention

relates generally ... to a deep muscle stimulator device to increase muscle metabolism, increase the lactic acid cycle and to relieve pain.”); Ex. 2005, ¶¶86-87.

Pivaroff contrasts its “deep muscle stimulator device” with “known prior art devices [that] do not reach deep enough into the muscle tissues to provide the necessary relief for many persons” because these prior devices “do not vibrate at high enough speeds and/or do not provide sufficient force to reach deep muscle tissues.” Ex. 1007, 1:11-26.

Pivaroff’s deep muscle stimulation device features a hollow head 44 that is partially filled with loose granular material to provide deep muscle relief. *Id.*, 2:55-3:30. According to Pivaroff, the hollow head partially-filled with grain is critical to providing deep muscle stimulation. *Id.*, 3:20-29. Indeed, Pivaroff states that “it appears that somehow the movement of the mixed grains of material within the interior hollow chamber made from titanium, during reciprocally motion thereof, is transferred to a patient’s body in an affected deep muscle area to produce improved and superior deep muscle relief.” *Id.*, 3:25-30.

Pivaroff’s percussive massager “operates at a speed of between about 2000 to 3600 RPM ... to provide sufficient percussion and mechanical vibrations against a portion of a patient to which it is applied by a user, to provide the deep muscle tissue within the patient's body with kinetic forms of percussion and concussion vibration.” *Id.*, 3:44-54. The movement length (*i.e.*, stroke length) of the head 44 is designed

“to provide maximum concussion and percussion, and, therefore, maximum muscle relief.” *Id.*, 3:61-64. Pivaroff concludes by explaining that “the deep muscle simulation [sic] device of the present invention has been developed for use by professionals in the chiropractic, medical and physical therapy fields. These professionals may also include massage therapists, rehabilitation providers and sports trainers in all athletic disciplines.” *Id.*, 3:65-4:3; Ex. 2005, ¶¶88-89.

The teachings of Pivaroff were extensively considered and overcome during prosecution of the '482 and '082 Patents. *See, e.g.*, Ex. 1013, pp.2587-95; Ex. 1004, p.1894.

E. Clark

Clark “relates to magnetic tools, and more particularly to tools adapted to magnetically hold and drive a multiplicity of different types of screws and the like.” Ex. 1014, 1:8-10. Clark is directed to a device that magnetically retains a screw prior to it being attached to (*i.e.*, screwed into) material by rotation. *Id.*, 3:35-48. Clark discloses a screwdriver. Ex. 2005, ¶91.

IV. LEVEL OF ORDINARY SKILL IN THE ART

“In determining the level of ordinary skill in the art, various factors may be considered, including the ‘type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field.’” *Apple Inc. et al.*

v. Uniloc Luxembourg S.A., IPR2017-00222, Paper 29, *19 (May 23, 2018) (*quoting In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995)).

The relevant field of art is percussive massage devices that apply a percussive force to a selected portion of a body sufficient to massage deep muscle tissue and designed to be easily used by an individual. Ex. 1001, 1:22-25, 6:53-56, 7:4-13; Ex. 2005, ¶65. A person of ordinary skill in the art (“POSITA”) as of the effective filing date of the ’082 Patent (July 1, 2013) would have a degree in mechanical engineering and/or industrial design, a working knowledge of consumer product design and human factors, and/or at least three to five years of experience in conceiving, designing, engineering, and/or modifying devices for human use and interaction. Ex. 2005, ¶66.

Petitioner’s proffered experiential requirement—limited to “rotating or reciprocating mechanisms”—is both too generic and too specific. Indeed, “rotating or reciprocating mechanisms” is non-specific to the problems and solutions in the field of percussive massage devices disclosed and claimed in the ’082 Patent. Rather, rotating or reciprocating mechanisms are merely one aspect of the claimed percussive massagers, while the ’082 Patent focuses on how a user (*i.e.*, a consumer) would interact with the percussive massager as a whole, which Petitioner’s proposal fails to consider. Ex. 1001, 3:45-57, 4:4-14, 6:53-56, 7:4-14, 9:18-22; Ex. 2005, ¶68; *Apple Inc. v. Uniloc 2017 LLC*, IPR2017-00222, Paper 29, *19-20 (finding that

“Patent Owner’s proffered level of ordinary skill in the art focuses too generally on experience in ‘communications technology’” and that “[t]he enunciation of such experience is too generic to be useful in determining the level of ordinary skill in the art...”).

Petitioner’s proffered experiential requirement appears designed to match to its declarant’s background rather than being based on the ’082 Patent. However, at his deposition, Dr. Pratt confirmed that most of his involvement with installation tools “was focused on ... the end effector” that “goes on the end of the tool” rather than the reciprocating or rotational mechanism itself. Ex. 2033, 17:20-25. Nevertheless, neither Petitioner nor Dr. Pratt connect the purported experiential requirement in “rotating or reciprocating mechanisms” to the ’082 Patent or the pertinent art generally. *See generally* Pet., p.15; Ex. 1002, ¶37.

Patent Owner respectfully requests that the Board adopt Patent Owner’s assessment of the level of ordinary skill in the art.

V. CLAIM CONSTRUCTION

“In a post-grant review proceeding, a claim of a patent ...shall be construed 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), including construing 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.” 37 C.F.R. § 42.200(b). “Under that standard, claim terms ‘are generally given their ordinary and customary meaning’ as understood by a person of ordinary skill in the art at the time of the invention.” *Beone Medicines USA, Inc. v. Pharmacyclics, LLC*, PGR2024-00009, Paper 50, *14 (Apr. 28, 2025) (quoting *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005) (en banc)).

A. The Preamble is Limiting

The preamble for all Challenged Claims includes the term “percussive massager,” and this preamble language is limiting for the reasons detailed below.

“While it is true that preamble language is often treated as nonlimiting in nature, it is not unusual for this court to treat preamble language as limiting....” *Bicon, Inc. v. Straumann Co.*, 441 F. 3d 945, 952 (Fed. Cir. 2006). “Whether a preamble stating the purpose and context of the invention constitutes a limitation of the claimed process is determined on the facts of each case in light of the overall form of the claim, and the invention as described in the specification and illuminated in the prosecution history.” *Applied Materials v. Advanced Semi. Materials*, 98 F. 3d 1563, 1572-73 (Fed. Cir. 1996). “No litmus test defines when a preamble limits claim scope,” but “[s]ome guideposts [] have emerged from various cases discussing the preamble’s effect on claim scope.” *Catalina Marketing Intern. v. Coolsavings.Com*, 289 F. 3d 801, 808 (Fed. Cir. 2002). The relevant “guideposts” here include “clear reliance on the preamble during prosecution to distinguish the

claimed invention from the prior art” and “dependence on a particular disputed preamble phrase for antecedent basis.” *Id.*

**1. The '482 Patent's Prosecution History is Properly
Considered in Construing The '082 Patent**

The '082 Patent is the grandchild of the '482 Patent. Ex. 1001, code [63]. The preamble of the claims in both the '082 and '482 Patents is limited to a “percussive massager.” According to Federal Circuit precedent, “unless otherwise compelled, that the same claim term in the same patent or related patents carries the same construed meaning.” *Omega Engineering, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1334 (Fed. Cir. 2003); *see also Elkay Mfg. Co. v. Ebco Mfg. Co.*, 192 F.3d 973, 980 (Fed. Cir. 1999) (“When multiple patents derive from the same initial application, the prosecution history regarding a claim limitation in any patent that has issued applies with equal force to subsequently issued patents that contain the same claim limitation.”). This canon of claim construction is equally applicable to the construction of a claim preamble. *See, e.g., First Quality Tissue, LLC v. Irving Consumer Prods. Ltd.*, No. 19-CV-428-RGA, 2020 WL 3542321, at *3 (D. Del. June 30, 2020) (finding the preamble limiting based on, *inter alia*, “the prosecution history of the grandfather '517 patent”).

2. Patentee Clearly Relied On The Preamble During Prosecution of the Parent '482 Patent

“[C]lear reliance on the preamble during prosecution to distinguish the claimed invention from the prior art transforms the preamble into a claim limitation because such reliance indicates use of the preamble to define, in part, the claimed invention.” *Catalina Marketing Intern.*, 289 F.3d at 808; *see also In re Cruciferous Sprout Litigation*, 301 F.3d 1343, 1348 (Fed. Cir. 2002) (holding that “the preamble is a limitation of the claims” because “[the patentee’s statements during prosecution] shows a clear reliance by the patentee on the preamble to persuade the Patent Office that the claimed invention is not anticipated by the prior art”).

The preamble of the original claims in the '482 Patent recited an “apparatus.” Ex. 1013, pp.25-28. After four Office Actions, in the final amendment prior to allowance, Applicant amended the preamble of each claim to replace “apparatus” with “percussive massager” and added new claims 35-65, each of which also recited the “percussive massager” preamble. *Id.*, pp.2524-31.

In addition to this late-prosecution narrowing amendment, Applicant clearly and expressly relied on the new preamble language to distinguish the claims of the '482 Patent over the prior art. Specifically, Applicant stated that “Rhoades is directed to a cosmetic instrument (e.g., a microderm abrasion device) that is not a percussive massager, as recited in the claims.” *Id.*, p.2534. Applicant proceeded to

explain how “Rhoades’ microderm abrasion device” operates “for treating the surface of the skin,” which is different from how Pivaroff is “directed to a deep muscle stimulation device.” *Id.* Later in its response, Applicant reiterated that “Rhoades’ apparatus is a cosmetic instrument, not a ‘**percussive massager.**’” *Id.*, p.2536 (**emphasis** in original).

In the subsequent Notice of Allowance, Examiner Stanis stated that “Specifically, the prior art of record does not disclose: ... (3) A percussive massager....” *Id.*, pp.2592-93.

In sum, Applicant expressly limited the scope of all claims of the ’482 Patent to a “percussive massager” instead of merely “an apparatus,” and Applicant expressly and clearly relied on that amendment and distinction to overcome at least Rhoades. Ex. 2005, ¶¶57-58. In addition, the Examiner cited the amended preamble among his reasons for allowing the ’482 Patent over the prior art, including Rhoades. Accordingly, the preamble of the claims of the ’482 Patent is limiting. *See Invitrogen Corp. v. Biocrest Mfg., LP*, 327 F.3d 1364, 1370 (Fed. Cir. 2003) (finding that “the district court correctly discerned that the preamble in this patent acts as a limitation” because the applicant amended the preamble and then “clearly relied on the preamble term ‘improved competence’ to distinguish Hanahan”). For these reasons, the same preamble of the Challenged Claims in the ’082 Patent is limiting.

3. Dependence on the Preamble for Antecedent Basis

In the '482 Patent, independent claim 1 recites “the percussive massager” within its body, relying on “a percussive massager” as recited in the preamble for proper antecedent basis, and dependent claims 13 and 18 (claims 15 and 20 during prosecution) similarly recite “the percussive massager” within their bodies. Ex. 1013, pp.2524-26. Moreover, dependent claims 46 and 51 (claims 50 and 55 during prosecution) each recite “the percussive massager” in their bodies, relying on the “percussive massager” preamble in independent claim 38 for proper antecedent basis. *Id.*, pp.2528-30. Thus, the “percussive massager” preamble in the claims of both the '482 and '082 Patents is limiting for these additional reasons. *See Pacing Technologies, LLC v. Garmin Intern., Inc.*, 778 F. 3d 1021, 1024 (Fed. Cir. 2015) (finding a claim preamble limiting where “the preamble of claim 25 provides antecedent basis for the term ‘user’ in the body of that claim” and “similarly provides antecedent basis for the term ‘repetitive motion pacing system’ recited as a positive limitation in the body of claim 28, which depends from claim 25”).

B. Plain and Ordinary Meaning of “Percussive Massager”

The term “percussive massager” as recited in the '082 Patent should be given its plain and ordinary meaning. *Thorner v. Sony Computer Entertainment America LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012) (“The words of a claim are generally given their ordinary and customary meaning as understood by a person of ordinary

skill in the art when read in the context of the specification and prosecution history.”); Ex. 2005, ¶60. The ’082 Patent explains that “[t]his invention relates ... more particularly[] to a deep-muscle stimulating device used to increase muscle metabolism, increase the lactic acid cycle and relieve pain” and describes using different stroke lengths to “work on larger or smaller muscle groups, or deeper or shallower point of stress or soreness in the muscles.” Ex. 1001, 1:25-28, 7:20-23. This description is consistent with general definition and description of “percussive massager” as explained in Sections II.A-B, *supra*. Nevertheless, for the avoidance of confusion, a POSITA would understand that a “percussive massager” as recited in the Challenged Claims is a device that provides a high-speed, long stroke action to massage deep muscle tissue. *See* Ex. 2020, p.3 (Therabody article describing “percussive therapy” as “work[ing] by delivery a unique combination of targeted deep-tissue massage, at a high-speed frequency, with the ability to apply sufficient force to the area”); Ex. 2005, ¶60.

A percussive massager differs from a vibrating massager in that the percussive massager is designed with sufficient stroke length to reach and massage deep muscle tissue. The ’082 Patent expressly ties the stroke length of its percussive massager to its muscle massaging ability, disclosing that “it may be desirable to adjust the throw or the stroke length of the massaging head to work on larger or smaller muscle groups, or deeper or shallower points of stress or soreness in the muscles.” Ex. 1001,

7:20-23. Moreover, percussive massage (and massagers) is, according to Therabody, “not to be confused with vibration therapy,” which features “a lower amplitude [*viz.* stroke length] than percussive therapy” to provide “lower-intensity pulses ... to the treatment area.” Exs. 2020-21; Ex. 2005, ¶61. Therabody also explains that “[v]ibration therapy operates at a lower amplitude (depth) than percussive therapy, meaning it does not physically push down on tissue.” Ex. 2027.

C. Plain and Ordinary Meaning of “Massaging Head”

The '082 Patent uses the term “massaging head” consistent with its plain and ordinary meaning as the end piece of the percussive massager that contacts the user’s body to provide percussive massage. Ex. 2005, ¶62. In other words, the term “massaging head” cannot be read in a vacuum as *any* end piece on any reciprocating device, but rather must be understood in the context of the claims⁶ and the specification of the '082 Patent, both of which are limited to percussive massagers. *See Phillips*, 415 F.3d at 1313 (“[T]he person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the

⁶ Even if the preamble is not found to be limiting, according to Petitioner it “still provide[s] context for the interpretation of the claims and the understanding of the invention.” *Therabody, Inc. v. DataFeel Inc.*, PGR2025-00026, Paper 2, *85 n.5 (January 17, 2025).

disputed term appears, but in the context of the entire patent, including the specification.”). The ’082 Patent also focuses on how the different massaging heads “work on different muscles or different portions of muscles during the massage.” Ex. 1001, 6:51-53.

Here, the claim term “massaging head” would be understood by a POSITA as an end piece that is capable of providing percussive massage, *i.e.*, high-speed, deep tissue massage. Exs. 2020, 2022. Not every end piece is capable of providing high-speed, deep muscle massage. Indeed, Therabody offers different end pieces (called “attachments”) that provide vibration massage instead of percussive massage by absorbing most of the force and stroke applied by the massager without passing it to the user’s body. Ex. 2027, p.3 (listing five attachments for percussive therapy and “a separate, easy-to-use attachment” for vibration therapy). Thus, a POSITA would understand that the recited “massaging head” is not simply any end piece on a reciprocating device but is the end piece of a percussive massager capable of providing percussive massage, *i.e.*, high-speed, deep tissue massage. Ex. 2005, ¶62.

VI. PETITIONER FAILS TO SHOW UNPATENTABILITY BY A PREPONDERANCE OF THE EVIDENCE

In a post-grant review, Petitioner bears the burden of proving unpatentability by a preponderance of the evidence. 35 U.S.C. § 326(e). This burden is Petitioner’s alone, and it never shifts. *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800

F.3d 1375, 1378 (Fed. Cir. 2015); *see Dynaenergetics Europe GmbH et al. v. Qinetiq Ltd.*, PGR2023-00003, Paper 19, *2 (Apr. 11, 2024) (applying *Dynamic Drinkware* to post-grant review). Petitioner fails to meet its burden for any asserted ground.

A. Ground 1: § 112(a)

To satisfy the written description requirement under § 112(a), the specification must “reasonably convey[] to those skilled in the art that the inventor had possession” of the claimed invention as of the filing date. *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc). An adequate description does not require any particular form of disclosure or that the specification recite the claimed invention *in haec verba*. *Id.* at 1352. In fact, “drawings may suffice to satisfy the ‘written description’ requirement.” *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1563-64 (Fed. Cir. 1991). In evaluating the adequacy of the written description, a court may also consider “the existing knowledge in the particular field, the extent and content of the prior art, the maturity of the science or technology, [and] the predictability of the aspect at issue.” *Capon v. Eshhar*, 418 F.3d 1349, 1359 (Fed. Cir. 2005) (cited with approval in *Ariad*, 598 F.3d at 1352); *see also Boston Sci. Corp. v. Johnson & Johnson*, 647 F.3d 1353, 1366 (Fed. Cir. 2011) (holding that because assessment for written description is made from perspective of person of ordinary skill in the art, in some instances, a patentee can rely on information that is “well-known in the art” to satisfy written description). “A patent

need not teach, and preferably omits, what is well known in the art.” *Falko-Gunter Falkner v. Inglis*, 448 F.3d 1357, 1365 (Fed. Cir. 2006).

1. Ground 1A: The “quick-connect system” Limitation

Petitioner fails to clearly identify the §112(a) basis for this Ground, contrary to its statutory burden to identify “the grounds on which the challenge to each claim is based” “with particularity.” 35 U.S.C. § 322(a)(3). Petitioner’s Section XI.A refers to “lack of written description support,” but Section XI.A.1 alleges “fail[ure] to enable.” Pet., pp.15-16.

It is black letter law that “[t]he written description requirement is separate and distinct from the enablement requirement.” MPEP § 2161(II) (quoting *Ariad Pharm., Inc. v. Eli Lilly and Co.*, 598 F.3d 1336, 1341 (Fed. Cir. 2010) (*en banc*)). The primary case relied upon by Petitioner—*Forte Biosciences, Inc. v. Univ. of Mass.*, PGR2023-00014, Paper 45, *8-21 (June 24, 2024)—fails to quell this confusion because it separately (and properly) addresses both written description and enablement of the same claims. Because Petitioner has failed to identify the statutory basis for Ground 1A *with particularly*, Ground 1A fails to meet the statutory standard.

a) The “quick-connect system” limitation is enabled

Petitioner fails to apply the proper test for enablement. As explained in *Phison Electronics Corp. v. Vervain, LLC*, PGR2024-00047, Paper 9, *35-36 (March 17,

2025), the Patent Office “continue[s] to use the *Wands* factors to ascertain whether the experimentation required to enable the full scope of the claimed invention is reasonable.”

Petitioner fails to acknowledge, let alone address, the *Wands* factors, nor does Petitioner analyze the nature or amount of experimentation needed to make and use the full scope of the claimed invention. Thus, Petitioner has not met its burden. *See Phison Electronics Corp.*, PGR2024-00047, Paper 9, *39-40 (finding that the petitioner failed to support its enablement argument because it confused written description and enablement requirements and failed to consider the *Wands* factors). To the extent Petitioner’s argument is based on an alleged lack of enablement, it is deficient as a matter of law.

b) The “quick-connect system” limitation is sufficiently described

Petitioner exclusively relies on cases and PTAB decisions addressing the written description requirement in the context of the pharmaceutical arts, but the ’082 Patent is in the mechanical arts. *See* Pet., p.13. This distinction is critical because “the level of detail required to satisfy the written description requirement varies depending on the nature and scope of the claims and on the complexity and predictability of the relevant technology.” *Ariad Pharmaceuticals, Inc. v. Eli Lilly and Co.*, 598 F. 3d 1336, 1351 (Fed. Cir. 2010); *see also Hologic, Inc. v. Smith &*

Nephew, Inc., 884 F.3d 1357, 1361 (Fed. Cir. 2018) (“We agree with the Board's finding that the field of this invention is a predictable art, such that a lower level of detail is required to satisfy the written description requirement than for unpredictable arts.”). In particular, the mechanical arts are predictable, such that “[a] single embodiment may provide broad enablement.” MPEP § 2164.03 (citing *In re Vickers*, 141 F.2d 522, 526-27 (CCPA 1944)); see also *Spectra-Physics, Inc. v. Coherent, Inc.*, 827 F.2d 1524, 1533 (Fed. Cir. 1987) (“If an invention pertains to an art where the results are predictable, e.g., mechanical as opposed to chemical arts, a broad claim can be enabled by disclosure of a single embodiment ... and is not invalid for lack of enablement simply because it reads on another embodiment of the invention which is inadequately disclosed.”) (internal citations omitted). By citing only cases and PTAB decisions involving the unpredictable chemical arts, Petitioner attempts to foist upon the Patent Owner an entirely incorrect standard to judge written description support as to this limitation and the claims as a whole.

Nevertheless, the written description and accompanying figures reasonably convey, to a skilled artisan, a “quick-connect system” that “is configured to have a proximal end of the first massaging head inserted into or removed from the bore while the piston reciprocates the predetermined first stroke length at the first speed” as recited in claim 1 and the similar limitations in claim 18. Indeed, the specification explicitly describes and illustrates, in detail, an example embodiment of the quick-

connect system, in which magnets assist in securing the massaging head to the bore in the piston. *See* Ex. 1001, 6:57-7:3, FIG. 6; *see also id.* at 2:7-11, 3:35-36, 42-45, FIGS. 1-3 (disclosing and describing an additional quick-connect system embodiment); Ex. 2005, ¶92.

Disclosure of one example embodiment of the recited “quick-connect system” is not *per se* deficient as Petitioner suggests, and such a position is wholly inconsistent with Federal Circuit precedent. Indeed, Petitioner merely attempts to limit the scope of the recited “quick-connect system” to an exemplary embodiment described in the ’082 Patent while arguing that failure to describe any other embodiment somehow runs afoul of §112’s written description requirement. This approach would, taken to its (il)logical end, result in any patent claim being limited to the specific embodiment(s) disclosed in the specification, contrary to Federal Circuit precedent. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1323 (Fed. Cir. 2005) (“In particular, we have expressly rejected the contention that if a patent describes only a single embodiment, the claims of the patent must be construed as being limited to that embodiment.”).

Further, the “quick-connect system” limitation is further described and limited in the body of independent claims 1 and 18. In particular, the claimed “quick-connect system” is limited to a particular structure of a piston with a bore and a first massaging head with a proximal end to be inserted into or removed from the bore

while the piston reciprocates, and the function is self-evident—to connect the massaging head and the piston.

Moreover, Petitioner ignores that a “quick-connect” system is a well-understood term of art in the mechanical arts featuring male and female components that can be attached and detached without the use of separate tools, which is modified in the context of claims 1 and 18 in that the quick-connect system is included in a percussive massager and must be operable while the piston reciprocates. Ex. 2005, ¶93; *see also* Exs. 2024-25. Indeed, a quick-connect system would be known to a POSITA to include a number of different mechanical configurations, and Petitioner’s expert agrees. Ex. 2005, ¶93; Ex. 1002, ¶¶54-65 (stating that “many different types of connectors not requiring a tool were known” and providing numerous examples); *see Boston Scientific Corp. v. Johnson & Johnson*, 647 F.3d 1353, 1366 (Fed. Cir. 2011) (Because specification is viewed from perspective of one of skill, a patentee may rely on information that is “well-known in the art” for purposes of meeting written description requirement); *see also Capon*, 418 F.3d at 1359 (“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.”).

In sum, the specification reasonably conveys to those skilled in the art that the inventor had possession of the claimed invention, including claimed the quick-connect system, as of the filing date.

2. Ground 1B: The “substantially cylindrical bore” Limitation

Petitioner’s contention that dependent claim 13’s recitation of a “substantially cylindrical bore” lacks written description support ignores the import of the specification as a whole to a POSITA. The written description and accompanying figures reasonably convey, to a skilled artisan, a “substantially cylindrical bore.” The specification reasonably conveys a piston having a bore and further reasonably conveys that the bore is a substantially cylindrical bore. Ex.2005, ¶95. The written description notes that the “[q]uick-connect system 600 includes a piston 602 that has a hollow-end bore 608 for receiving the shaft 621 of a massaging head 620. Located with the bore 608 of piston 602 is a cylindrical seat 604.” Ex. 1001, 6:57-60. Similarly, Figure 4 (below) shows the piston 230 having a circular opening at its distal end, and the cross-sectional view of the piston 602 in Figure 6A (below) shows a deep bore 608, which together with Figure 4 reasonably conveys to a POSITA that the bore in the piston is cylindrical, *i.e.*, a circle extended along a third dimension. Ex. 2005, ¶95.

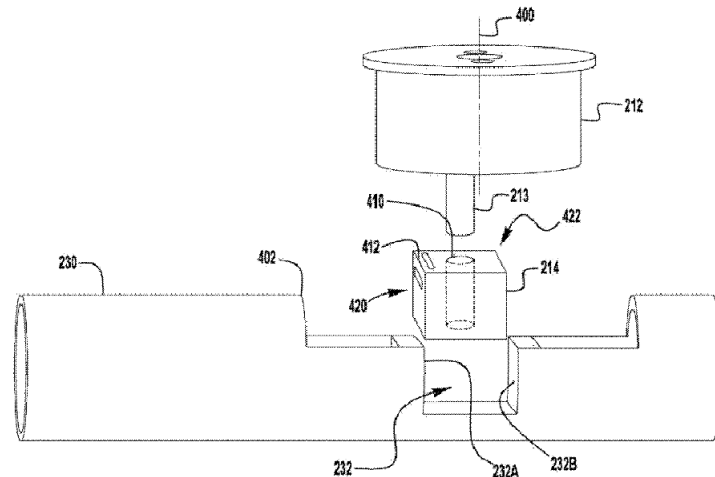


FIG. 4

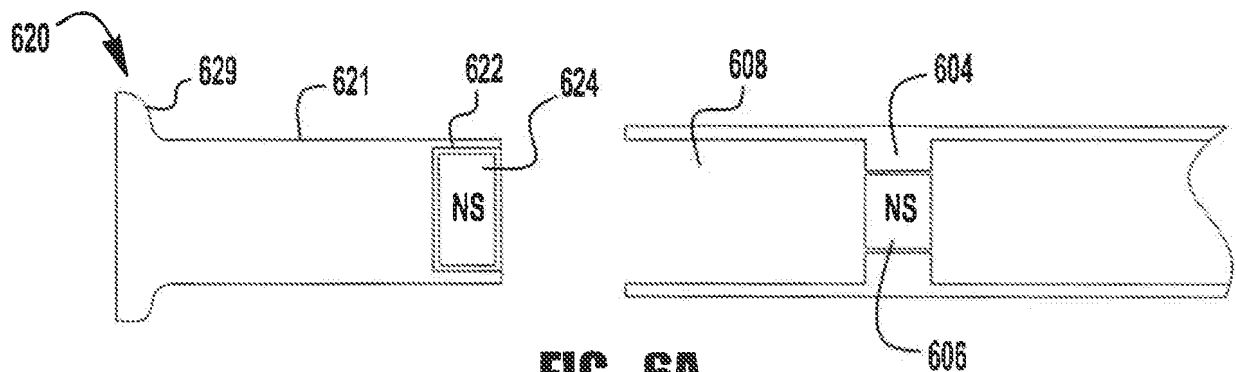


FIG. 6A

As Petitioner admits, “[t]he term ‘substantial’ implies ‘approximate,’ rather than ‘perfect.’” *Wilson Sporting Goods Co. v. Hillerich & Bradsby Co.*, 442 F.3d 1322, 1329 (Fed. Cir. 2006) (quoting *Liquid Dynamics Corp. v. Vaughan Co., Inc.*, 355 F.3d 1361, 1368 (Fed. Cir. 2004)).” Pet., p. 20 n.5. The Federal Circuit has also stated that “like the term ‘about,’ the term ‘substantially’ is a descriptive term commonly used in patent claims to ‘avoid a strict numerical boundary to the specified parameter’....” *Verve, LLC v. Crane Cams, Inc.*, 311 F.3d 1116, 1120 (Fed. Cir. 2002) (citations omitted). Claim 13’s recitation of a “substantially

cylindrical bore” merely allows for minor variations in the cylindrical shape while still performing its intended function of having the proximal end of the first massaging head inserted into or removed therefrom and need not be mathematically defined. In practice, this variance is called cylindricity or runout. Ex. 2017. At his deposition, Petitioner’s declarant, Dr. Pratt, explained that cylindrical parts are commonly designed with a tolerance allowing for some variance in their overall cylindrical shape while still fitting together or performing their required function. Ex. 2033, 25:3-26:21. Indeed, Petitioner’s own arguments confirm that the bounds of a “substantially cylindrical bore” would be well understood by a POSITA as being able to receive the proximal end of the first massaging head without the need for alignment while the piston reciprocates. Pet., pp.19-20; Ex. 2005, ¶96.

Petitioner’s argument is devoid of any case or PTAB decision supporting its novel argument that the common patent drafting term “substantially” requires explicit, mathematically precise disclosure, and Federal Circuit precedent is to the contrary. *See Sonix Tech. v. Publications Intern.*, 844 F.3d 1370, (Fed. Cir. 2017) (“a patentee need not define his invention with mathematical precision”) (internal quotations and citations omitted); *Dynaenergetics Europe GmbH v. Qinetiq Ltd.*, PGR2023-00003, Paper 19, *32 (Apr. 11, 2024) (stating that “[p]etitioner’s non-enablement grounds seeks to foist upon Patent Owner an artificial and arbitrary standard of mathematical precision....”).

Taken together, the specification reasonably conveys to those skilled in the art that the inventor had possession of the claimed invention, including the substantially cylindrical bore, as of the filing date and, moreover, that use of “substantially” is common not only in patents generally but also in this same field of art without requiring an express definition.

The Challenged Claims are not unpatentable under 35 U.S.C. § 112(a).

3. Ground 1C: Claim 17

Patent Owner filed a statutory disclaimer disclaiming claim 17. Ex. 2004. The disclaimer shall have no effect on the non-disclaimed claims of the '082 Patent, and no adverse inference shall result from the disclaimer. *See Raytheon Technologies Corp. v. General Electric Company*, 993 F.3d 1374, 1379, n.4 (Fed. Cir. 2021) (internal citations and quotations omitted). Patent Owner is not seeking an adverse judgment against it as to disclaimed claim 17. Pursuant to 37 CFR § 42.73(b), Patent Owner is not disclaiming the '082 Patent or any of the remaining non-disclaimed claims challenged in the Petition.

B. Ground 2: The “substantially cylindrical bore” Limitation

Petitioner’s challenge to the “substantially cylindrical bore” as recited in dependent claim 13 and the similar “substantially cylindrical” terms in dependent claims 14-16 as being indefinite is deficient because it seeks to require mathematical precision, contrary to Federal Circuit precedent. Rather, a patent is indefinite only

“if its claims, read in light of the specification delineating the patent, and the 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, 901 (2014); *see also* 35 U.S.C. § 112(b) (the specification must “conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.”). The indefiniteness standard “mandates clarity, while recognizing that absolute precision is unattainable.” *Nautilus*, 572 U.S. at 901. Words of degree like “substantially” are not “inherently indefinite,” but “the court must determine whether the patent provides some standard for measuring that degree.” *Biosig Instruments, Inc. v. Nautilus, Inc.*, 783 F.3d 1374, 1378 (Fed. Cir. 2015) (internal quotation marks omitted).

In *Ironburg Inventions Ltd. v. Valve Corp.*, 64 F.4th 1274, 1288 (Fed. Cir. 2023), the Federal Circuit held that “an elongate member that extends substantially the full distance between the top edge and the bottom edge” was not indefinite. The Federal Circuit agreed that the claim term was not indefinite based on the purpose of the claimed structure: “[w]ith respect to the rear controls, the word ‘substantially’ is reasonably precise, given that the purpose of the elongate shape is to allow ‘a user to engage the paddles with any of the middle, ring, or little finger.’” *Id.* at 1288.

Similarly, in *Grace Instrument Indus., LLC v. Chandler Instruments Co.*, 57 F.4th 1001, 1009 (Fed. Cir. 2023), the Federal Circuit concluded that the term “enlarged chamber” was not indefinite: “in the context of this patent, ‘enlarged chamber’ does not require that chamber to be larger than some baseline object; rather it must be large enough to accomplish a particular function.”

Likewise, with respect to the ’082 Patent, a person of ordinary skill in the art would know when the bore in the piston is substantially cylindrical enough, *i.e.*, sufficiently cylindrical, to accomplish the function identified in the claims themselves: receiving or allowing removal of the proximal end of the first massaging head while the piston reciprocates.⁷ Ex. 2005, ¶97. In other words, the bore of the piston needs to be sufficiently cylindrical to enable the massaging head to be inserted or removed while the piston is reciprocating. *Id.*

Indeed, Petitioner’s own retelling of the prosecution history of the parent ’482 Patent in Ground 1B confirms that a POSITA would understand that the bore is

⁷ Similarly, in the parallel district court proceeding, Therabody asserts the following alternative proposed claim construction for “wherein the bore comprises a substantially cylindrical bore”: “the bore is sufficiently cylindrical such that it can receive the proximal end of the first massaging head without the need for rotational alignment.” Ex. 1016, pp.8-9.

substantially cylindrical when it can receive the proximal end of massaging head without alignment, which would be required for attachment while the piston is reciprocating. *See* Pet., p.19. The term “substantially cylindrical bore” is not indefinite.

Moreover, Petitioner has availed itself to the very same claim practice. In U.S. Patent No.10,557,490 to Wersland (Ex. 2010, “Wersland”)⁸, claim 3 recites that “the first and second flat surfaces of the female attachment member are *substantially parallel* to one another.” Wersland uses the term “substantially parallel” in the Summary of the Preferred Embodiments section but provides no precise or mathematical definition other than the inferred definition of parallel enough such that the surfaces fit together and do not “rotat[e] with respect to one another.” *Id.*, 9:24-29. At his deposition, Dr. Pratt confirmed that “substantially parallel” would encompass “perfectly parallel” but otherwise only “need to be close enough in size to prevent rotation, but yet they need to slide together....” Ex. 2033, 23:9-24:7. In other words, Dr. Pratt was able to understand “substantially parallel” as claimed in Wersland based on context clues and intended functionality despite Wersland’s lack of specific disclosure on this point.

⁸ Theragun, LLC later changed its name to Therabody, Inc. Ex. 2011.

Dr. Pratt has also availed himself of “substantially” in his own patents. For example, U.S. Patent No. 8,348,566 (Ex. 2012) states that the “[l]eading edge 54 has a rounded cross-section as illustrated” but claims that “the leading edge portion further comprises *a substantially rounded edge.*” *Id.*, 3:26-27, claims 6 and 19 (*emphasis* added). Dr. Pratt’s patent, however, never explains or describes the “substantially rounded edge” in the specification, relying instead on “common knowledge for fastener engineers familiar with these types of fasteners” and the understanding of “one of ordinary skill in the art for these types of fasteners.” Ex. 2033, 20:10-21:10.

The Challenged Claims inform, with reasonable certainty and based on the knowledge of a POSITA, those skilled in the art about the scope of the invention, and thus, they are not unpatentable under §112(b).

C. **§ 103 Grounds**

1. **Ground 3: Mabuchi and Colloca Do Not Render Claims 1 and 18 Obvious**

At least the following limitations of independent claim 1 and the similar limitations of independent claim 18 are missing from and are not obvious in light of Mabuchi and Colloca in Ground 3. Thus, Petitioner fails to meet its burden under Ground 3, and the Challenged Claims are not unpatentable in Ground 3 and, therefore, also in Ground 4.

a) **A POSITA Would Not Have Been Motivated To
Modify Mabuchi in View of Colloca**

A POSITA would not have been motivated to combine the teachings of Mabuchi and Colloca. *See InTouch Techs., Inc. v. VGO Commc'ns, Inc.*, 751 F.3d 1327, 1351-52 (Fed. Cir. 2014); *ActiveVideo Networks, Inc. v. Verizon Commc'ns, Inc.*, 694 F.3d 1312, 1327 (Fed. Cir. 2012). “[O]bviousness concerns whether a skilled artisan not only *could have made* but *would have been motivated to make* the combinations or modifications of prior art to arrive at the claimed invention.” *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2015) (emphasis in original) (citation omitted).

First, Mabuchi does not disclose, describe, or even suggest a percussive massager. Mabuchi specifically distinguishes its “beauty treatment device” that “repeatedly pats a skin surface” from “[o]n the other hand, the conventional patting device which is intended mainly for the massage of the muscular [*i.e.*, muscle] tissues, not for beauty treatment of the skin.” Ex. 1005, 1:6-58. According to Mabuchi’s introductory paragraphs, “the conventional patting device,” as opposed to its disclosed beauty treatment device, “belongs to the category of massager.” *Id.*, 1:26-28. This is described in more detail in Section VII.C.1.b.1, *infra*. *See also* Ex. 2005, ¶98.

Colloca describes a chiropractic adjustment device that is even more deviated from Mabuchi's beauty treatment device than the "conventional patting device" or "massager" described in Mabuchi. Colloca's chiropractic adjustment device is intended to be used by a clinical professional for medical purposes, unlike Mabuchi's beauty treatment device intended to be used on one's own body for cosmetic purposes. Ex. 2005, ¶99. Indeed, Colloca is directed to "the chiropractic art," and its device is designed "to allow more bone movement" to fix or cure "[m]isalignment or other mis-adjustment or subluxation of the spine and bones of the human body." Ex. 1009, ¶¶[0001]-[0003], [0009]. Put simply, Mabuchi's device is intended to mimic the "repeated[] tap[ping] or pat[ting] the skin surface with fingertips or palms" for beauty treatment purposes while Colloca's device is a chiropractic instrument for bone adjustment. Ex. 1005, 1:14-20; Ex. 1009, ¶¶[0002]-[0003], [0009].

Second, prior to this proceeding, Petitioner understood that Mabuchi's beauty treatment device is materially different than, and not readily combinable with, a chiropractic adjustment tool, such as Colloca. *See generally* Ex. 2014, pp.1020-22. In prosecuting its own patent, U.S. Patent No. 11,730,668⁹, Petitioner argued:

⁹ The pre-grant publication of this patent is provided as Ex. 2022.

shaft, the attachment member comprising a first magnet.

II. A person skilled in art would not have been motivated to combine Mabuchi and Fuhr because the device of Fuhr is designed to treat different body areas and does not have an attachment magnetically secured to a reciprocating shaft.

Mabuchi discloses a beauty device that pats the skin with a padder. Mabuchi, 1:31-34. On the other hand, Fuhr discloses a chiropractic instrument for use in chiropractic adjustment of musculoskeletal structures. Fuhr, [0001]. A person skilled in the art would have understood that a device for treating the face requires different specifications than a chiropractic device for adjusting musculoskeletal structures, *see e.g.* Specification, [0041], and therefore would not have looked at Fuhr for linear velocity. Indeed, the velocity disclosed in Fuhr only reads on the upper values of the claimed range (i.e. 0.44 m/s to 0.5 m/s), and the highest velocity is more than twice the claimed range (i.e. 1.22 m/s), indicating that the device of Fuhr is not designed for treating the face. Fuhr, [0076].

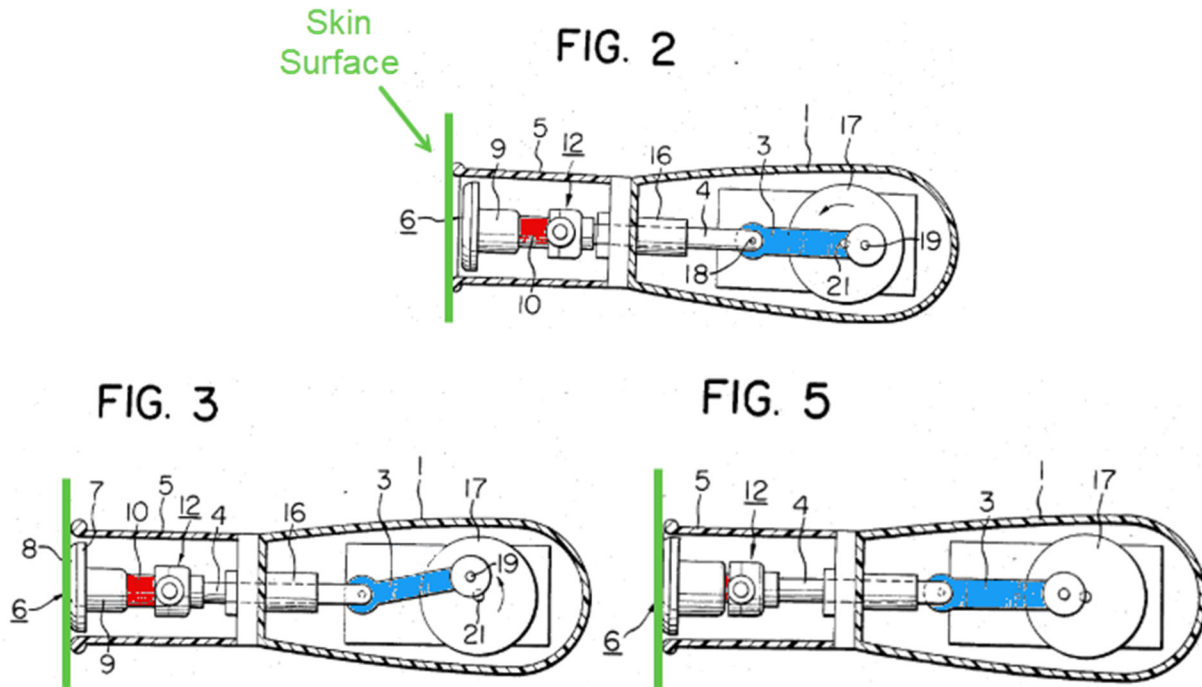
Id., pp.1021-22 (annotations and highlighting added)¹⁰.

¹⁰ Merriam-Webster's online dictionary defines "on the other hand" as an idiom "used to introduce a statement that contrasts with a previous statement or presents a different point of view." *See* <https://www.merriam-webster.com/dictionary/on%20the%20other%20hand> (accessed July 3, 2025). Mabuchi uses the phrase "on the other hand" to compare its beauty treatment device with "massager[s]." Ex. 1005, 1:21-28.

Petitioner now takes the opposite position, arguing not only that Mabuchi “teaches or suggests” or “describe[s]” a percussive massager (when it does not), but also that “[b]oth [Mabuchi and Colloca] describe percussive massagers” (when neither does). Pet., pp.33-34, 47. Petitioner’s original position—that Mabuchi’s beauty treatment device “requires different specifications than a chiropractic device for adjusting musculoskeletal structures,” such as the device in Colloca—is contrary to Petitioner’s position. In this proceeding, Petitioner argues that “Mabuchi and Colloca ... teach compatible systems” and that “because Mabuchi and Colloca 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.” Pet., p.35; *see also* Ex. 2005, ¶108.

Petitioner’s original position should be credited as it is consistent with Mabuchi’s disclosure and teachings; Petitioner’s new, contradictory position should be discredited and ignored. Ex. 2005, ¶108. In sum, Petitioner’s original characterization of Mabuchi as merely “a beauty device that pats the skin with a patter,” which Petitioner contrasted with “a chiropractic instrument for use in chiropractic adjustment of musculoskeletal structures” because these devices “require[] different specifications,” confirms that even Petitioner originally understood that Mabuchi could not be readily modified in view of chiropractic instruments, such as Colloca. *Id.*

Third, the intended purpose, use, and design considerations of Mabuchi's beauty treatment device are irreconcilable with those of Colloca. Ex. 2005, ¶¶100-03. The express disclosures of Mabuchi and Colloca directly contravene the very basis of Petitioner's argument for combining these references. *See, e.g.*, Pet., p.34 (Petitioner asserting that Mabuchi and Colloca "[b]oth references describe percussive massage devices"). Mabuchi includes the space guide 5, which ensures that the pater assembly 6 contacts and separates from the skin surface each stroke, to repeatedly pat the skin surface and so that the pater assembly 6 does not press into the user's skin. Ex. 1005, 3:64-4:30, 5:33-38, FIGS. 2, 3, and 5 (below) (showing the pater assembly 6 moving from a position retracted within the space guide 5 and out of contact with the skin surface (FIG. 2) to the end of the space guide 5 to contact the skin surface (FIG. 3) to a compressed state still in contact with but not pushing the user's skin (FIG. 5)); Ex. 2005, ¶¶100-01.



On the other hand, Colloca is specifically designed to operate *only* when the impact head 70 is maintained in contact with and pressed against a patient's body. Ex. 2005, ¶102. Colloca explains that prior art devices had a “disadvantage ... [in] they do not have ... an interlock such that the device cannot be activated with an appropriate preload” and “do not have an interlock so that the device cannot be triggered unless the appropriate preload is attained.” Ex. 1009, ¶¶[0006], [0008]. To overcome this “disadvantage,” Colloca requires that the clinician apply a preload to the impact head 70 by pressing it against a patient's body before the device can be operated. *Id.*, ¶¶[0043], [0054], [0055]. Put simply, Mabuchi is intended for its end piece to contact and separate from the user's skin each stroke, while Colloca is designed to only operate when its end piece is held in contact against a patient's body. Ex. 2005, ¶103.

In view of these contrary design and operational characteristics, Petitioner’s superficial recitation of the obviousness standard without *any* articulated reasoning is deficient. *See* Pet., p.35 (“A POSITA would have had a reasonable expectation of success in combining the teachings of Mabuchi and Colloca because they teach compatible systems” and “Mabuchi and Colloca provide percussive massage devices that operate in similar ways...”). And even if the references were “compatible” or “similar,” this alone is not sufficient to support a motivation to combine the references. *See William Wesly Carnes, Sr., Inc. v. Seaboard Intern. Inc.*, IPR2019-00133, Paper 10, *17 (May 8, 2019) (“To the extent that Petitioner is arguing that these alleged similarities would have provided a POSITA with a reason to modify the mud-gas separators described in [various references], that argument is not persuasive. ... Petitioner’s conclusory statement that a POSITA would have used mud-gas separators for shale-gas separation does not constitute an articulated reasoning with rationale underpinning sufficient to support a motivation to modify the prior art teachings.”).

Further, Petitioner’s repeated reference to the feasibility of its proposed modification—*i.e.*, that “POSITA would have understood that their teachings *could be combined* with little to no change in their respective functions” and “Colloca’s bore for receiving the attachment head *could be* implemented on Mabuchi incorporating a bore to accept a massaging head shank”—rather than providing any

evidence as to why a POSITA *would have* made such a modification is similarly deficient. Pet., p.35; *InTouch Technologies, Inc. v. VGO Communications*, 751 F.3d 1327, 1351-52 (Fed. Cir. 2014) (“VGo’s expert also succumbed to hindsight bias in her obviousness analysis. Dr. Yanco’s testimony primarily consisted of conclusory references to her belief that one of ordinary skill in the art could combine these references, not that they would have been motivated to do so.”); *William Wesly Carnes, Sr., Inc.*, IPR2019-00133, Paper 10, *18 (“Furthermore, to the extent that Petitioner is asserting that a POSITA ‘could’ have combined the references to reach the claimed invention, this is also insufficient for obviousness.”).

Accordingly, lacking any rational underpinning for its obviousness analysis, Petitioner’s Ground 3 is deficient.

b) Claim 1: Element 1[pre]

The preamble of claim 1 recites “A percussive massager.” As explained above, the preamble of claim 1 (and of every Challenged Claim) is limiting. In addition, as detailed below, Mabuchi does not disclose, teach, or otherwise suggest a percussive massager as Petitioner alleges. Accordingly, the Challenged Claims are not obvious in view of Mabuchi and Colloca as alleged in Ground 3.¹¹

¹¹ Failure by the prior art to teach or suggest a limiting preamble is sufficient to find the challenged claims not unpatentable. *See Ford Motor Co. v. Neo Wireless*

**(1) Mabuchi Expressly Confirms it is Not a
Percussive Massager**

Mabuchi specifically distinguishes its “beauty treatment device” that “repeatedly pats a skin surface” from a “conventional patting device which is intended mainly for the massage of the muscular [*i.e.*, muscle] tissues, *not for beauty treatment of the skin*,” which “belongs to the category of massager.” Ex. 1005, 1:6-58 (*emphasis added*). According to Mabuchi’s introductory paragraphs, Mabuchi discloses a “beauty treatment device,” which it directly contrasts with both: (1) “the vibrator [which] only presses and/or kneads the skin;” and (2) “the conventional patting device, which is intended mainly for the massage of the muscular tissues, not for beauty treatment of the skin” and “belongs to the category of massager.” *See id.* at 1:26-28. Put simply, Mabuchi expressly confirms that it does not disclose, teach, or even suggest a percussive massager as required by each of the Challenged Claims. Ex. 2005, ¶106.

Petitioner’s declarant, Dr. Pratt, ignores the introductory paragraphs of Mabuchi. *See generally* Ex. 1002, ¶118. Instead of addressing Mabuchi’s explicit

LLC, IPR2023-00763, Paper 53, *40 (Sept. 3, 2025) (finding the challenged claims not unpatentable where the cited references did not “teach[] or suggest[]” the claim preamble “as properly construed”).

disclosure, Dr. Pratt alleges that Mabuchi “teaches a percussive massager” because: (1) it reciprocates; and (2) it “can ‘remove subcutaneous fat, stimulate subcutaneous muscular tissues and prevent the skin from loosening or wrinkling by patting the skin surface with the padder assembly 6.’” *Id.* (quoting Ex. 1005, 5:52-60). These features do not convert Mabuchi’s beauty treatment device into a percussive massager and confirm that Mabuchi’s device intentionally lacks sufficient stroke to provide deep tissue massage. Ex. 2005, ¶106.

First, as explained in Sections II.A-B, *supra*, a POSITA would understand that a percussive massager is a device that provides a high-speed, long stroke action to massage deep muscle tissue. The portion of Mabuchi relied on by Dr. Pratt confirms that Mabuchi’s design is limited to “remov[ing] subcutaneous fat” and “stimulating subcutaneous muscular tissues,” that is, the fat and muscle directly under the skin and not deep muscle tissue as required by a percussive massager. Ex. 2005, ¶106. Mabuchi’s description of its surface-level effects is consistent with how Therabody contrasts vibration therapy, which “focuses on the surface of the treatment area” from percussive therapy, which “reaches deep into the muscle.” Ex. 2027, p.3.

Second, critically, Dr. Pratt never explains his understanding of what a “percussive massager” is. In other words, Dr. Pratt works backwards from Mabuchi’s disclosure to conclude that Mabuchi is a percussive massager rather than

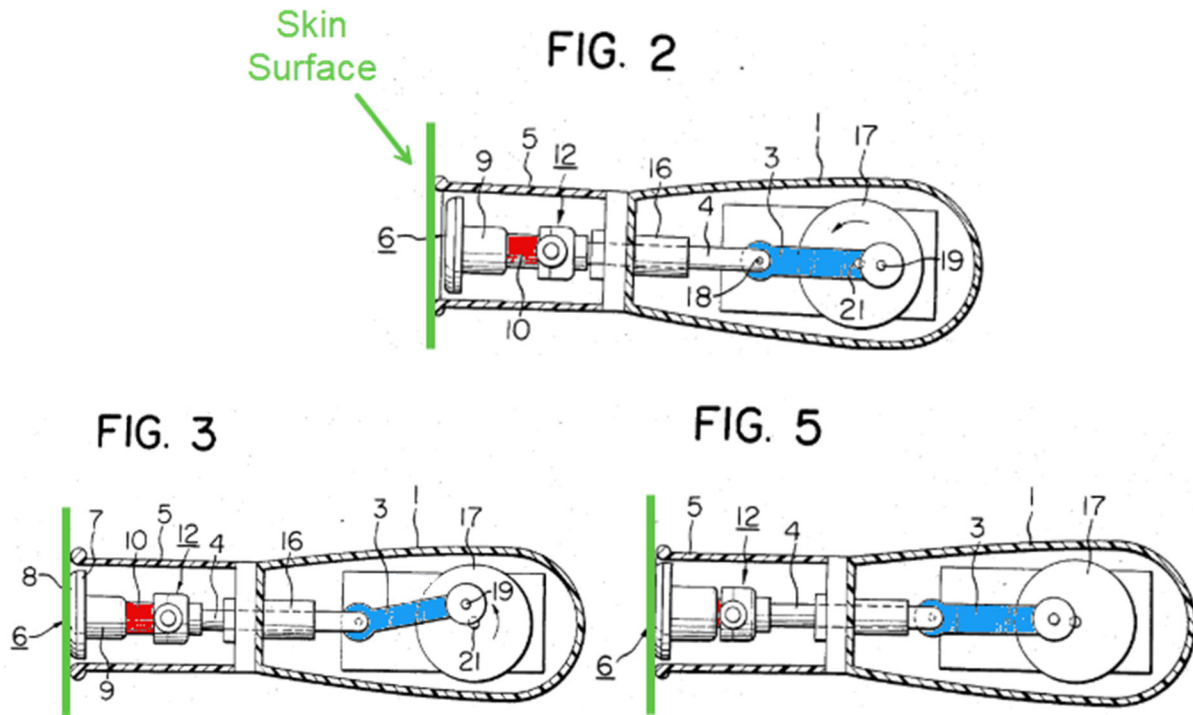
first describing his understanding of how a POSITA would understand the claim term “percussive massager” and then analyzing Mabuchi. Dr. Pratt’s results-oriented testimony cannot contradict Mabuchi’s express disclosure that it is not a “massager.” *See Ericsson Inc. v. Intellectual Ventures I LLC*, 890 F.3d 1336, 1346 (Fed. Cir. 2018) (“To contradict a reference, an unsupported opinion is not substantial evidence.”); *Homeland Housewares, LLC v. Whirlpool Corp.*, 865 F.3d 1372, 1378 (Fed. Cir. 2017) (“[W]e must disregard the testimony of an expert that is plainly inconsistent with the record, or based on an incorrect understanding of the claim[s].”).

Dr. Pratt was unable to clarify his understand of a “percussive massager” during his deposition. When asked for his general understanding of a “percussive massager,” Dr. Pratt responded with “a tool that imparts percussive forces to parts of the body.” Ex. 2033, 29:24-30:3. When pressed on whether a “percussive force” is a “relatively strong force,” he equivocated, suggesting that “the force ... could be so light as to not be perceived as a percussive impact” or that “It depends on how hard you’re pressing the tool against the body.” *Id.*, 30:13-25. In short, Dr. Pratt’s understanding of a “percussive massager” implausibly ranges from tools that “imparts percussive forces” that may “not be perceived as a percussive impact” or is dependent on how hard the device is pressed by the user. Dr. Pratt’s results-oriented testimony lacks any basis in the art or common understanding and should be given

little weight. *See* Ex. 1001, 1:25-29 (describing “a deep muscle-stimulating device”); Ex. 2020, p.3 (“percussive therapy ... works by delivering a unique combination of targeted deep-tissue massage, at a high-speed frequency, with the ability to apply sufficient force to the area”).

(2) Mabuchi is Designed to Avoid Operating as a Percussive Massager

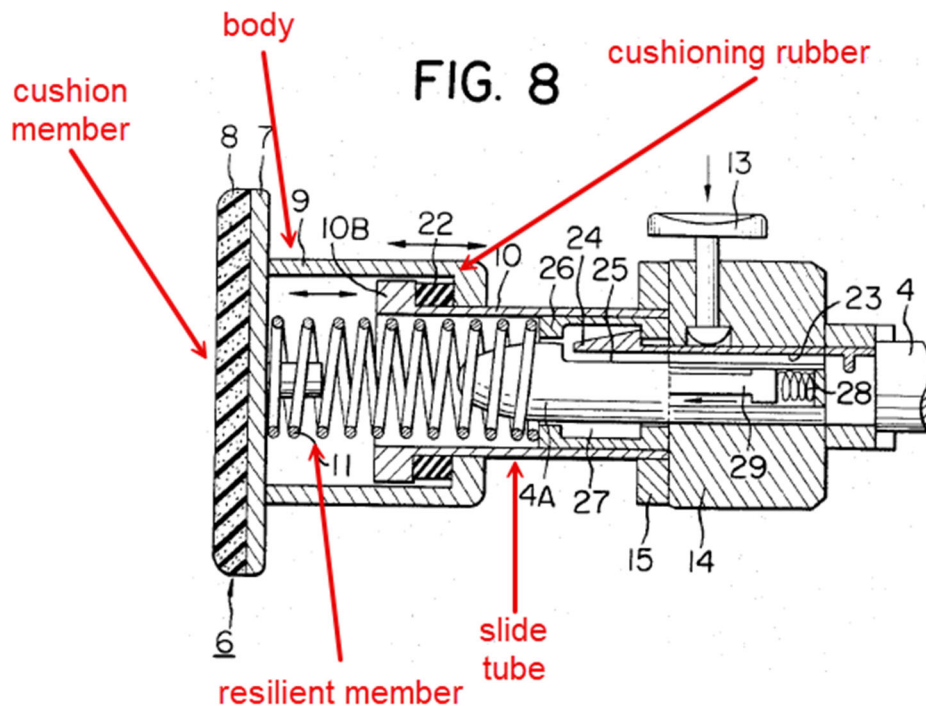
Mabuchi has two design features specific to its beauty treatment device that render it unable to even be used as a percussive massager. **First**, Mabuchi includes the space guide 5, which ensures that the padder assembly 6 contacts and separates from the skin surface each stroke, to repeatedly pat the skin surface. Ex. 1005, 3:64-4:30, 5:33-38, FIGS. 2, 3, and 5 (below) (showing the padder assembly 6 moving from a position retracted within the space guide 5 and out of contact with the skin surface to the end of the space guide 5 to contact the skin surface); Ex. 2005, ¶¶100-01, 107.



Mabuchi specifically cautions against operating its beauty treatment device without the space guide 5, explaining that “the absence of the space guide 5 would cause both the plate member 7 and the cushion member 8 to be kept in contact with the skin surface at all times to exert a pushing force onto the skin surface, rather than patting the skin.” Ex. 1005, 5:39-50. In other words, the space guide 5 ensures that the pater assembly 6 only pats the skin and avoids applying “a pushing force onto the skin surface.” *Id.*; Ex. 2033, 37:24-38:4 (“it couldn’t be a skin pater as described in Mabuchi without the space guide”). The avoidance of “exert[ing] a pushing force” to a user’s skin is diametrically opposed to the operating design and configuration of a percussive massager, which is a device specifically designed with sufficient stroke and force to massage deep muscle tissue. *See* Sections II.A-B,

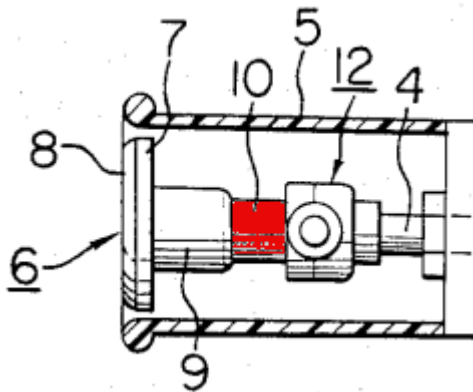
supra; Ex. 2020, p.3 (describing “percussive therapy” as a “targeted deep-tissue massage, at a high-speed frequency, with the ability to apply sufficient force to the area”); Ex. 2005, ¶107.

Second, Mabuchi uses a complex padder assembly 6 including a resilient member 11 (a spring) to avoid imparting a strong, abrupt, percussive force to the user’s skin and to avoid pushing into the user’s skin. Ex. 1005, 2:53-3:12, FIG. 8 (below with annotations); Ex. 2005, ¶101, 107.

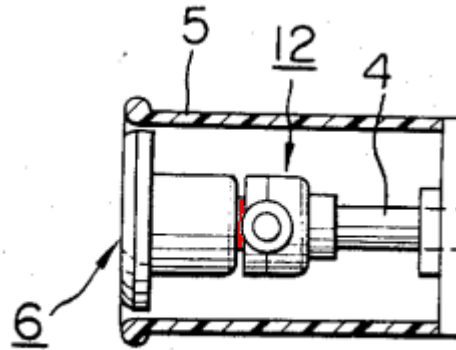


As can be seen in Figures 3 and 5 of Mabuchi (below with annotations), the resilient member 11 absorbs the additional movement of the actuator 4 after the cushion member 8 contacts the user’s skin at the end of the space guide 5 so that the padder body 9 does not press itself into the user’s skin. *Id.*, 4:28-58. Thus, instead

of applying a strong, abrupt, pushing force (*i.e.*, a percussive force) deep into the user's skin, the resilient member/spring 11 absorbs the force and movement of the actuator 4 specifically to *prevent* percussive force from being applied to the user's skin, ensuring only a surface-level beauty treatment.



UNCOMPRESSED
(FIG. 3)



COMPRESSED
(FIG. 5)

The combination of the space guide 5 and the patten assembly 6 including the spring 11 ensures that Mabuchi's beauty treatment device has an effective stroke length of zero or near zero as applied to a user's skin (*i.e.*, has no or near zero effective stroke length) and does not, and cannot, operate as a percussive massager. Ex. 2005, ¶77; Ex. 2033, 38:20-39:7 (explaining that the patten assembly 6 "would not extend outside of the space guide as the machine was reciprocating").

Upon cross-examination, Dr. Pratt confirmed that for Mabuchi's device to provide a "deep muscle massage," despite such a modification being contrary to Mabuchi's design and intended use, "the resiliency of the spring would have to be

adjusted accordingly.” Ex. 2033, 42:13-22; 65:19-66:7 (discussing “choosing a spring pressure and choosing a stroke length” to provide “the same deep muscle massage with Mabuchi that one could with Pivaroff”). Yet Dr. Pratt admitted that Mabuchi does not describe adjusting the resiliency of the spring. *Id.*, 42:10-12.

In light of Mabuchi’s specific design and intended use as a beauty treatment device and not as a massager, Mabuchi does not disclose or even suggest that the resiliency of the spring could be adjusted. Nor would a POSITA modify the stiffness of the spring in Mabuchi for it to “function as a percussive massager ... for deep muscle massage” because Mabuchi is specifically designed and intended to operate as a beauty treatment device, not as a massager. Ex. 1005, 4:48-57; Ex. 2033, 42:13-43:6. At most, Mabuchi describes that “the desired patting intensity can be obtained by using a patter assembly having an appropriate surface area” and is silent as to any modification of the spring or the stroke length. *Id.*, 9:11-13.

In more detail, Mabuchi explains that, after the patter body 9 initially contacts the user’s skin, “[t]he patter body 9 of the patter assembly 6 [] is prevented from [sic] being moved leftward by the skin surface [and] ***remains at the same position*** during the time from the moment at which the patter assembly 6 of FIG. 3 strikes the skin surface to the moment at which the state shown in FIG. 5 is reached.” *Id.*, 4:37-42 (***emphasis*** added). Thus, to the user, Mabuchi’s beauty treatment device has an effective stroke length of zero or near zero because the patter body 9 is

designed to not protrude beyond the open end of the space guide 5, which is already in contact with the user's skin. Ex. 2005, ¶¶96-100. There is no reason why a POSITA would have modified the spring so that Mabuchi operated different than described.

(3) Petitioner Previously Contrasted Mabuchi with Percussive Devices

As explained above, Petitioner previously argued to the USPTO that a “[POSTIA] would have understood that device for treating the face [Mabuchi] requires different specifications than a chiropractic device for adjusting musculoskeletal structures [Fuhr, but same as Colloca here].” Ex. 2014, p.1022. Petitioner's original characterization of Mabuchi as merely “a beauty device that pats the skin with a patter,” which Petitioner contrasted with “a chiropractic instrument for use in chiropractic adjustment of musculoskeletal structures” because these devices “require[] different specifications” confirms that even Petitioner originally understood that Mabuchi was not a percussive device. Ex. 2005, ¶108.

Because Mabuchi and Petitioner (at least prior to this proceeding) expressly contrast the beauty treatment device of Mabuchi with a percussive device, and because Mabuchi features specific elements and configurations to avoid acting as a percussive massager, Mabuchi simply does not disclose, teach, or even suggest a “percussive massager” as required by claim 1, nor would a POSITA have been

motivated to modify Mabuchi's beauty treatment device to operate as a percussive massager. Accordingly, Mabuchi fails to disclose, teach, or even suggest a "percussive massager" as required by the Challenged Claims.

**c) Element 1[b]: Petitioner Fails to Support Its
Combination of Mabuchi with Colloca**

After conceding that Mabuchi does not disclose a piston with a distal end "having a bore," Petitioner merely relies on a modified drawing of Mabuchi prepared by Dr. Pratt to support its argument. But this "evidence" is insufficient because: (1) Dr. Pratt and Petitioner fail to offer any reason *why* a POSITA would have made that specific modification; and (2) the alleged modification renders modified Mabuchi inoperable for its intended purposes.

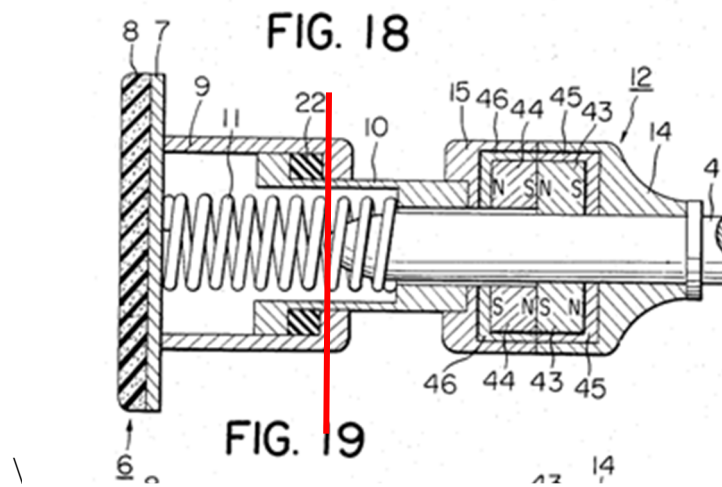
In short, the Petition is entirely devoid of any factual basis explaining why a POSITA *would have* been motivated to modify Mabuchi to arrive at the claimed invention; instead, Petitioner provides a diagram showing how the combination *could have* been accomplished based on nothing more than "design choice" and hindsight reconstruction. Pet., p.38; Ex. 2033, 76:23-77:1 (Dr. Pratt confirming that modified Mabuchi was drawn "to read on the claims of the '082 patent"). The Federal Circuit has rejected just this sort of conclusory "design choice" argument. *Cutsforth, Inc. v. MotivePower, Inc.*, 636 F. App'x. 575, 578 (Fed. Cir. 2016) (nonprecedential) ("Merely stating that a particular placement of an element is a

design choice does not make it obvious. The Board must offer a reason for why a person of ordinary skill in the art would have made the specific design choice to locate the spring on the mounting block. Here, it does not.”). The PTAB has similarly rejected such conclusory “design choice” arguments. *See, e.g., Cisco Systems, Inc. v. Video Solutions Pte. Ltd.*, IPR2024-00922, Paper 7, *19 (Nov. 12, 2024) (stating that “[p]etitioner’s design choice contentions are conclusory” and faulting the petitioner for not “explain[ing] persuasively why a person having ordinary skill in the art would have chosen the particular combination and modification set forth in the Petition”); *Voltage, LLC v. Shoals Technologies Group, LLC*, IPR2024-00876, Paper 9, *47 (Nov. 18, 2024) (finding that “Petitioner’s single sentence is insufficient to show any design incentive, predictability, or other reason why adoption of a 30 amp feeder cable is an improvement to some solar systems” and stating that the petitioner’s declarant “does not provide any reasoning as to why one of skill in the art would have selected a feeder cable rated for 30 amps as opposed to some other value”); *Vectair Systems Inc. v. Fresh Products, Inc.*, IPR2024-00824, Paper 9, *18 (Nov. 12, 2024) (stating that “unsupported statements that a combination of elements would have been merely a design choice is insufficient to establish obviousness” and “whether a skilled artisan would have understood how to make a modification does not address the question of why a skilled artisan would have had reason to make the modification”).

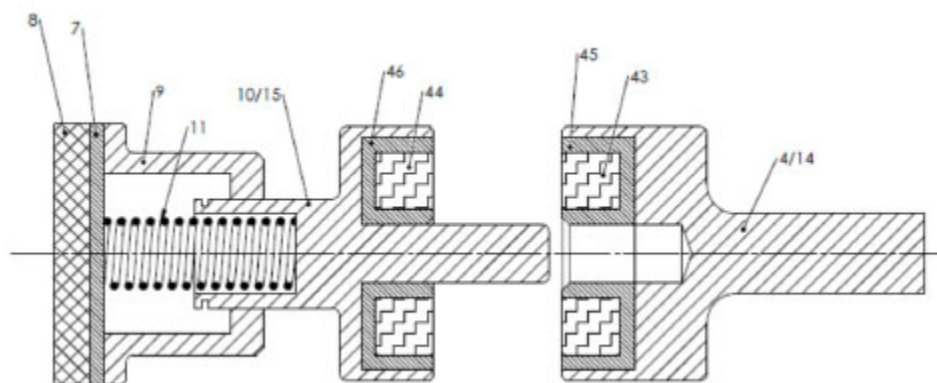
Here, Petitioner simply starts from the claimed invention and Mabuchi's deficient disclosure to explain how a POSITA *could have modified* Mabuchi in view of Colloca to arrive at the claimed invention. But the Petition lacks any explanation or evidence as to why a POSITA *would have been motivated to modify* Mabuchi in such a manner. The Federal Circuit has cautioned against crediting similar results-oriented obviousness arguments. *See TQ Delta, LLC v. Cisco Systems, Inc.*, 942 F.3d 1352,1359-60 (Fed. Cir. 2019).

Moreover, Petitioner fails to consider or address the detrimental impacts of its proposed modifications on Mabuchi's operation and use. **First**, Dr. Pratt states that, with respect to unmodified Mabuchi, "[t]he protruding head of actuator 4 engages a bore in patter slide tube 10 *to stabilize an impact head 6* upon attachment to the percussive massager." Ex. 1002, ¶121 (*emphasis added*). Figure 18 of Mabuchi is reproduced below showing the protruding head of actuator 4 that engages the bore in the patter slide tube 10, which stabilizes the patter slide tube 10, especially because the patter body 9 reciprocates along the patter slide body 10 *and over the actuator 4* during use. Ex. 1005, 2:58-63, 3:5-22; *see also* Ex. 2005, ¶111. It is no coincidence that the head of actuator 4 extends into the patter slide tube 10 to a depth corresponding to the position of the patter body 9 in its fully extended position—it is designed to stabilize the patter assembly 6 during use because the patter body 9 separately reciprocates along the patter slide tube 10 while the actuator 4 separately

but relatedly reciprocates the patter slide tube 10. Ex. 2005, ¶111.



Yet, in Petitioner’s modified Figure 18 of Mabuchi (below), the space in the spring 11 and the pater slide tube 10 previously occupied by the “protruding head of the actuator 4” to “stabilize [the] impact head 6” according to Dr. Pratt is left empty, leaving the pater assembly 6 and, particularly, the separately reciprocating pater body 9, lacking critical stabilization. Ex. 2005, ¶¶111, 113.

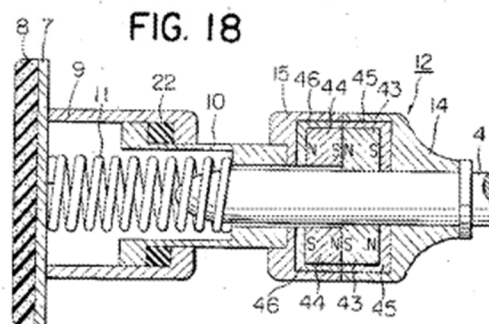


In more detail, Mabuchi's reciprocating assembly is a complex two-element system, with the actuator 4 reciprocating based on the motor output, and the patter

body 9 separately reciprocating based on the force of the spring 11 and contact with a user's skin. Stability in two-element systems is a crucial design factor as the competing reciprocating motions and forces can cause undesirable vibration and wear. Ex. 2005, ¶111. Removing the actuator 4 from inside the patten body 9 and the spring 11, as Petitioner suggests, would reduce stability of the separately reciprocating patten slide tube 10 over the largely hollow patten body 9, leading to undesirable vibration and wear. *Id.*

Second, Petitioner, in prosecuting its own patent, argued that the very modification to Mabuchi it proposes here would render “pattern [sic] assembly 7 inoperable for its intended purposes.” Ex. 2014, p.1021. In detail, Petitioner argued that:

comprising a first magnet.



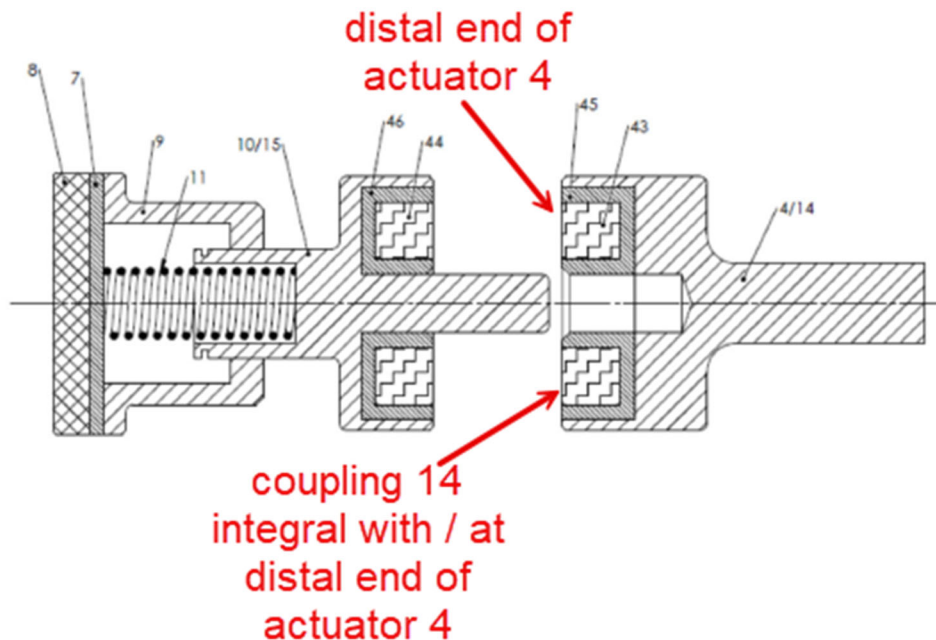
Mabuchi, FIG. 18.

In the rejection of claim 5, the Office relies on coupling 14 for allegedly corresponding to the claimed reciprocating shaft. *See* Office Action, 13. However, Mabuchi does not teach or suggest that coupling 14 is a reciprocating shaft configured to reciprocate in response to activation of a motor.

Moreover, it is not obvious to modify Mabuchi to move coupling 14 to the distal end of actuator 4. Mabuchi discloses that actuator 4 engages with resilient member 11 to cause the reciprocating motion of patten assembly 6. *See* Mabuchi, 2:53-3:12. If coupled 14 is at the distal end of actuator 4, the distal end of actuator 4 would not extend into patten assembly 6 and would not engage with resilient member 11, making pattern assembly 6 inoperable for its intended purposes. Accordingly, a person skilled in the art would not have been motivated to move coupling 14 to the distal end of actuator 4.

Id. Yet Petitioner and Dr. Pratt suggest this very same modification to Mabuchi. *See* Ex. 2033, 77:2-13. Specifically, Petitioner and Dr. Pratt suggest modifying Mabuchi by placing the coupling 14 at the distal end of the actuator 4 such that “the distal end of actuator 4 would not extend into [the] patten assembly 6 and would not engage with resilient member 11,” which according to Petitioner, would “mak[e] patten[] assembly 6 inoperable for its intended purposes.” *Id.* Petitioner’s modified

Figure 18 of Mabuchi is reproduced below with annotations to further explain Petitioner's contradiction.



Petitioner's arguments in prosecuting its own patent address the same obvious deficiency in Petitioner's modification here—that the actuator 4 extending into and engaging with the resilient member 11 is a critical feature of Mabuchi's patter assembly 6, including its magnetic connection embodiment, and even Petitioner (previously) realized that a POSITA would not have modified Mabuchi to omit this critical feature. Ex. 2005, ¶¶112-13.

Third, Petitioner's modification to Mabuchi would add substantial mass onto the patter assembly 6 by adding the actuator 4 onto the proximal end of the patter assembly 6. Ex. 2005, ¶114. Increasing the mass of the patter assembly 6 would increase the momentum of the patter assembly 6, increasing the impact force on the

skin, which may be ideal for Colloca's chiropractic device meant to move bones but is contrary to Mabuchi's intended purpose of simply patting skin. *Id.*

Moreover, moving additional mass onto the padder assembly 6 increases the risk that the padder assembly 6 unintentionally detaches from the actuator 4 by adding to the force experienced by the magnetic connection; again, not a consideration in Colloca's device, which features a safety shutoff switch ensuring that the device is operable only when the impact head 70 is in contact with a patient but relevant to Mabuchi's device that intentionally moves out of contact with the skin each cycle and could be operated without being in contact with a user. *Id.*

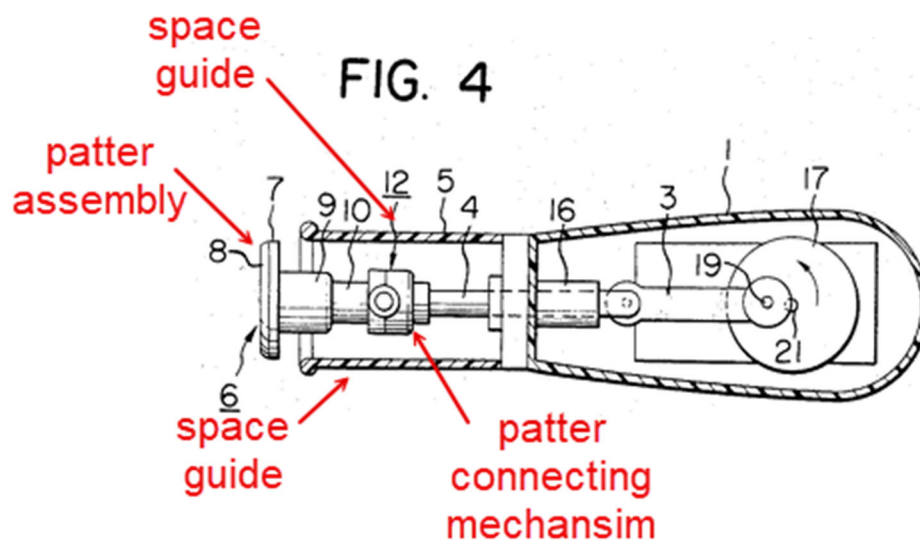
d) Claim 1, Element 1[e]

Mabuchi does not disclose, teach, or suggest at least the recitation of Claim 1[e]—"a quick-connect system... wherein the quick-connect system is configured to have a proximal end of the first massaging head inserted into or removed from the bore while the piston reciprocates the predetermined stroke length at the first speed."

(1) Mabuchi's Padder Assembly 6 Cannot Be Connected or Disconnected as the Piston Reciprocates

Mabuchi does not disclose, teach, or even suggest that the padder assembly 6 could be inserted into or removed from the actuator 4 while the actuator 4

reciprocates. Ex. 1005, 5:65-67. Petitioner entirely overlooks, or intentionally omits, that Mabuchi requires that the “space guide 5” be present during use. Indeed, Mabuchi confirms that the space guide 5 is critical to the purported invention because it “plays a role of maintaining the distance between the device body 1 and the skin surface constant.” *Id.*, 5:38-51. As shown in Figure 4 of Mabuchi (reproduced below with annotations), the space guide 5 entirely encompasses the actuator 4 and the pater connecting mechanism 12 along its entire stroke, including when the pater assembly 6 “protrude[s] slightly from the end face of the space guide [5]” when the user’s skin is not present. *Id.*, 1:4-42, 4:18-25. In other words, Figure 4 of Mabuchi shows the maximum extent that the pater assembly 6 could possibly protrude from the space guide 5 and the nearest the pater connecting mechanism 12 moves to the open end face of the space guide 5. Ex. 2005, ¶117.



Separate from the rotational alignment consideration (discussed below), Petitioner fails to consider that replacing the patter assembly 6 would require removing the space guide 5 so that the patter assembly 6 could be inserted into or removed from the actuator 4 while it reciprocates. *Id.* Indeed, attempting to insert or remove the patter assembly 6 without removing the space guide 5 while the actuator 4 reciprocates would cause the user's finger(s) to be pinched between the plate member 7 of the patter assembly 6 and the end of the space guide 5, and the user's view of the connection between the actuator 4 and the patter assembly 6 would be obscured, preventing the user from aligning the patter assembly 6 onto (or into) the actuator 4. Ex. 2005, ¶¶115-17.

Petitioner relies on Mabuchi's statement that "In this state, or *in the state where the actuator 4 is connected* to the patter assembly 6, the patter assembly 6 is operated...." to support its allegation that "Mabuchi notes that the device can be operated before the patter assembly 6 is connected." Pet., p.43 (quoting Ex. 1005, 8:15-18) (*emphasis* in original). But this passage simply references the preceding sentence in Mabuchi, which explains how, in Figure 18, the magnets 43 and 44 in the coupling 14 and the flange 15 can be attracted to connect the actuator 4 and the patter assembly 6. Ex. 1005, 8:11-15; Ex. 2005, ¶¶118-19. When considered in context, this passage merely confirms that "the patter assembly 6 is operated" when the patter assembly 6 is magnetically connected to the coupler 14 on the actuator 4

or, for short, “in this state.” If “In this state” is meant to refer to some other state, Mabuchi would have disclosed some state in which “the patter assembly 6 is operated” when it is not connected to the actuator 4, which makes no sense. *Id.*

**(2) Mabuchi’s Magnetic Connector Requires
Particular Angular Alignment Rendering It
Unsuitable For Insertion or Removal as the
Piston Reciprocates**

Petitioner and Petitioner’s declarant, Dr. Pratt, consistently assert that the claimed quick-connect system that “is configured to have a proximal end of the first massaging head inserted into or removed from the bore while the piston reciprocates” “*must be capable of being connected regardless of rotational alignment.*” See Ex. 2013 (Therabody’s Opening Claim Construction Brief), pp.13-15 (*emphasis added*); Ex. 2031 (Pratt Declaration ISO Claim Construction), ¶43 (“A POSITA would understand... that a connector or system configured to secure or insert a massaging head ‘while the piston reciprocates the predetermined stroke length at the first speed,’ is one that does not require rotational alignment to do so.”); Ex. 1002, ¶¶91, 94 (stating that “reciev[ing] the proximal end of the attachment ‘while the piston reciprocates,’ [] would be done without the need for alignment”). Petitioner relies on this same interpretation for its §112 Ground 1B. Pet., p.19 (“[A] POSITA would understand that the bore would be cylindrical (not ‘*substantially*

cylindrical’) so as to receive the proximal end of the attachment ‘while the piston reciprocates,’ *without the need for alignment.*”) (*emphasis* in original).

Attempting to avoid these concessions and arguments, and apparently understanding Mabuchi’s intractable deficiency in that its magnetic connection requires angular/rotational alignment, Petitioner relies on a different interpretation of this claim limitation in its §103 grounds than in the District Court proceeding or its §112 grounds.¹² In this Ground, Petitioner instead argues that a user “not need[ing] to *carefully control* the angular orientation or spatial position of the massage head in relation to the massage tool during attachment” is sufficient to teach this limitation. Pet, p.44 (*emphasis* added). Dr. Pratt mirrored this new interpretation in his declaration, stating:

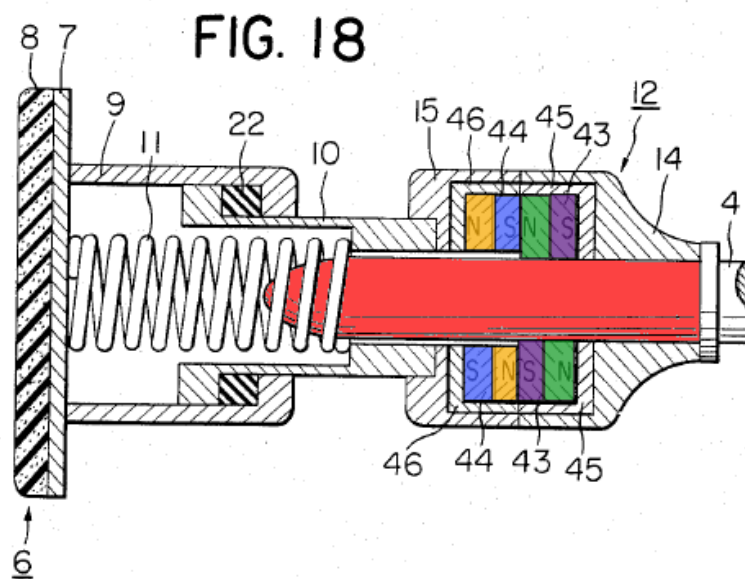
Because the connecting mechanism is configured such that a user does not need to *carefully control the angular orientation or spatial positioning of the patter assembly* in relation to head of the actuator

¹² Petitioner must, in its Petition, identify “[h]ow the challenged claim is to be construed” and “[h]ow the construed claim is unpatentable.” 37 CFR §42.204(b)(3)-(4); *see also Google LLC v. Neonode Smartphone LLC*, IPR2021-01041, Paper 52, *26 (Jan. 11, 2023) (“Because Google has the burden of persuasion, Neonode has no obligation to precisely define the term *gliding ... away* or explain how the term differs from the term *flick* in Robertson.”).

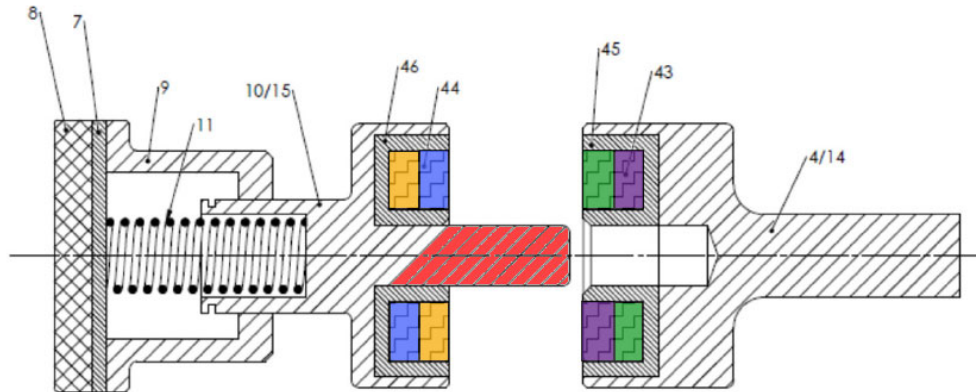
during attachment, a POSITA would understand that it is configured to be inserted or removed while the actuator was reciprocating.

Ex. 1002, ¶132 (*emphasis added*). Petitioner’s different interpretations of the same claim limitation across its different Grounds highlights Mabuchi’s deficiencies.

Petitioner argument hinges on Mabuchi’s unsupported statement that “positive connection can be ensured without positioning the actuator 4 and the patter assembly 6.” *Id.*, p.42. (quoting Ex. 1005, 8:33-39). But this passage is contradicted by Mabuchi’s description of how the patter assembly 6 and the actuator 4 must be positioned and oriented to connect to each other. Ex. 1005, 8:18-32. **First**, the patter assembly 6 *must be positioned* so that the openings in the patter slide tube 10, the flange 15, and the magnet 44 are aligned with the actuator head 4a of the actuator 4 (shaded in red, below). Ex. 2005, ¶121.



This requirement remains even in Petitioner's modified Mabuchi (below), where the protrusion on the modified pater assembly 6 (shaded in red, below) must be aligned with the opening in the actuator 4/coupling 14/magnet 43. *Id.*, ¶122.



Petitioner's Modified Mabuchi (color added)

Second, the pater assembly 6 *must be rotationally/angularly oriented* so that the opposite poles (N/S) of the magnets 43 and 44 are aligned. Ex. 2005, ¶¶120-24. Again, this remains true even in Petitioner's modified Mabuchi. *Id.* As Mabuchi explains, “[t]he changing of the pater assembly 6 can be easily accomplished since the actuator 4 and the pater assembly 6 are automatically disconnected merely by turning each other.” Ex. 1005, 8:40-43. This occurs because, when the same poles of opposing magnets 43 and 44 face each other (*i.e.*, N/N and S/S), “the magnet 43 implanted in the coupling 14 and the magnet 44 implanted in the flange 15 ***are repulsed with each other*** due to repulsion force caused by the same polarities, ***causing the pater assembly 6 to separate from the actuator 4.***” *Id.*, 8:21-25 (***emphasis added***). Dr. Pratt confirm this in his declaration, explaining that:

The composite magnetic assemblies [in Mabuchi] are comprised of radially oriented alternating polarity magnets—North/South/North/South (“NSNS”). The poles of the magnets on the massaging head, which become attracted and attached to the opposite polarity on the mating magnet on the shaft, are oriented such that rotating the massage head 90-degrees misaligns the oppositely oriented poles to cause separation.

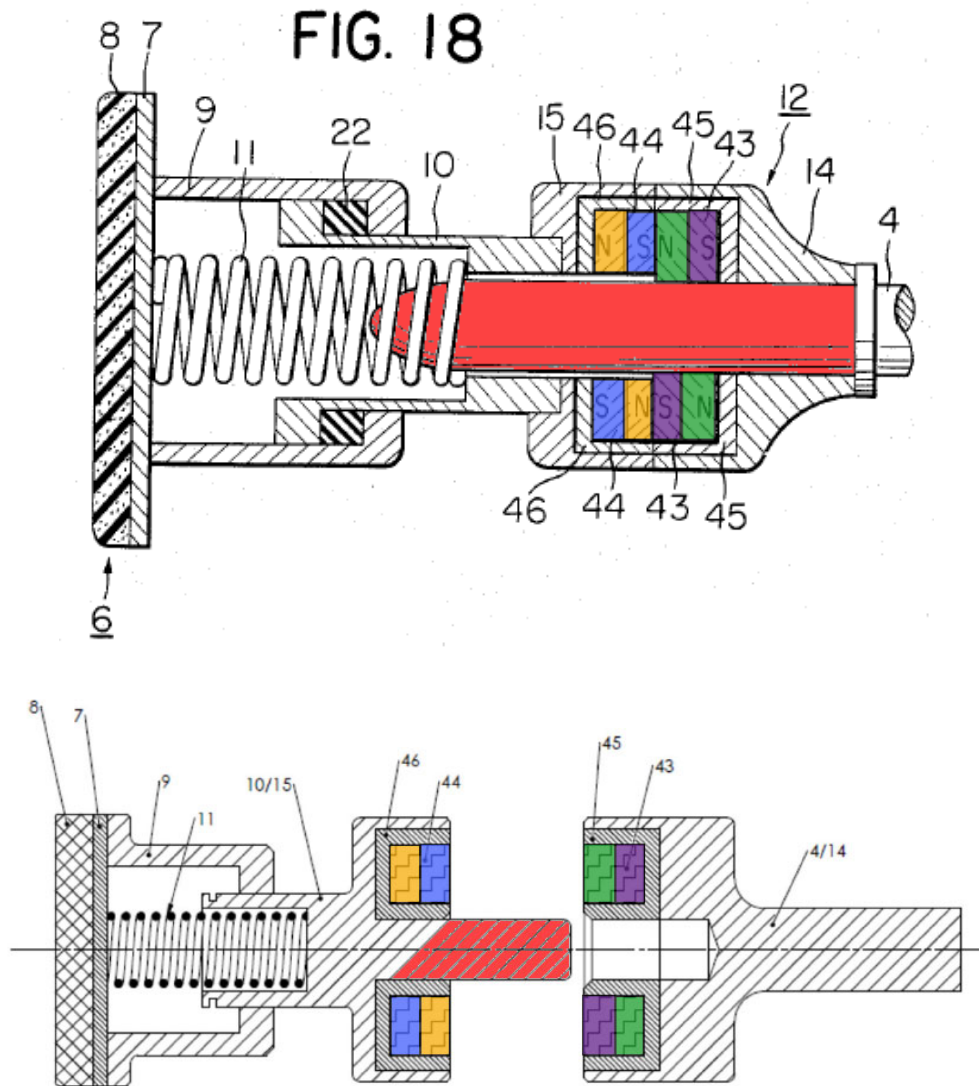
Ex. 1002, ¶61 (citing Ex. 1005, 8:40-43). In other words, the flange 15 must be grasped *and turned* with respect to coupling 14 to disconnect it from the actuator 4.

This same unavoidable, natural phenomenon of the magnets 43 and 44 repulsing each other when like poles are aligned would occur when trying to connect the padder assembly 6 with the actuator 4 and would prevent connection. Ex. 2005, ¶¶120-24. Thus, the padder assembly 6 *must be rotationally aligned* in a particular way so that the opposite poles (N/S and S/N) of the magnets 43 and 44 are aligned to attract each for connection and *must be rotationally aligned* in a particular way so that the same poles (N/N and S/S) of the magnets 43 and 44 are aligned to repulse each other for disconnection.

At his deposition, Dr. Pratt walked back his written testimony regarding Mabuchi’s magnetic connection, alleging that a user “doesn’t have to control the angular orientation” because the magnets would “automatically jerk around and rotate automatically” so that “all the user has to do is stick it in there.” Ex. 2033, 51:1-12. However, Dr. Pratt also revealed that this new interpretation of the

connection behavior of Mabuchi's magnetic connection was based on a test he conducted to "convince [him]self and demonstrate how this works." Ex. 2033, 51:9-20. But Dr. Pratt did not describe this test, or any aspect of it, in his declaration. *Id.*; *see generally* Ex. 1002. Because the basis of Dr. Pratt's testimony regarding his understanding of Mabuchi's magnetic connection and how he alleges it reads on the Challenged Claims is not disclosed, his testimony should be entitled little or no weight. 37 CFR § 42.65 ("If a party relies on a technical test or data from such a test, the party must provide an affidavit explaining: [*inter alia*] How the test was performed").

Contrary to Dr. Pratt's unsupported testimony, as shown below, in both Mabuchi (below top) and Petitioner's modified Mabuchi (below bottom), the flange 15 must be rotationally aligned such that poles of the magnet 44 (shaded in orange for north and blue for south) are rotationally or angularly aligned with the opposite poles of the magnet 43 (shaded in green for north and purple for south) in the coupling 14. Ex. 2005, ¶¶121-24.



Petitioner's Modified Mabuchi (color added)

Moreover, Mabuchi expressly describes *other* embodiments of the patten connection mechanism as being configured to connect regardless of angular orientation. For example, in connection with the embodiment of Figure 8, Mabuchi states that:

The patter assembly 6 can be connected to the actuator 4 *at any angular position* since the pawl groove 27 for engaging with the patter connecting pawl 24 is provided in an annular shape along the inner periphery of the actuator head supporting cylinder 26.

Ex. 1005, 6:43-48 (*emphasis* added). Similarly, Mabuchi describes the embodiment of Figure 15 as allowing “the patter assembly 6 can be connected to the actuator 4 *at any angular position*” because “[t]his mechanism has no directionality in connecting or disconnecting the actuator 4 and the patter assembly 6.” *Id.*, 7:54-57 (*emphasis* added). Tellingly, Mabuchi does *not* describe the relied-upon magnetic connection embodiment of Figures 18 and 19 as being connectable at any angular position. Ex. 2005, ¶124. Thus, a POSITA would understand that Mabuchi’s magnetic connection embodiment requires a particular angular alignment to connect or disconnect the patter assembly 6 to/from the actuator 4 and that Mabuchi’s magnetic connection is not “configured to have a proximal end of the first massaging head inserted into or removed from the bore while the piston reciprocates the predetermined stroke length at the first speed” as recited in claim 1.

(3) Colloca’s Impact Head Cannot Be Inserted or Removed as the Piston Reciprocates

As explained in Section III.B, Colloca features a safety switch that only allows it to operate when it registers sufficient preload from being placed against a patient. Ex. 2005, ¶114. Thus, Colloca is designed to not operate away from a patient’s

body, which prevents the impact head 70 from being connectable or removeable while the device operates. Examiner Stanis agreed with this premise, stating during prosecution of the parent '482 Patent, that “Colloca on its own would not disclose a quick release connector configured to connect a first massaging head while the piston moves because of Colloca’s safety switch mechanism.” Ex. 1013, p.2453.

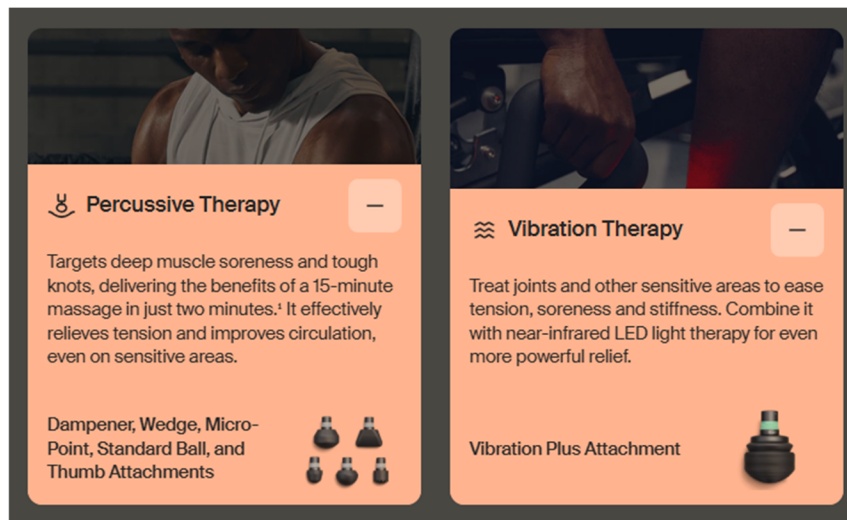
(4) Mabuchi’s Patter Assembly Is Not A
“Massaging Head”

As explained above in Section II.C, the “massaging head” as recited in claim 1 is not merely any end piece, but is an end piece that is capable of providing percussive massage, *i.e.*, deep tissue massage. Ex. 2005, ¶125.

Mabuchi uses a complex patter assembly 6 including the resilient member 11 (a spring) to avoid imparting substantial pressure onto the skin surface and to avoid pressing into the user’s skin. Ex. 1005, 2:53-3:12, FIG. 8; Ex. 2005, ¶126. Mabuchi explains that, once the patter body 9 contacts the skin surface, the patter assembly 6 is compressed via the spring 11 rather than forcing itself into the user’s skin. Ex. 1005, 3:18-25, 4:42-49. In other words, instead of applying a strong pushing force to the user and moving into the user’s body to massage the deep muscle tissue, the patter assembly 6 (the alleged “massaging head”) includes the spring 11 to absorb the force and movement of the actuator 4 to *prevent* a pushing force from being applied to the user, let alone a force or depth sufficient to provide a deep muscle

massage. Ex. 2005, ¶126.

Petitioner's own products confirm that not every end piece is a percussive massaging head. For example, in connection with its Theragun PRO Plus, Petitioner offers certain attachments for percussive therapy (*i.e.*, massaging heads) while providing a different attachment for vibration therapy (e.g., a vibrating head) (shown below)¹³:



Thus, Mabuchi also fails to disclose, teach, or suggest a “massaging head” as would be understood by a POSITA, nor would a POSITA have been motivated to modify Mabuchi to include such a massaging head because, as explained above, Mabuchi is not designed, intended, or even capable of high-speed, deep muscle massage. Ex. 1005, 1:14-28.

¹³ Ex. 2023 (the website is also available at <https://www.therabody.com/products/theragun-pro-plus>).

Accordingly, for any *one* of the numerous above-described deficiencies in Ground 3, challenged claim 1 of the '082 Patent is not obvious in view of Mabuchi and Colloca, and Petitioner's Ground 3 fails. Ex. 2005, ¶127.

e) Independent Claim 18

In addressing claim 18, Petitioner refers back to its analysis of claim 1. See Pet., pp.50-51. A table detailing the correspondence of claims 1 and 18 follows:

Claim 1[pre]	Claim 18[pre]
Claim 1[a]	Not present
Claim 1[b]	Claim 18[a]
Claim 1[c]	Claim 18[a]
Claim 1[d]	Claim 18[b]
Claim 1[e]	Claim 18[c]

Accordingly, Patent Owner reincorporates its arguments regarding claim elements 1[pre], 1[b], and 1[e], which respectively correspond to claim elements 18[pre], 18[a], and 18[c], herein. For the same reasons as with claim 1, Mabuchi and Colloca do not disclose, teach, or even suggest each and every limitation of claim 18 and there no reason why a POSITA would have combined Mabuchi and Colloca in the manner necessary to arrive at the embodiment of claim 18. Thus, Petitioner's Ground 3 also fails as to claim 18. Ex. 2005, ¶128.

2. Ground 4: Claims 2-4 Are Not Obvious in View of Mabuchi, Colloca, and Harris

Because Petitioner's analysis of Mabuchi in view of Colloca with respect to independent claim 1 is flawed, as explained above, challenged claims 2-4 are not unpatentable in view of Mabuchi in view of Colloca and Harris, because Petitioner does not rely on Harris to cure any of the above-noted deficiencies of Mabuchi and Colloca. Ex. 2005, ¶129.

3. Ground 5: Claims 1 and 18 are Not Obvious Over Pivaroff and Clark

At least the following recitations of independent claim 1 and the similar recitations of independent claim 18 are either missing from, or not obvious in light of, Pivaroff and Clark. Thus, Petitioner fails to meet its burden under Ground 5 and, therefore, also under Ground 6.

a) Clark is Non-Analogous Prior Art

A reference only qualifies as prior art for an obviousness determination when it is analogous the claimed invention. *In re Klein*, 647 F.3d 1343, 1348 (Fed. Cir. 2011). "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.” *Id.* (quoting *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004)) (internal quotations omitted).

As to the first test, the ’082 Patent is directed to percussive massagers and, according to Petitioner, “the claims of the ’082 Patent are directed to a different aspect of the percussive massage device: a ‘quick-connect system.’” Pet., p.5. Petitioner asserts that “Clark is directed ‘to tools adapted to magnetically hold and drive a multiplicity of different types of screws or the like.’” *Id.*, p.33 (quoting Ex. 1014, 1:8-10). In other words, Clark is directed to a screwdriver.

Clark is not in the same field of endeavor as the ’082 Patent. Ex. 2005, ¶131. And even if the ’082 Patent is narrowly considered as being directed to a quick-connect system for a percussive massager, it is still in a wholly different field of endeavor than screwdrivers. *See Mito Red Light, Inc. v. Joovv, Inc.*, IPR2024-00621, Paper 7, *22 (Sept. 19, 2024) (“From their descriptions, we find that one of ordinary skill in the art would have viewed the ’719 patent and Norwood as directed to light therapy and scent diffusers and nightlights, respectively. These are different fields of endeavor.”); *The Chamberlain Group, LLC v. Overhead Door Corp.*, IPR2022-00842, Paper 9, *34 (Oct. 25, 2022) (“These disparate technologies and goals raise a question as to whether Romine is from the same field of endeavor as that of the claimed subject matter. Petitioner does not address this question. Based on the

evidence, Petitioner does not sufficiently show that Romine and the claimed subject matter are from the same field of endeavor.”).

The second test asks whether Clark is reasonably pertinent to the particular problem with which the inventor is involved. “A reference is reasonably pertinent if, even though it may be in a different field from that of the inventor’s endeavor, it is one which, because of the matter with which it deals, 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).

Clark describes a prior “magnetic screw driver capable of use with a plurality of different screw driving bits” that “has been extensively used and has been highly successful in practice” but goes on to describe:

[A] desire and a need for greater universality in the types of screws and the like that can be processed by a single tool. For instance, it is highly desirable to be able to drive screws having hexagonal or other multisided heads, or in other words, to provide a tool which will accommodate driving means in the nature of socket wrenches and the like.

Ex. 1014, 1:11-28. To this end, Clark describes that:

[B]y selecting a magnet of proper length and adjusting its position in relation to the nonmagnetic and magnetic portions of the sleeve or casing in such manner that one half or more of the length of the magnet is encased in the non-magnetic portion of the casing, a new and useful result is accomplished in that a large number of different tool ends can

be selectively employed, as hereinafter described, and the magnetic force imparted to the end of the tool for holding a screw or the like can be selected to accommodate the needs of any particular use.

Id., 2:19-29.

The problem Clark seeks to solve—use of different shaped tool ends while imparting a magnetic force at the end of the tool end to magnetically retain a screw—is not reasonably pertinent to the particular problem the inventor of the '082 Patent was involved. Ex. 2005, ¶¶132-34. Again, accepting Petitioner's characterization of the '082 Patent as being directed a quick-connect system for a percussive massager, a POSITA would not have viewed problems associated directing a magnetic force to the end of a tool end to retain a screw in a screwdriver as reasonably pertinent to a connection system between a massaging head and a percussive massager. *Id.*, see also *The Chamberlain Group, LLC*, IPR2022-00842, Paper 9, *37 (“A person having ordinary skill in the art of automated door control systems would not reasonably have been expected to consult a reference (i.e., Romine) that deals with factory testing of wireless devices without physical connections in order to solve a problem of pairing without having to involve a user (i.e., the '120 patent).”).

Similar to the first test, Petitioner also fails to provide any evidence as to how Clark would have logically commended itself to the particular problem faced by the inventor of the '082 Patent. For example, Clark describes that “by selecting a

magnet of proper length and adjusting its position in relation to the nonmagnetic and magnetic portions of the sleeve or casing,” “different tool ends can be selectively employed ... and the magnetic force imparted to the end of the tool for holding a screw or the like can be selected to accommodate the needs of any particular use.” Ex. 1014, 2:19-29. In other words, Clark describes selecting and positioning a magnet to attach different tool ends while directing the magnetic field to the end of the tool end to magnetically hold the screw onto the tool end. Ex. 2005, ¶¶132-33. But the '082 Patent describes connecting a massaging head to a piston, and nothing is or would be magnetically attached to the end of the massaging head. Thus, Clark would not have commended itself to the inventor's attention in developing the inventions in the '082 Patent.

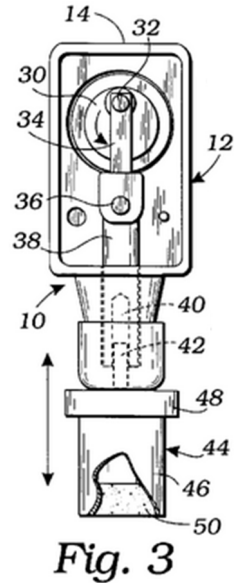
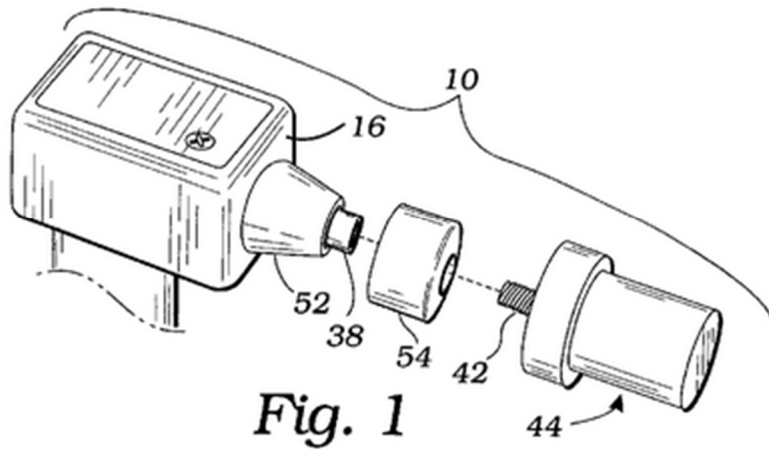
Because Clark is in a different field than the '082 Patent and a POSITA would not have been expected to consult a reference describing magnetic screwdrivers when designing a percussive massager, Clark is non-analogous to the claimed invention and does not qualify as prior art for an obviousness determination.

b) A POSITA Would Not Have Been Motivated to Modify
Pivaroff in View of Clark

Even if Clark is considered, a POSITA would not have been motivated to modify Pivaroff in view of Clark to arrive at the claimed inventions, and a POSITA would not have had a reasonable expectation of success in any such combination.

Arctic Cat v. Bombardier Recreational Products, 876 F. 3d 1350. 1360-61 (quoting *Cyclobenzaprine Hydrochloride Extended-Release Capsule Patent Litig.*, 676 F.3d 1063, 1068-69 (Fed. Cir. 2012)) (“[W]here a party argues a skilled artisan would have been motivated to combine references, it must show the artisan ‘would have had a reasonable expectation of success from doing so,’ ... [such that] if an ordinarily skilled artisan would not believe that a particular combination would have a reasonable expectation of ‘anticipated success,’ the combination may not be obvious.”).

Pivaroff is directed to a “deep muscle stimulator device” that improves prior art devices by vibrating at higher speeds and providing increased force to “reach deep muscle tissues.” Ex. 1007, 1:6-17. Pivaroff’s disclosure focuses on the hollow head 44, which includes a hollow body 46 filled with loosely packed granular material 50 threaded onto a metallic cap 48. *Id.*, 2:55-60. The head 44 is threaded into the opening 40 by the threaded pin 42, and the electric motor operates between 2000 to 3600 RPM, which is transferred to the head 44 as reciprocal motion. *Id.*, 2:50-54, 3:44-48. Pivaroff asserts that this combination of novel head 44 containing loosely packed granular material 50 along with the high-speed, long-stroke reciprocation provide the desired improvements over the prior art. *Id.*, 3:48-60. There is no reason a POSITA would have modified Pivaroff in view of Clark. Ex. 2005, ¶¶135-39.



First, Clark does not compliment Pivaroff and is, in fact, unrelated to Pivaroff. In Clark, the magnetically attached components, *i.e.*, the workpiece holder 21 and the screw, are subject to low-speed rotational motion rather than high-speed reciprocal motion. Ex. 2005, ¶136. Pivaroff’s percussive massager, on the other hand, subjects the head 44 to intense, high-speed reciprocal motion. *Id.*, ¶¶135-36. Petitioner does not explain how Clark “compliments” Pivaroff in light of these substantial differences.

Second, Pivaroff is concerned with adequately attaching a metallic head 44 filled with granular materials 50 to the rod 38 and then reciprocating the head 44 between 2000 to 3600 RPMs. Pivaroff is entirely unconcerned with the ease with which the hollow head 44 could be changed. *Id.*, ¶135. Indeed, Pivaroff is silent as to the head 44 ever being removed from the massager. *See generally* Ex. 1007.

Further to this point, Pivaroff focuses on the head 44 having one very particular combination of materials inside:

In particular, it has been found that improved and extraordinary results are obtained by using a mixture of 10 grains of diamond, 25 grains of ruby, 200 grains of copper and 100 grains of carbon for a total of 335 grains of material.

Id., 3:20-23; claims 1 and 4-7. There is no reason why a POSITA would consider replacing this “improved” and “extraordinary” design, let alone redesigning Pivaroff’s percussive massager to make replacing it easier. Ex. 2005, ¶135. Petitioner’s alleged motivation to modify Pivaroff in view of Clark so that “the changing of the hollow body can be easily accomplished” smacks of hindsight reconstruction. Pet., p.57; see *Innogenetics, N.V. v. Abbott Labs.*, 512 F.3d 1363, 1374 n.3 (Fed. Cir. 2008) (“We must still be careful not to allow hindsight reconstruction of references to reach the claimed invention without any explanation as to how or why the references would be combined to produce the claimed invention.”).

Third, Petitioner fails to support its bare assertion of a reasonable expectation of success in its proposed combination. As explained above, Clark is directed to removably retaining a workpiece holder and screw, which weighs little, while placing it against a workpiece and then rotating it. Pivaroff, on the other hand, is directed to reciprocating a head 44 housing granular material between 2000 and 3600

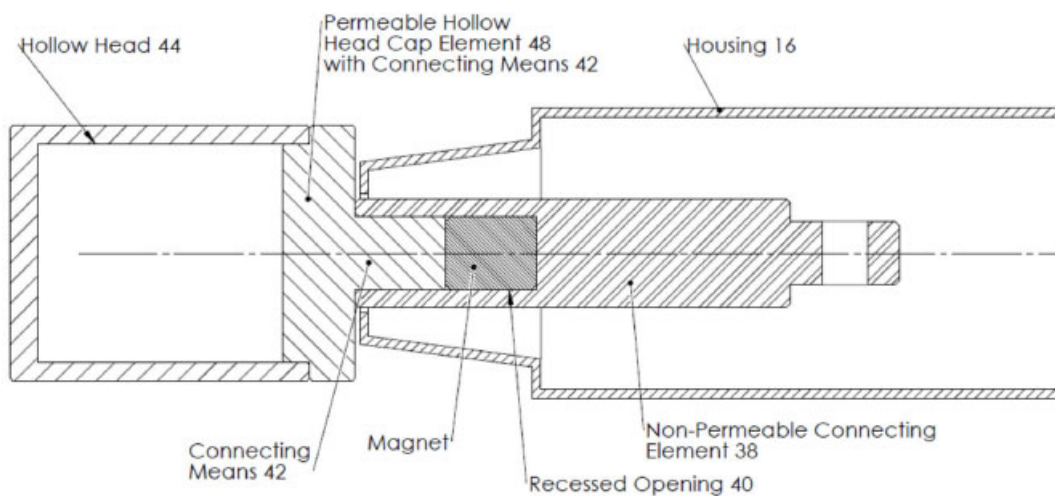
RPMs. Petitioner fails to explain how a POSITA would have reached the conclusion that a magnetic retainer designed to hold a workpiece holder for low-speed rotational movement would be suitable to retain a heavy head full of granular material as it is reciprocated between 2000 and 3600 RPMs with any reasonable expectation of success, and Dr. Pratt testified that he did not conduct any analysis of the movement of the loose material within the head 44 of Pivaroff. Ex. 2005, ¶136; Ex. 2033, 71:3-6.

Petitioner merely asserts that “[Pivaroff and Clark] teach compatible systems,” but this is circular logic. Pet., p.58. Petitioner asserts that Pivaroff and Clark are compatible systems, yet Petitioner relies solely on this self-serving and unsupported conclusion to somehow assert that “[a] POSITA would have had a reasonable expectation of success in combining Clark’s teachings with Pivaroff.” *Id.* Common sense dictates that the magnetic connection described in Clark would be entirely unsuitable to and unsuccessful in retaining the head 44 while it reciprocates between 2000 and 3600 RPMs in Pivaroff and would almost certainly result in the head 44 being unintentionally detached from Pivaroff, leading to injuries and damage. Ex. 2005, ¶¶135-36. Indeed, in 2022, 8.5 years *after* the effective filing date of the Challenged Claims, Petitioner understood that magnetic connections in reciprocating devices, particularly massagers, risk disconnection during use. Ex. 2022, ¶¶[0047], [0104] (cautioning that magnetically connected

massage attachments “may disconnect during use” due to “higher amplitude (or linear velocity)”).

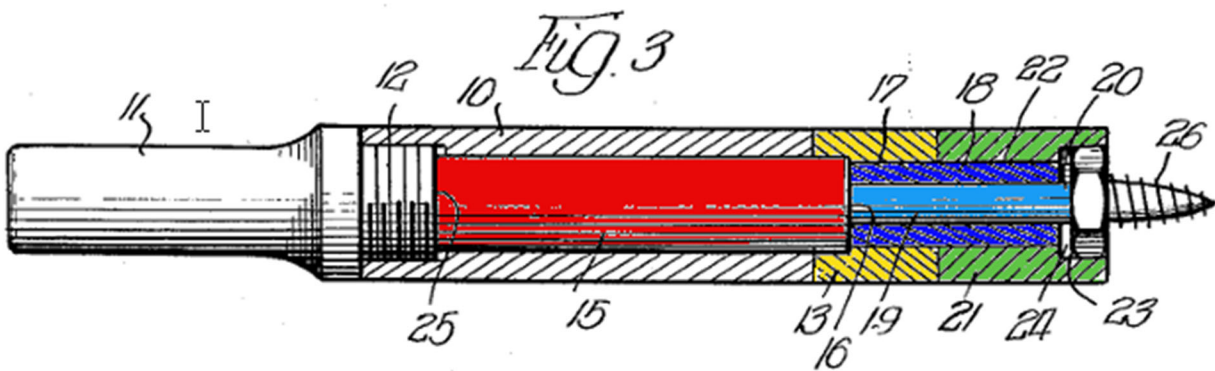
Perhaps more egregiously, Petitioner asserts that “a POSITA would have understood that [Pivaroff and Clark’s] teachings could be combined with little to no change in their respective functions.” Pet., p.58. Again, Pivaroff and Clark are directed to entirely different classes of devices—a percussive massager and a screwdriver—that operate entirely differently—high-speed reciprocation versus low-speed rotation. Ex. 2005, ¶136. Petitioner cannot simply ignore all of the differences between Pivaroff and Clark.

Fourth, Petitioner’s modified Figure 5 of Pivaroff misconstrues Clark’s complicated construction structure. Petitioner incorrectly suggests that modified Pivaroff would include a “magnet” in contact with “connecting means 42,” which is understood to be part of the head 44.



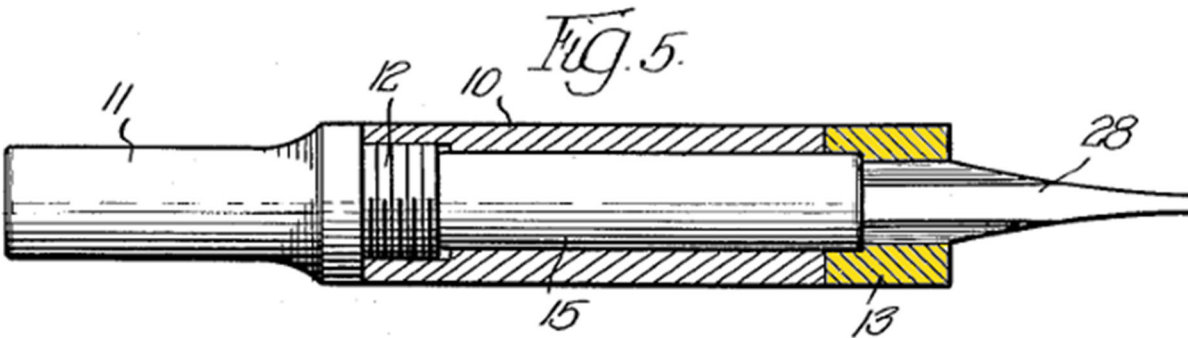
Petitioner’s Modified Pivaroff

Rather, as shown in Figure 3 of Clark (below), a cylindrical member 13 (yellow) is between the magnet 15 (red) and the workpiece holder 21 (green) as a spacer. Ex. 2005, ¶133. Petitioner's modified Pivaroff omits this component without explanation. *Id.*, ¶138. But more to the point, Clark's complex structure, including not only the magnet 15 (red), the workpiece holder 21 (green), and the cylindrical member 13 (yellow) but also includes the shell 18 (dark blue) and the magnetically permeable member 19 (light blue) is designed "so that substantially all of the [magnetic] flux is directed to the workpiece in the chamber 23." Ex. 1014, 3:53-58; Ex. 2005, ¶133. In other words, Clark's complex configuration is designed to maximize magnetic flux at the distal end of the workpiece holder 21, which would be equivalent to the distal end of the head 44 in Petitioner's modified Pivaroff, and there is simply no reason to maximize magnetic flux at the distal end of the head 44 because the head 44 is not designed to retain a screw (or anything else).



Clark Figure 3 (annotated)

At his deposition, Dr. Pratt confirmed that modified Pivaroff lacks any element corresponding to Clark's cylindrical member 13, shell 18, and magnetically permeable member 19. Ex. 2033, 83:19-84:16. Realizing these deficiencies, Dr. Pratt pivoted to attempting to rely on Figure 5 of Clark (below with annotations) instead of Figure 3. *Id.*, 84:19-25. Yet neither Petitioner nor Dr. Pratt previously relied on Figure 5 of Clark. Nevertheless, Figure 5 of Clark also includes the cylindrical member 13, which Dr. Pratt admitted is missing from modified Pivaroff, and is designed for the same purported purpose as in the embodiment of Figure 3, that is, to transmit "magnetic forces ... to the tip of the screw driver 28 so that the screw will be held thereto". Ex. 1014, 3:67-73; Ex. 2005, ¶139.



Clark Figure 5 (annotated)

Fifth, the head 44 is "preferably formed from titanium." Ex. 1007, 2:57-58, 3:27, claims 1, 2, 4, and 6. Titanium is non-magnetic. Ex. 2005, ¶140; Ex. 2032. Petitioner's modified Pivaroff relies on the magnet to magnetically hold the head 44 and connecting means 42, but because titanium is non-magnetic, this simply *would not work*—the magnet would not retain the titanium head 44 and connecting means

42. Ex. 2005, ¶140. In other words, a POSTIA would have understood that this arrangement would not have had any reasonable expectation of success.

At his deposition, Dr. Pratt attempted to remedy this critical deficiency by suggesting that “A [POSITA], however, if he was going to use magnets to attach it would use something that was magnetic, like mild steel.” Ex. 2033, 86:4-7. But this testimony confirms Dr. Pratt’s results-oriented analysis by presupposing that a POSITA “was going to use magnets” when there is no basis in the art for this presupposition.

Accordingly, for any *one* of the numerous above-described deficiencies in Ground 5, claim 1 of the ’082 Patent is not obvious in view of Pivaroff and Clark, and Petitioner’s Ground 5 fails.

a) Independent Claim 18

In addressing claim 18, Petitioner refers back to its analysis of claim 1. *See* Pet., pp.70-72. Accordingly, Patent Owner reincorporates its arguments regarding claim 1 herein. For the same reasons as with claim 1, Petitioner has failed to allege why a POSITA would have combined Pivaroff and Clark in the manner necessary to arrive at the embodiment of claim 18 or that a POSITA would have had any reasonable expectation of success in its proposed combination. Thus, Petitioner’s Ground 5 also fails as to claim 18.

**1. Ground 6: Claims 2-4 Are Not Obvious in View of Pivaroff,
Clark, and Harris**

Because Petitioner's analysis of Pivaroff in view of Clark with respect to independent claims 1 and 18 is flawed, as explained above, all challenged dependents claims are not unpatentable in view of Pivaroff in view of Clark and Harris because Petitioner does not rely on Harris to cure any of the above-noted deficiencies of Pivaroff and Clark. Ex. 2005, ¶140.

VII. CONCLUSION

For the foregoing reasons, Patent Owner respectfully requests that the Board find that Petitioner failed to meet its burden to establish that the Challenged Claims are unpatentable.

Dated: September 24, 2025

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CERTIFICATE OF COMPLIANCE

Pursuant to 37 C.F.R. §42.24(d), the undersigned hereby certifies that this paper contains 18,605 words, excluding the portions exempted under 37 C.F.R. §42.24(a)(1), according to the word count feature of the word-processing system used to prepare this paper.

The undersigned further certifies that this paper complies with the typeface requirements of 37 C.F.R. §42.6(a)(2)(ii) and formatting requirements of 37 C.F.R. §42.6(a)(2)(iii). This paper has been prepared in 14-point, Times New Roman proportional font with normal spacing.

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CERTIFICATE OF SERVICE

I hereby certify that the foregoing Patent Owner's Response and supporting materials (Exhibits 2005-2028 and 2031-2033) have been served in their entirety today, September 24, 2025, by electronic mail to:

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