

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. PGR2024-00053

U.S. Patent No. 11,857,482

PATENT OWNER'S RESPONSE

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PATENT OWNER’S EXHIBIT LIST

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2001	Unused	
2002	Unused	
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2004	Unused	
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”	
2017	Capture of “Engineering Essentials – GD&T – CYLINDRICITY ‘CIRCLE 1’” Webpage (captured July 8, 2025)	

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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 to Wersland et al. (corresponding to Ex. 2014)	
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2027	Capture of “What You Should Know About Theragun PRO Plus” Webpage (captured Aug. 12, 2025)	
2028	Capture of “Unlock the benefits of percussion therapy: How it works and why it’s worth it” Webpage (captured August 18, 2025)	
2029	Unused	

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¹ All citations to this exhibit 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 this Patent Owner’s Response to the Petition for Post-Grant Review No. PGR2024-00053 (Paper 2, “Petition” or “Pet.”) filed on October 30, 2024, by Therabody, Inc. (“Therabody” or “Petitioner”) challenging claims 34-38, 40, 41, 43-46, and 58-60 of U.S. Patent No. 11,857,482 (the “Challenged Claims”) (Ex. 1001, “the ’482 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). This 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.

Regarding the §112 grounds, Petitioner ignores the clear disclosure and import of the ’482 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 are apparent from claims themselves. Regarding the §103 grounds, Mabuchi is not a percussive massager, nor does it disclose a quick release connector as required by the Challenged Claims. Further, Pivaroff and Mabuchi are unrelated in design and function, and Petitioner's strained argument to combine 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 '482 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

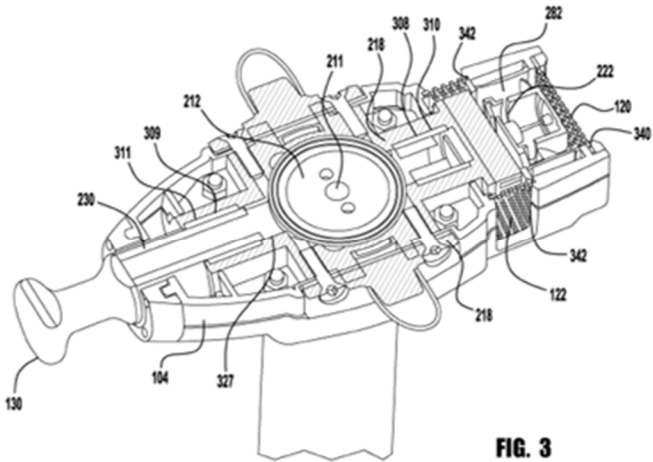
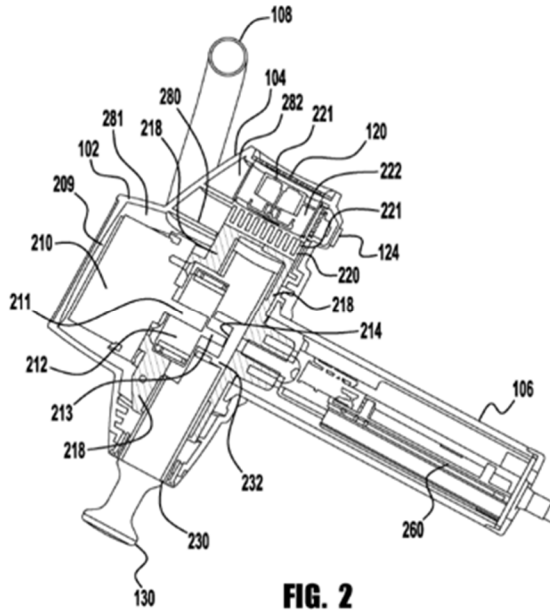
muscle tissue, improving mobility, decreasing lactic acid, increasing blood flow, and decreasing muscle soreness and stiffness”).

On the other hand, vibration therapy is a low amplitude, low impact, high-speed massage designed to increase blood flow to targeted areas. *See* 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, 57.

B. Overview of the ’482 Patent

The ’482 Patent is directed to a deep muscle-stimulating, percussive massage device (*i.e.*, a percussive massager or percussive massage gun). Ex. 1001, Abstract, 1:22-25, FIGS. 1-3; Ex. 2005, ¶45. The ’482 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.*, 1:23-25, 6:49-53.

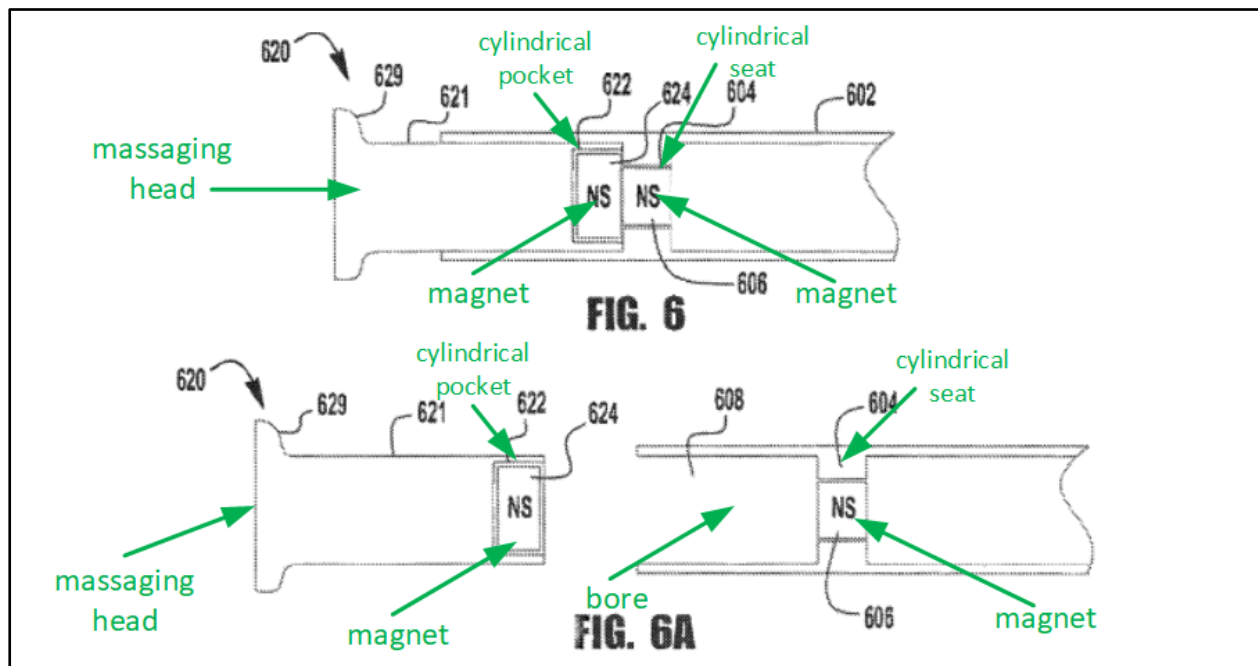


One disclosed improvement is a “messaging head 130 [that] includes a quick-release connection.” *Id.*, 3:41-44, FIGS. 1-3, 6-6A. One such embodiment of a quick release connection—discussed in more detail below—is the “quick-connect system 600 for connecting a massaging head to a piston.” *Id.*, 3:41-44, 6:47-49, FIGS. 6-6A.

The '482 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.*, 6:49-56. The exemplary quick-connect system allows a user to quickly switch massaging heads without turning off the massaging device. *Id.*, 3:41-44, 6:47-56.

One embodiment of the quick-connect system 600 includes a piston 602 that has as a hollow-end bore 608 for receiving a shaft 621 of a massaging head 620. *Id.*,

6:47-56, FIGS. 6 and 6A (below with annotations). A cylindrical seat 604 is located within the bore 608 of piston 602 and retains a magnet 606, which assists in holding the massaging head 620 in place. *Id.*, 6:59-7:3. When the shaft 621 of massaging head 620 is slid into the bore 608, the magnet 606 in the piston 602 and the magnet 624 in the pocket 622 in the massaging head 620 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 '482 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. Selected Portions of the Prosecution History

The '482 Patent was subject to rigorous examination by primary Examiner Stanis, who was well versed in the subject matter of this patent, having examined each parent application² of the '482 Patent beginning in July 2016.

A review of the '482 Patent's prosecution history confirms that the Challenged Claims were allowed based on their novel and non-obvious features that distinguished them the prior art of record, including each of the three prior art references cited in the Petition. Indeed, the Petition simply recycles the same prior art and arguments previously considered and overcome during prosecution. Based on the thorough examination of the '482 Patent conducted by Examiner Stanis, who was well versed in both the subject matter of the '482 Patent and the content of the prior art references cited by Petitioner, Patent Owner has settled expectations in the validity of the '482 Patent over at least the art of record.

1. Summary of Office Actions

On June 9, 2022, prior to any examination on the merits, Applicant filed an IDS citing all references that were cited and applied in all four Office Actions (including Meyers, Instructables, Miller, **Harris**, **Pivaroff**, Tsai, Ehrenreich,

² Exs. 2007-08.

Colloca, Rhoades³, Noble, and Elman) as well as all references relied on in the Petition (*i.e.*, **Mabuchi**, Harris, and Pivaroff). Ex. 1004, pp.1167-84. Examiner Stanis considered the IDS on January 26, 2023. *Id.*, pp.2207-24.

In the July 6, 2023, Final Office Action—the last Office Action issued prior to allowance—Examiner Stanis cited Pivaroff in combination with Rhoades to address, *inter alia*, the use of magnetic attractive forces for connection mechanisms. Ex. 1004, 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.

³ Ex. 2009.

III. CITED PRIOR ART

Petitioner relies on Mabuchi, Harris, and Pivaroff. 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.

A. Mabuchi

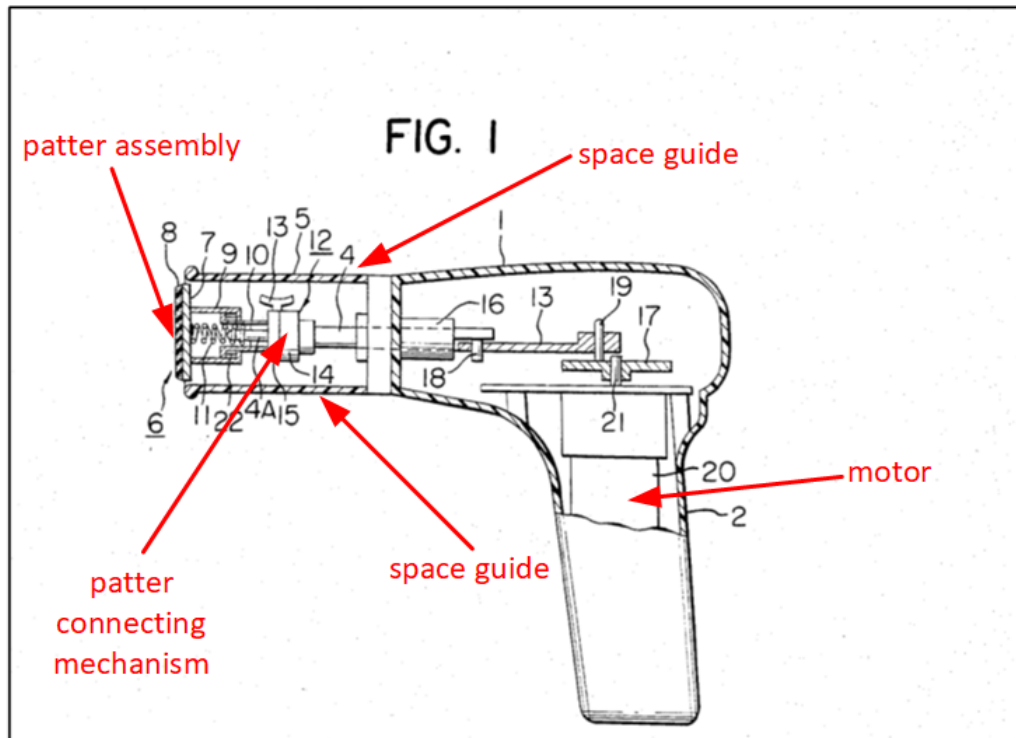
Mabuchi does not describe a percussive massager; rather, Mabuchi is explicitly directed to a “beauty treatment device.” Ex. 1005, Abstract. In this respect, Mabuchi is similar to the cosmetic instrument of Rhoades, which Applicant distinguished and overcame during prosecution. *See* Ex. 2009, ¶[0021].

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 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”

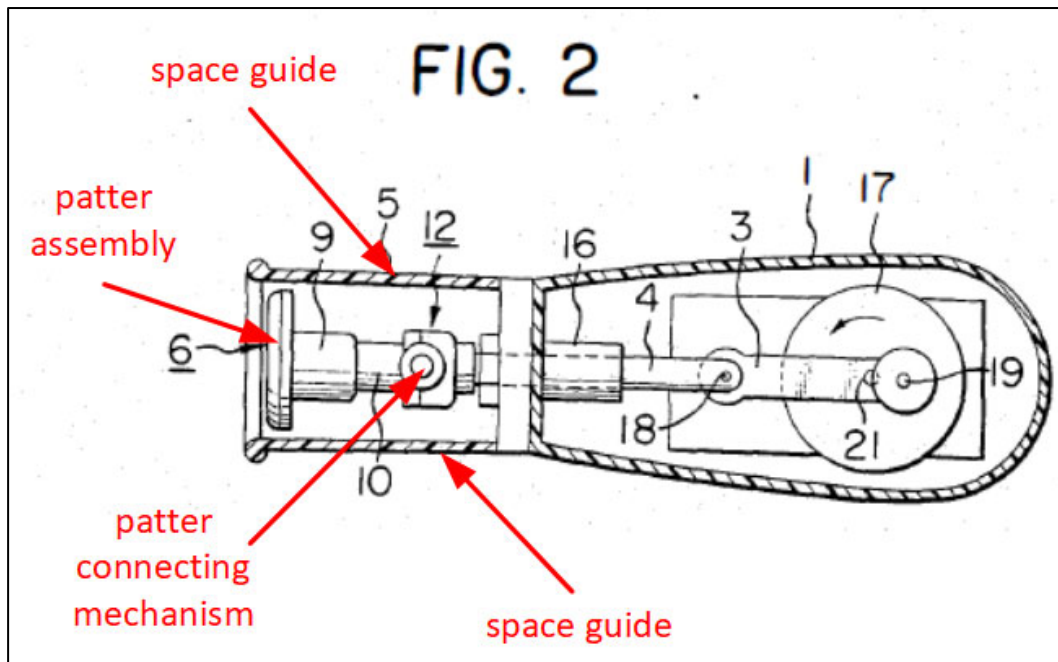
⁴ The muscular system is composed of muscle fibers. *See* <https://training.seer.cancer.gov/anatomy/muscular/> (accessed April 8, 2025). Thus, Mabuchi's reference to muscular tissue is equivalent to muscle fibers.

“intended mainly for the massage of the muscular tissues, not for beauty treatment of the skin.” *Id.*

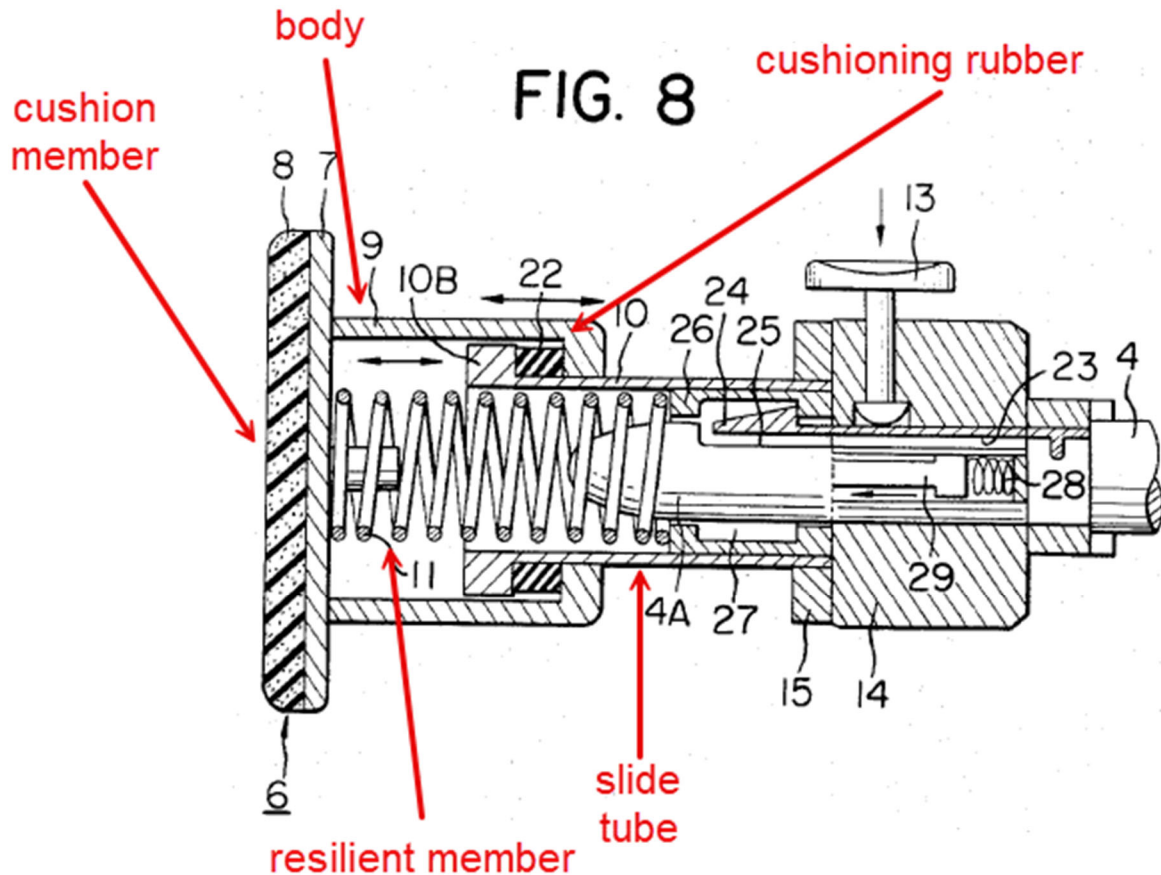
Figure 1 of Mabuchi (reproduced below with annotations) illustrates the fully assembled beauty treatment device.



Mabuchi teaches that interchangeability of the patter assembly 6 requires physical access to the connection mechanism 12. *Id.*, 5:65-67. However, in use, the space guide 5 fully encompasses the patter connection assembly 12. *Id.*, 1:36-39, 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, ¶¶71-72.



Further, Mabuchi's end piece—the padder assembly 6—has a complex, multi-component configuration that acts in concert with the space guide 5 to avoid applying a pushing force to the user's skin. *Id.*, 4:37-57, 5:33-38; FIG. 8 (below with annotations); Ex. 2005, ¶73. In use, the actuator 4 moves the padder slide tube 10 of the padder assembly 6 to the left (in the figure), and the movement of the padder 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 padder slide tube 10 moves to the right (in the figure), and the flange 10B of the padder slide tube 10 contacts the padder body 9 to pull it away from the skin surface. *Id.*, 3:5-12.



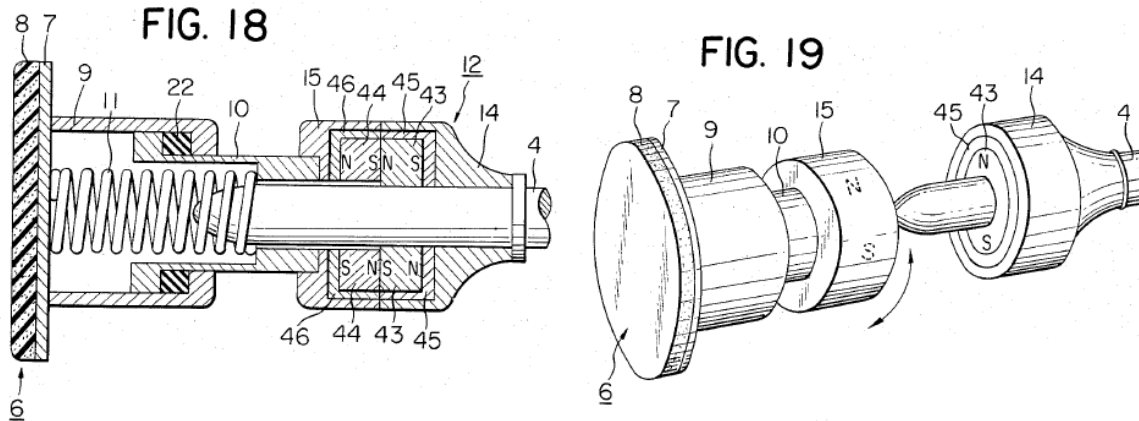
According to Mabuchi, the combination of the “distance adjusting” padder assembly 6 and the space guide 5 avoid “exert[ing] a pushing force onto the skin surface” and instead cause the cushion member 8 “to pat the skin surface.” *Id.*, 5:33-37, 46-50. To this end, Mabuchi explains the space guide 5, in combination with the stroke length of the actuator 4 and the resilient member 11 in the padder 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 patten assembly 6 compresses via the resilient member 11. *Id.*, 4:48-57.

One embodiment of the patten 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 cause by different polarities on the two magnets 43 and 44.” *Id.*, 8:11-15. According to Mabuchi, “[t]o change the patten 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 patten 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, ¶76. Mabuchi explains that, due to the radial pole arrangement, 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 whether the padder assembly 6 is attracted to or repulsed from the coupling 14.⁵ Ex. 2005, ¶76.



B. 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, ¶78.

C. 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 ’482 Patent, Pivaroff is directed to a percussive massager.

⁵ In embodiments of the ’482 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.

Compare Ex. 1001 ('482 Patent), 1:22-25 (“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.”).

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, ¶¶80-81.

The teachings of Pivaroff were extensively considered and overcome during prosecution of the '482 Patent. *See, e.g.*, Ex. 1004, pp.2587-95.

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, ¶62. A person of ordinary skill in the art (“POSITA”) as of the earliest effective filing date of the ’482 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, ¶¶63, 65.

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 ’482 Patent. Rather, rotating or reciprocating mechanisms are merely one aspect of the claimed percussive massagers, while the ’482 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; *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 '482 Patent. However, at his deposition, Petitioner's declarant, 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 '482 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 of 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. Patentee Clearly Relied on The Preamble

During Prosecution

“[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 recited an “apparatus.” Ex. 1004, 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 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 addressing new claim 38, which was added in the same response, Applicant stated that “Independent claim 38 recites a percussive massager” and then discussed the features of the quick release connector and why new claim 38 was allowable over Pivaroff and Rhoades. *Id.*, p.2537.

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 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, ¶¶53-54. 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 Challenged Claims 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”).

2. Dependence on the Preamble for Antecedent Basis

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. 1004, 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 challenged independent claim 38 for proper antecedent basis. *Id.*, pp.2528-30. Thus, the “percussive massager” preamble in the Challenged Claims 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 ’482 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.”). The ’482 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, 1:22-25, 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, ¶57.

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. Ex. 2005, ¶58. The ’482 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, ¶58. 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 ’482 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, ¶59. 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

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).

specification of the '482 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 disputed term appears, but in the context of the entire patent, including the specification.”). The '482 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, ¶59.

VI. THE PETITION 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 as to any asserted ground.

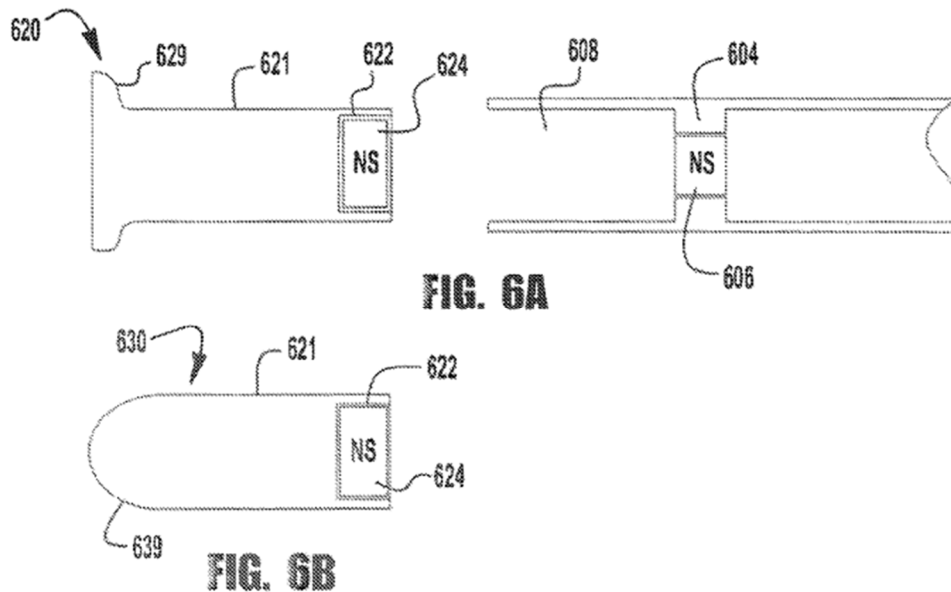
A. Ground 1: § 112(a)

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 of § 112.” *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 “first massaging head has a ... pocket”
Limitation

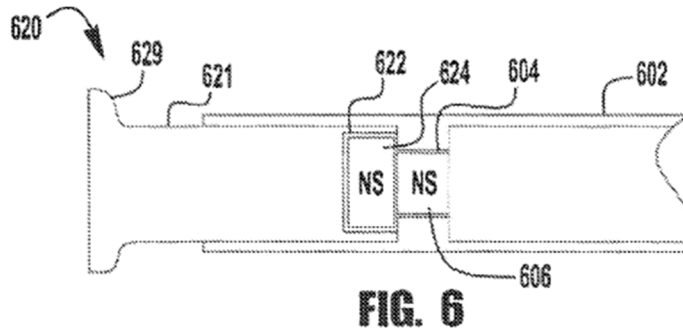
Petitioner’s contention that claim 34’s recitation of a “first massaging head has a ... pocket” lacks written description support ignores the clear disclosure of this feature in the specification and drawings. In other words, the written description and accompanying figures of the ’482 Patent reasonably convey, to a skilled artisan, a “first massaging head” having a “pocket to receive the quick release connector.” Ex. 2005, ¶¶84-87. In fact, Figures 6A and 6B of the ’482 Patent (below) illustrate two embodiments of massaging heads 620 and 630, each of which has a “cylindrical pocket 622 at the distal end” and has a magnet 624 within the pocket 622. Ex. 1001, 6:63-65.



The '482 Patent further explains that:

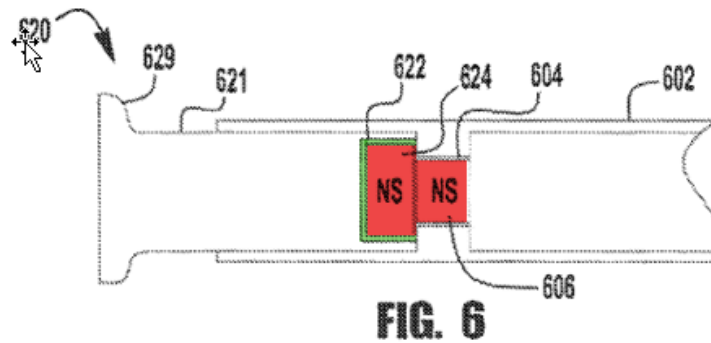
Quick-connect system 600 includes a piston 602 that has a hollow-end bore 608 for receiving the shaft 621 of a massaging head 620. Located within the bore 608 of piston 602 is a cylindrical seat 604. Cylindrical seat 604 retains a magnet 606. Magnet 606 is illustrated with its north pole located flush with the seat and facing toward the opening in bore 608. *Massaging head 620 includes a shaft 621 having a cylindrical pocket 622 at the distal end. Located within the cylindrical pocket 622 is a magnet 624.* Magnet 624 is positioned so that its south pole is located at the distal end of shaft 621. *Accordingly, when the shaft 621 of massaging head 620 is slid into opening in bore 608, the magnets 606 and 624 are attracted to one another and magnetically hold massaging head 620 firmly in place.*

Id., 6:57-7:3 (**emphasis** added). Figure 6 shows the quick-connect system in operation, with the cylindrical pocket 622 in the massaging head 620 receiving the quick release connector (magnets 624 and 606). Ex. 2005, ¶85.



Even if understood in an *unduly* narrow sense⁷, the pocket 622 in the massaging head 620 (annotated in green, below) receives at least one-half of the quick release connector (annotated in red, below) consisting of two oppositely arranged magnets 624/606, fully supporting the claim limitation of “wherein the first massaging head has a ... pocket to receive the quick release connector.” Ex. 2005, ¶86.

⁷ “Receive” may be defined as “to hold, bear, or contain.” Ex. 2016. The pocket 622 *contains* and *holds* the magnet 624 and at least *holds* the magnet 606, which is consistent with the recitation of “to receive” in claim 34.



As best understood, Petitioner argues that because the non-limiting, illustrated embodiments show various components being “slid into a pocket (‘bore 608’) in the piston 602,” the claimed pocket [622] in the first massaging head [620] to receive the quick release connector [624/604] somehow lacks support *despite it being literally described and shown* in the ‘482 Patent. The specification’s separate disclosure of the piston 620 having a bore 608 does not invalidate the specification’s disclosure of the massaging head 620 having a pocket 622 to receive the quick release connector. Petitioner’s primary argument is a misguided, and incorrect, claim construction argument that seeks to omit the preferred illustrated embodiment. *See Globetrotter Software v. Elan Computer Group, Inc.*, 362 F. 3d 1367, 1381 (“A claim interpretation that excludes a preferred embodiment from the scope of the claim is rarely, if ever, correct.”) (internal quotations and citation omitted).

Petitioner briefly argues that “[t]his ‘pocket’ in the massaging head does not and cannot ‘receive the quick release connector *at the distal end of the piston*,’⁸ as recited in challenged Claim 34....” Pet., p.20 (*emphasis added*). But claim 34 has no such literal recitation. Claim 34 recites “a quick release connector at the distal end of the piston” and “the first massaging head has a substantially cylindrical pocket to receive the quick release connector.” Again, rather than accept the ’482 Patent’s recitations and disclosure, Petitioner misleadingly combines these two recitations of claim 34 into a single quote, which is another basis for dismissing this Ground.

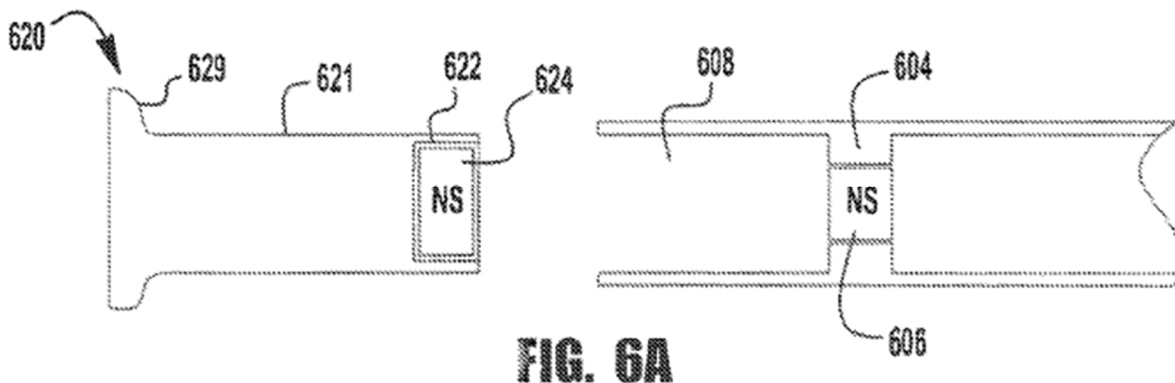
In sum, the specification reasonably conveys to those skilled in the art that the inventor had possession of this element of the claimed invention—a massaging head having a pocket to receive the quick release connector—as of the filing date. *See Ariad Pharms.*, 598 F.3d at 1351.

⁸ This argument is contradicted by Petitioner’s argument that Mabuchi discloses “[the] magnet 43 implanted in the coupling 14 and the protruding actuator head, all located at the distal end of actuator 4” because the coupling 14 containing the magnet 43 is spaced from the exact distal end of the actuator 4. Pet., p.37.

2. Ground 1B: The “substantially cylindrical pocket”

Limitation

Petitioner’s contention that the recitation of a “substantially cylindrical pocket” lacks written description support ignores the import of the specification as a whole to a POSITA. The specification reasonably conveys to a skilled artisan that the claimed “pocket” is substantially cylindrical. The written description notes that the “[m]assaging head 620 includes a shaft 621 having *a cylindrical pocket 622* at the distal end.” *Id.*, 6:63-64 (*emphasis added*), FIG. 6A.



Based on FIG. 6A and the above-cited teachings of the specification, a POSITA would understand that the pocket 622 may take the form of “substantially cylindrical” while still performing its intended function, that is, receiving the quick release connector. Ex. 2005, ¶89. Rather than discuss the explicitly-described “cylindrical pocket 622,” Petitioner largely rehashes its deficient arguments from Ground 1A conflating the bore 608 with the pocket 622. *See* Pet., p.21 (“The ’482 Patent does not explicitly disclose the shape of the pocket (bore 608).”). Petitioner

also argues that “to the extent PO points to ‘cylindrical pocket 622’ in the massaging head ... this cylindrical pocket 622 does not ‘receive the quick-release connector.’” *Id.*, p.22. These arguments miss the mark.

At best, Petitioner briefly argues that the specification must expressly define a “substantially cylindrical pocket” or that a “substantially cylindrical pocket” somehow excludes a perfectly cylindrical pocket. Pet., p.23 (“The ’482 Patent does not disclose a ‘substantially cylindrical,’ i.e., only approximately cylindrical pocket.”) (footnote omitted). There is no such standard. 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.22 n.5.

Claim 34’s recitation of a “substantially cylindrical pocket” merely allows for minor variations in a cylindrical shape while still performing its intended function of receiving the quick release connector and need not be mathematically defined. In practice, this variance is called cylindricity or runout. Ex. 2017; Ex. 2005, ¶89. At his deposition, 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.

Notably, Petitioner’s argument is devoid of any case law 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....”).

In sum, the ’482 Patent reasonably conveys to those skilled in the art that the inventor had possession of this element of the claimed invention—a substantially cylindrical pocket to receive the quick release connector—as of the filing date.

3. Ground 1C: The “quick release connector” Limitation

Petitioner’s contention that the claims are invalid because “they lack written description supporting the full scope of the claimed ‘quick release connector’” ignores Federal Circuit precedent and the knowledge of a POSITA, including that of its own declarant. In short, the written description and accompanying figures reasonably convey, to a skilled artisan, a “quick release connector” that “is configured to secure a first massaging head while the piston reciprocates a predetermined stroke length at the first speed.” In fact, the specification explicitly

describes and illustrates one embodiment of the quick release connector, in which magnets assist in securing the connection, described in detail in Section VII.A.1, *supra*. Ex. 2005, ¶91.

Petitioner exclusively relies on case law and PTAB decisions addressing the written description requirements in the context of the pharmaceutical arts, but the '482 Patent is in the mechanical arts. *See* Pet., p.15. 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 predictability of the mechanical arts means that “[a] single embodiment may provide broad enablement.” MPEP § 2164.03 (citing *In re Vickers*, 141 F.2d 522, 526-27, 61 USPQ 122, 127 (CCPA 1944)). Petitioner ignores this long held legal principle. *See 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).

Nevertheless, the written description and accompanying figures reasonably convey, to a skilled artisan, a “quick release connector” that “is configured to secure a first massaging head while the piston reciprocates a predetermined first stroke length at the first speed” as recited in claim 34. Ex. 2005, ¶¶92-94. Indeed, the specification explicitly describes and illustrates, in detail, an example embodiment of the quick release connector in which magnets assist in securing the massaging head to the bore in the piston while the piston reciprocates. *See* Ex. 1001, 6:57-7:3, FIG. 6; *see also id.*, 2:7-11, 3:35-36, 42-45, FIGS. 1-3 (disclosing and describing an additional quick-connect system embodiment).

Disclosure of one example embodiment of the recited “quick release connector” 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 “quick release connector” to the exemplary embodiment described in the ’482 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 §112(a) limiting a patent claim to only 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 release connector” limitation is further described and limited in the body of independent claim 34. In particular, the claimed “quick release connector” is limited to a particular structure of a piston and a first massaging head having a pocket to receive the quick release connector and is configured to secure the first massaging head while the piston reciprocates. In fact, Petitioner later argues that the first massaging head being connectable while the piston reciprocates further defines the claimed “quick release connector” as meaning it “is designed to be secured without the need to align it to the piston.” Pet., p.40.

Moreover, Petitioner ignores that a “quick release connector,” also known as a “quick disconnect,” 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 claim 34 in that the quick release connector is included in a percussive massager and must be operable while the piston reciprocates. *See* Ex. 2024 (website titled “The Basics of Quick Disconnects”); Ex. 2025 (Wikipedia entry for “Quick connect fitting”); Ex. 2005, ¶92. Quick release or disconnect systems are also known as quick connect systems. *See* Ex. 2026 (Oxford Reference, A Dictionary of Mechanical Engineering (2 ed.),

defining “quick coupling” the same as “quick disconnect”). Indeed, a quick release connector would be known to a POSITA to include a number of different mechanical configurations, as confirmed by Petitioner’s own declarant. *See* Pet., p.25 (citing Ex. 1002, ¶¶53-58); *see also 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.”).

Thus, the specification reasonably conveys to those skilled in the art that the inventor had possession of this element of the claimed invention—a quick release connector—as of the filing date.

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

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

Petitioner’s second challenge to the “substantially cylindrical pocket” as recited in claim 34 is similarly 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 ’482 Patent, a person of ordinary skill in the art would know when the pocket in a massaging head is substantially cylindrical enough – *i.e.*, sufficiently cylindrical – to accomplish the function identified in the patent: receiving the quick release connector.⁹ Thus, the “substantially cylindrical pocket to receive the quick release connector” 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”)¹⁰, claim 3 recites that “the first and second flat surfaces of the female attachment member are *substantially parallel* to one another.” Wersland does not provide a precise or mathematical definition or even informal definition for “substantially parallel” other than the inferred definition of parallel enough such that the surfaces fit together and

⁹ Similarly, in the parallel district court proceeding, Therabody asserts the following proposed claim construction for “a substantially cylindrical pocket to receive the quick release connector”: “the pocket is sufficiently cylindrical such that it can receive the quick release connector without the need for rotational alignment.” Ex. 2013, p.17.

¹⁰ Theragun, LLC later changed its name to Therabody, Inc. Ex. 2011.

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.

Dr. Pratt has also availed himself of “substantially” in his patents. For example, U.S. Patent No. 8,348,566 (Ex. 2012) discloses 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 never explains or describes the “substantially rounded edge,” 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” according to Dr. Pratt. 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 Does Not Render Claims 34, 35
and 58-60 Obvious**

At least the following limitations of independent claim 34 and dependent claims 35 and 58-60 of the '482 Patent are missing from and not obvious in light of Mabuchi, the single asserted prior art reference¹¹. Thus, Petitioner fails to meet its

¹¹ Petitioner fails to explain the basis for Mabuchi as a single-reference §103 reference “with particularity” as required by 35 U.S.C. § 322(a)(3). Because Petitioner did not assert Mabuchi as an anticipatory reference, Petitioner concedes that the claimed invention is novel in view of Mabuchi, yet Petitioner fails to explain what claim element(s) is not disclosed in Mabuchi, let alone why a POSITA would have been motivated to modify Mabuchi to arrive at the claimed embodiments. *See Adaptics Ltd. v. Perfect Co.*, IPR2018-01596, Paper 20, *20 (March 6, 2019) (Informative) (citing *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966)) (stating that “[c]ritically, however, the Petition fails to specify what Petitioner regards as the difference(s) between Bendel or Sartorius and the challenged claims.”). Nevertheless, Mabuchi also fails to anticipate the Challenged Claims for the same reasons it does not render them obvious.

burden under Ground 3, and the Challenged Claims are not unpatentable in view of Ground 3.

a) **Claim 34, Element 34[pre]**

The preamble of claim 34 recites “A percussive massager.” As explained above, the preamble of claim 34 (and of every Challenged Claim) is limiting. Mabuchi does not disclose, teach, or otherwise suggest a percussive massager, and Petitioner does not attempt to rely on Harris or Pivaroff to remedy this deficiency. Accordingly, the Challenged Claims are not obvious in view of Mabuchi as alleged in Ground 3.¹²

(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*

¹² 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 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”).

treatment of the skin.” 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.*, 1:26-28. Put simply, Mabuchi expressly confirms that it does not disclose, teach, or even suggest a percussive massager as required by the Challenged Claims. Ex. 2005, ¶96.

Petitioner’s declarant, Dr. Pratt, similarly ignores the introductory paragraphs of Mabuchi. *See generally* Ex. 1002, ¶101. Instead of addressing Mabuchi’s explicit 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, ¶96.

First, as explained above in Section 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, ¶¶96-97. 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.

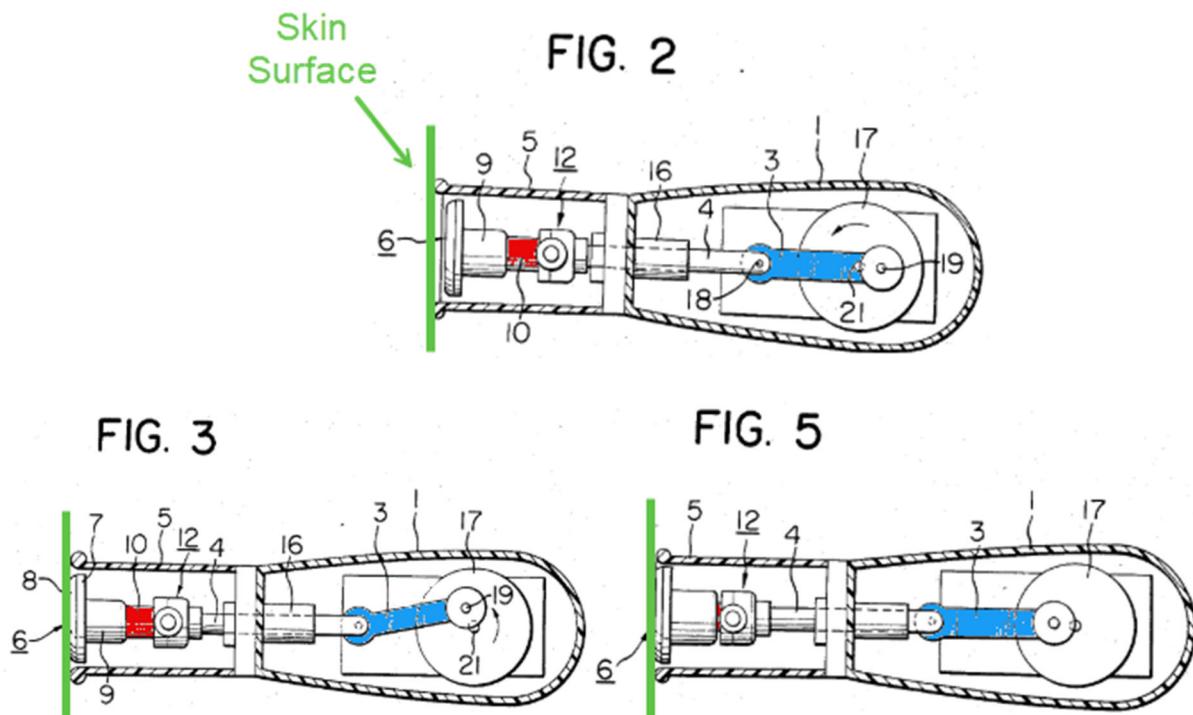
Second, critically, Dr. Pratt never explains his understanding of what a "percussive massager" is. In other words, Dr. Pratt works backwards from Mabuchi's disclosure to conclude that Mabuchi is a percussive massager rather than first describing his understanding of how a POSITA would understand the 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 beauty treatment devices that render it unable to even be used as a percussive massager. Ex. 2005, ¶97. **First**, Mabuchi includes the space guide 5, which ensures that the patten assembly 6

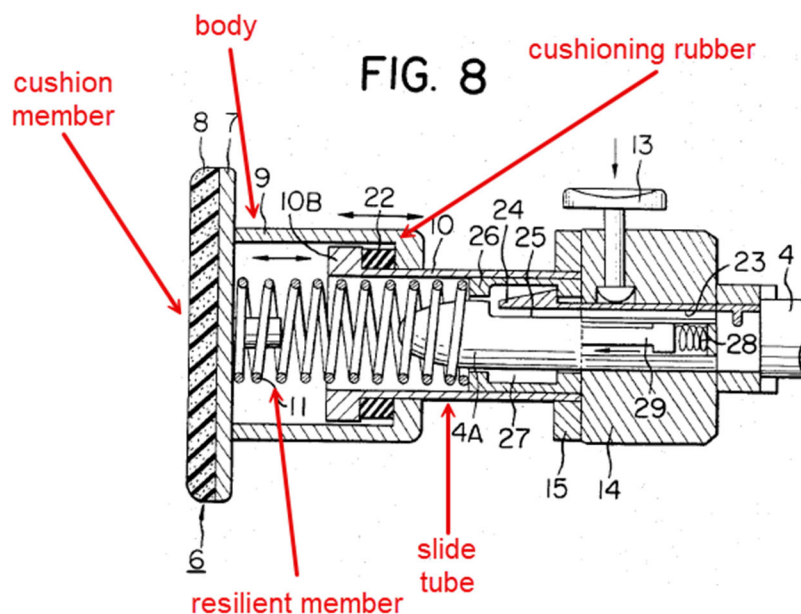
contacts and separates from the skin surface each stroke, to repeatedly pat the skin surface. Ex. 1005, 3:64-4:30, 5:33-38, FIGS. 2, 3, and 5 (below) (showing the pater assembly 6 moving from a position retracted within the space guide 5 and out of contact with the skin surface to the end of the space guide 5 to contact the skin surface); Ex. 2005, ¶¶97-100.



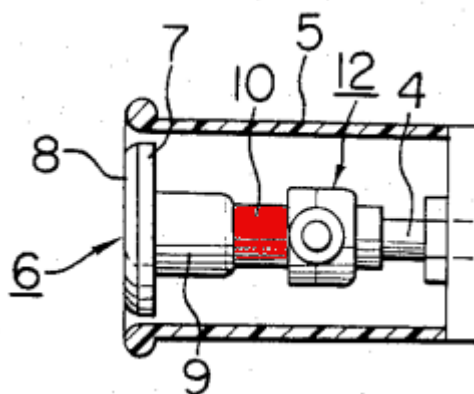
Mabuchi specifically cautions against operating the beauty treatment device without the space guide 5, explaining that “the absence of the space guide 5 would cause both the plate member 7 and the cushion member 8 to be kept in contact with the skin surface at all times to exert a pushing force onto 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 patter 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 massage deep muscle tissue. *See* Sections II.A-B, *supra*; Ex. 2020 (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, ¶100.

Second, Mabuchi uses a complex patter assembly 6, which includes 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, ¶¶98-99.

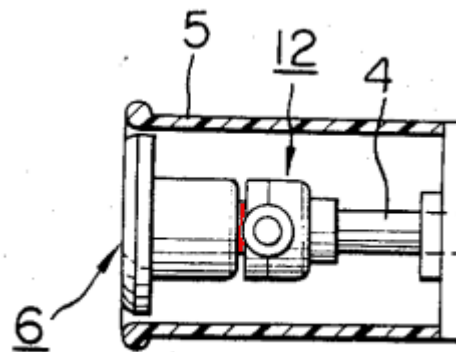


As can be seen in Figures 3 and 5 of Mabuchi (below with annotations), the resilient member 11 absorbs the additional movement of the actuator 4 after the cushion member 8 contacts the user's skin at the end of the space guide 5 so that the padder body 9 does not press itself into the user's skin. *Id.*, 4:28-58. Thus, instead of applying a strong, abrupt, pushing force (*i.e.*, a percussive force or impact) 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 padder assembly 6 including the spring 11 ensures that Mabuchi's beauty treatment device has an effective stroke length of zero or near zero (*i.e.*, has no or near zero effective stroke length) as applied to a user's skin and does not, and cannot, operate as a percussive massager. Ex.

2005, ¶98; Ex. 2033, 38:20-39:7 (explaining that the patter 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 pater 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 pater 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

Prior to this proceeding, Petitioner understood that Mabuchi’s beauty treatment device materially differs from percussive devices, such as the chiropractic adjustment device described in Fuhr. *See* Ex. 2014, pp.1020-22. In prosecuting its own patent, U.S. Patent No. 11,730,668,¹³ filed in March 2022 (approximately 8.5 years *after* the effective filing date of the Challenged Claims), Petitioner argued:

¹³ The pre-grant publication of this patent—US 2022/0211575—is provided as Exhibit 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).

Petitioner now takes the opposite position, arguing that Mabuchi “teaches or suggests” (Pet., p.33) or “describe[s]” (Pet., p.47) a percussive massager. Petitioner’s original interpretation of Mabuchi should be credited as it is consistent with Mabuchi’s disclosure, while Petitioner’s new, contradictory interpretation of Mabuchi lacks any factual basis. In sum, Petitioner’s original characterization of Mabuchi as merely “a beauty device that pats the skin with a padder,” which

Petitioner contrasted¹⁴ with “a chiropractic instrument for use in chiropractic adjustment of musculoskeletal structures” because these devices “require[] different specifications” confirms that Petitioner originally understood that Mabuchi was not a percussive device, let alone a percussive massager. *Id.*; Ex. 2005, ¶101.

Because Mabuchi and Petitioner (at least prior to this proceeding) expressly contrast the beauty treatment device of Mabuchi with other types of reciprocating devices, such as the chiropractic adjustment device of Fuhr, and because Mabuchi features specific elements and configurations to avoid acting as a percussive massager, Mabuchi does not disclose, teach, or even suggest a “percussive massager” as required by claim 34.

¹⁴ 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 itself uses the phrase “on the other hand” to compare its beauty treatment device with devices “intended mainly for the massage of the muscular tissues” or “massager[s].” Ex. 1005, 1:21-28.

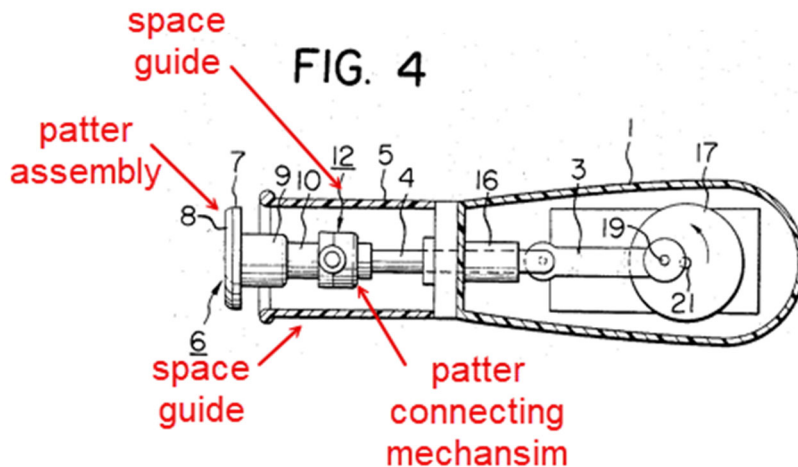
b) Claim 34, Element 34[e]

Mabuchi does not disclose, teach, or suggest at least the recitation of Claim 34[e]—“a quick release connector ... wherein the quick release connector is configured to secure a first massaging head while the piston reciprocates a predetermined stroke length at the first speed....”

(1) Mabuchi’s Patter Assembly 6 Cannot Be Secured While the Actuator 4 Reciprocates

Mabuchi does not disclose, teach, or even suggest that the patter assembly 6 could be secured 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. As explained above, 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 patter connecting mechanism 12 along its entire stroke, including when the patter 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 patter assembly 6 could possibly protrude from the space

guide 5 and the nearest the patter connecting mechanism 12 moves to the open end face of the space guide 5. Ex. 2005, ¶104-05.



Separate from any 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. 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, preventing the patter assembly 6 from being secured to or removed from the piston 4. Ex. 2005, ¶105. Moreover, the space guide 5 would preclude the user from clearly seeing the actuator 4 and the patter assembly 6 as they approach each other, frustrating or preventing the user from successfully connecting the patter assembly 6 and the actuator 4. *Id.*

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.39 (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 are attracted to connect the actuator 4 and the patter assembly 6. Ex. 1005, 8:11-15; Ex. 2005, ¶¶106-07. When considered in context, this passage merely confirms that "the patter assembly 6 is operated" in the state described in the immediately preceding sentence, that is, when the patter assembly 6 is magnetically connected to the coupler 14 on the actuator 4. If "In this state" is meant to refer to some other state than "the state where the actuator 4 is connected to the patter assembly 6," 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 Alignment Rendering It Unsuitable
For Securing as the Piston Reciprocates**

Petitioner and Petitioner's declarant, Dr. Pratt, consistently assert that the claimed quick release connector that "is configured to secure a first massaging head

while the piston reciprocates” means that it “must be capable of being connected regardless of rotational alignment.” *See* Ex. 2013 (Therabody’s Opening Claim Construction Brief), pp.13-14; Ex. 2031 (Pratt Declaration), ¶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.*”) (*emphasis added*); Ex. 1002, ¶¶85, 88 (stating that “reciev[ing] the proximal end of the attachment ‘while the piston reciprocates,’ [] would be done without the need for alignment”). Petitioner asserts the same understanding in this proceeding. Pet., p.40 (“[A] POSITA would understand that Applicants were arguing that a connection mechanism where the massaging head is designed to be secured ***without the need to align it to the piston*** is configured to do so while the piston is reciprocating.”) (*emphasis added*).

Apparently understanding Mabuchi’s intractable deficiency in that its magnetic connection requires a particular angular/rotational alignment to determine attraction or repulsion, Dr. Pratt applied a different standard in his declaration, stating that:

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

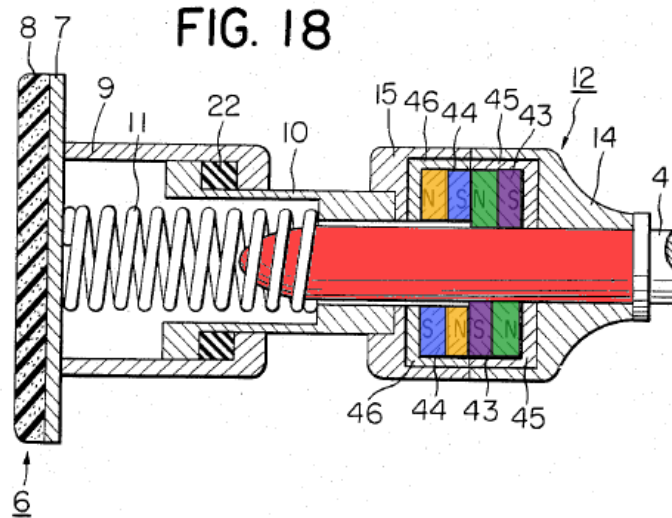
actuator during attachment, a POSITA would understand that it is configured to secure while the actuator was reciprocating.

Ex. 1002, ¶113 (*emphasis* added). In other words, Petitioner and its declarant, Dr. Pratt, have different interpretations of Mabuchi and what is required by this claim limitation. As explained below, consistent with Dr. Pratt's written testimony quoted above, Mabuchi's magnetic connection requires a particular alignment between the patter assembly 6 and the actuator 4 for connection and disconnection, contrary to Petitioner's argument.¹⁵

The sole evidence on which Petitioner relies is Mabuchi's unsupported statement that "positive connection can be ensured without positioning the actuator 4 and the patter assembly 6." Pet., 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

¹⁵ 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.").

patter slide tube 10, the flange 15, and the magnet 44 are aligned with the head of the actuator 4 (shaded in red, below). Ex. 2005, ¶108.



Second, the patter assembly 6 *must be rotationally oriented* so that the opposite poles (N/S) of the opposing magnets 43 and 44 are aligned. As Mabuchi explains, “[t]he changing of the patter assembly 6 can be easily accomplished since the actuator 4 and the patter assembly 6 are automatically disconnected merely by turning each other.” Ex. 1005, 8:40-43. This occurs because, when the same poles of opposing magnets 43 and 44 face each other (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 patter 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.

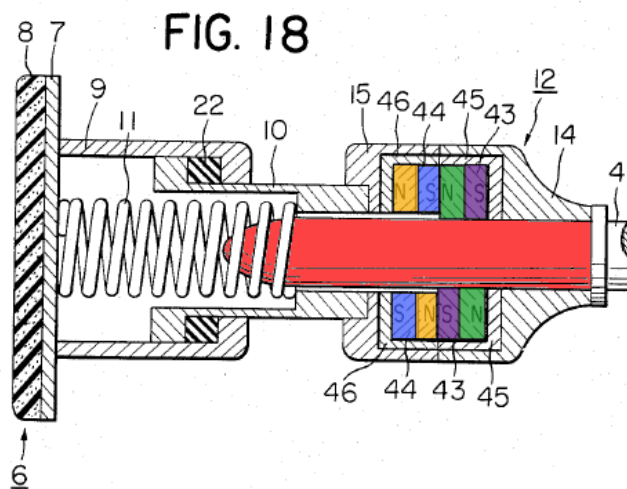
Ex. 1002, ¶61 (citing Ex. 1005, 8:40-43). In other words, the flange 15 must be grasped *and turned* with respect to coupling 14 to disconnect it from the actuator 4.

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. Ex. 2005, ¶¶108-10. To avoid the magnets 43/44 repulsing each other, 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 other for connection.

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, 48:10-18, 51:1-12. 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 Mabuchi, 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, ¶¶108-10. The opposite rotational alignment causes the magnets to repulse each other, preventing connection. Ex. 1005, 8:40-43.



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 magnetic connection embodiment of Figures 18 and 19 in the same manner—as being connectable at any angular position. Ex. 2005, ¶110. Thus, a POSITA would understand that Mabuchi’s magnetic connection embodiment requires a particular angular alignment to secure the patter assembly 6 to the actuator 4 and the magnetic connection is not “configured to secure a first massaging head while the piston reciprocates a predetermined stroke length at the first speed” as recited in claim 34.

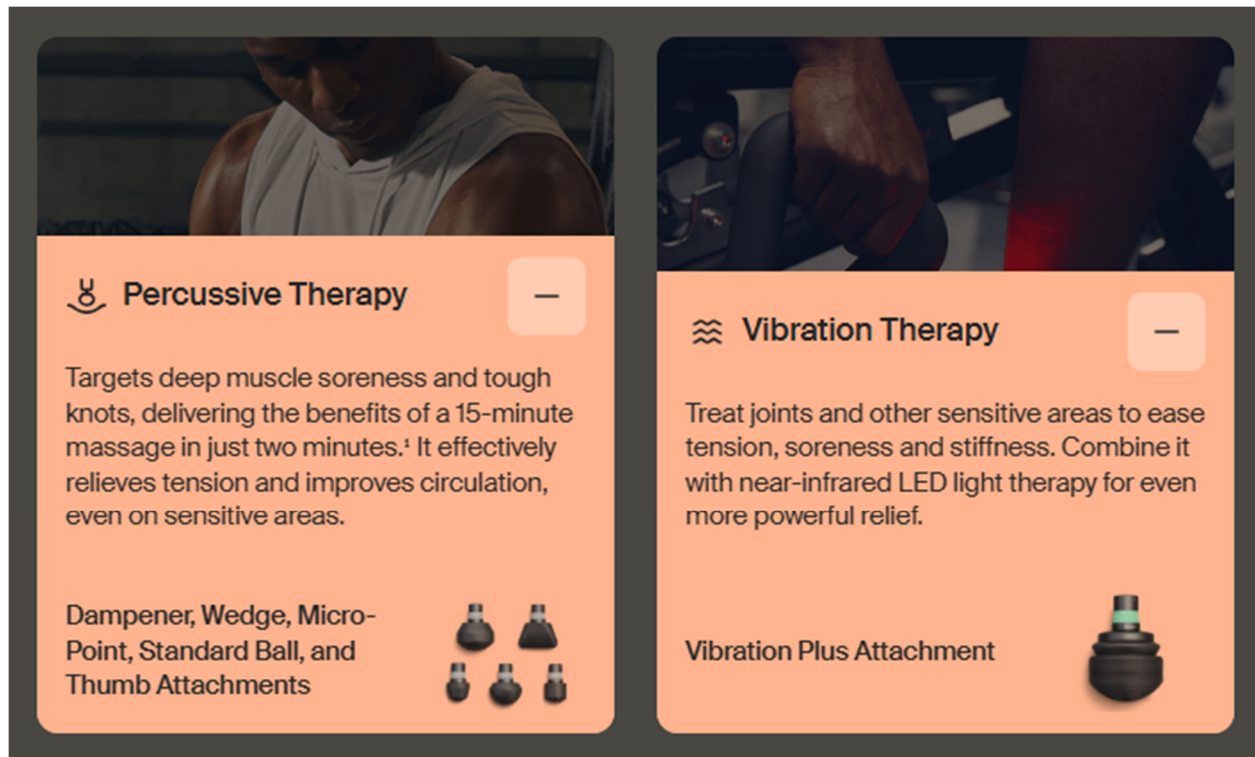
(3) Mabuchi’s Patter Assembly Is Not A
“Massaging Head”

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

Mabuchi uses a complex padder assembly 6 including the resilient member 11 (a spring) to avoid imparting substantial pressure onto the skin surface or pushing into the user's skin. Ex. 1005, 2:53-3:12, FIG. 8; Ex. 2005, ¶¶111-12. Mabuchi explains that, once the padder body 9 contacts the skin surface, the padder assembly 6 is compressed via the spring 11 rather than forcing itself into the user's skin. Ex. 1005, 4:42-49, 3:18-25. 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 padder 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 force or depth sufficient to provide a deep muscle massage. Ex. 2005, ¶112.

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.*, messaging heads) while providing a different attachment for vibration therapy (*i.e.*, a vibrating head) (shown below)¹⁶:

¹⁶ Ex. 2023 (the website is also available at <https://www.therabody.com/products/theragun-pro-plus>).



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.

Accordingly, for any *one* of the numerous above-described deficiencies in Mabuchi, challenged claim 34 of the '482 Patent is not obvious in view of Mabuchi, and Petitioner's Ground 3 fails. Ex. 2005, ¶113. Further, Petitioner's Grounds 4 and 5 also fail as they are premised on Ground 3 and do not remedy any of the above-identified deficiencies in Ground 3.

2. Ground 4: Petitioner Fails to Establish that Mabuchi in view of Harris Renders Claims 36-38, 40-41 and 43-46 Obvious

Because Petitioner’s analysis of Mabuchi in view of independent claim 34 is flawed, as explained above, all challenged dependents claims are not unpatentable in view of Mabuchi and Harris because Petitioner does not rely on Harris to cure any of the above-noted deficiencies of Mabuchi. Ex. 2005, ¶114. The following arguments regarding challenged dependent claim 38 are in addition to the above arguments regarding challenged independent claim 34.

a) Claim 38

Claim 38 recites “wherein the first speed and the second speed are each greater than or equal to 600 strokes per minute.” The entirety of Petitioner’s argument regarding claim 38 in view of Mabuchi and Harris is that “[f]or the reasons discussed above in Section XIII.B.3, a POSITA would have understood that the selection of particular speeds that are greater than or equal to 600 strokes per minute would be a readily available design choice.” Pet., p.50. But Section XIII.B.3 discusses claim 37 and does not address the “600 strokes per minute” as recited in claim 38. Thus, the Petitioner procedurally waived any argument with respect to claim 38 in this ground. For this reason alone, the Board should disregard Petitioner’s argument with respect to claim 38.

Even if the Board considers Petitioner’s argument, it is deficient: (1) as a matter of law; (2) in view of the lack of relevant disclosure in either Mabuchi or Harris; and (3) in view of the irreconcilable disparities between Mabuchi and Harris.

First, “unsupported statements that a combination of elements would have been merely a design choice is insufficient to establish obviousness.” *Vectair Systems Inc. v. Fresh Products, Inc.*, IPR2024-00824, Paper 9, *18 (Nov. 12, 2024) (citing *Stryker Corp. v. Karl Storz Endoscopy–America, Inc.*, IPR2015–00677, Paper 15, *37 (Sept. 2, 2015)). It is black letter law that “obviousness 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). Petitioner’s argument is just the sort of superficial “design choice” hit-and-run that the PTAB and the Federal Circuit routinely reject. *See Fanduel, Inc. v. Interactive Games LLC*, 966 F.3d 1334, 1338, (Fed. Cir. 2020) (affirming the Board’s rejection of the petitioner’s “conclusory [] sole explanation that it would be an ‘obvious design choice’” to modify a primary reference because it was unclear how the modification would benefit the primary reference and “simply calling the addition ... ‘an obvious design choice’ did not fill that gap”).

Taking Petitioner's entire argument and replacing the quotation of claim 38 results in: "a POSITA would have understood that the selection of particular speeds that are [*claim language*] would be a readily available design choice." Pet., p.50 (alterations added). Petitioner's declarant, Dr. Pratt, adds nothing; instead, he simply parrots, word for word, Petitioner's deficient argument. Thus, Dr. Pratt's testimony should be given little, if any, weight. *Compare* Pet., p.50 *with* Ex. 1002, ¶139; *Xerox Corp. v. Bytemark, Inc.*, IPR2022-00624, Paper 9, *15 (Aug. 24, 2022) (Precedential; designated Feb.10, 2023) (finding that a declarant's declaration that "merely repeats, *verbatim*, the conclusory assertion for which it is offered to support ... is conclusory and unsupported, adds little to the conclusory assertion for which it is offered to support, and is entitled to little weight") (citing 37 C.F.R. § 42.65(a)) (collecting cases). Thus, Petitioner's argument is without any factual support and insufficient as a matter of law.

Second, neither Mabuchi nor Harris discloses any stroke rate or RPM such that they do not provide any basis from which to arrive at the claimed limitation. Ex. 2005, ¶116. At most, Harris explains the commonsense principle that "[a]s power to the motor 40 increases, the rotational speed of cylindrical eccentric cams 8 driven by rotary drives 6 and rotary drive arms 7 increases, increasing the speed of the stroke cycle of spacers 21 striking surfaces 18...." Ex. 1006, 3:36-40. However, Harris does not provide any example speeds for its percussive massager, nor does

Mabuchi provide any example speeds for its cosmetic patting device. *See generally* Exs. 1005-06. Thus, Petitioner's argument that a POSITA would have modified Mabuchi to have two speeds, each greater than or equal to 600 strokes per minute, is pulled from whole cloth (or, more accurately, from the '482 Patent itself).

Third, even if Harris disclosed two speeds within the claimed range, which it does not, there is simply no reason why a POSITA would have modified the cosmetic patting device of Mabuchi to have the speed(s) of Harris' percussive massager. Ex. 2005, ¶118. Mabuchi explains that its device is designed to "repeatedly pat[] a skin surface ... at a given rate" to mimic the "repeated[] tap[ping] or pat[ting] the skin surface with fingertips or palms." Ex. 1005, 1:7-15. Speeds of "greater than or equal to 600 strokes per minute" do not mimic manual patting. Ex. 2005, ¶117. For example, 600 strokes per minute is equivalent to 10 strokes per second, a feat impossible for a user to achieve with their "fingertips or palms," and claim 38 requires two speeds, both of which must be greater than or equal to 600 strokes per minute. *Id.*

In other words, even if *percussive massagers* are designed to provide two speeds, each of which are greater than or equal to 600 strokes per minute as required by claim 38, Petitioner fails to provide any reason why a POSITA would have modified Mabuchi's beauty treatment device to operate at such speeds, let alone at two such speeds. *See 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.*, IPR2024-00824, Paper 9, *18 (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”).

Moreover, Petitioner, in prosecuting its own patent, argued against modifying Mabuchi in view of Fuhr, a reference directed to a chiropractic adjustment tool, with respect to Fuhr’s reciprocation speed due to the devices’ material differences as to their intended use and in view of Mabuchi’s magnetic connector. Ex. 2005, ¶119. In detail, in its September 16, 2022, amendment, Petitioner argued as follows:

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.

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Therabody, Inc.
Application No. 17/705,300

Claim 1 also recites, “wherein the reciprocating shaft is configured to reciprocate in response to activation of the motor, such that the attachment member has a linear velocity between 0.06 m/s and 0.5 m/s.” The Office acknowledges that Mabuchi does not disclose a linear velocity between 0.06 m/s and 0.5 m/s, and instead relies on Fuhr for allegedly disclosing this feature. *See* Office Action, 9–10. However, a person skilled in the art would not have been motivated to combine the velocity disclosed in Fuhr with the device of Mabuchi.

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].

Additionally, the present disclosure explains that the linear velocity is also optimized to ensure the magnetic securement of the attachment member during reciprocating movement. Specification, [0047]. Fuhr does not disclose an attachment member magnetically secured to a reciprocating shaft, and therefore a person skilled in the art would not have looked to Fuhr when designing the linear velocity of Mabuchi, which is a magnetically connected device.

Ex. 2014, pp.1021-22 (annotations and highlighting added).

The same reasons that Petitioner originally argued against modifying Mabuchi to have the speed of Fuhr’s chiropractic tool equally contradict Petitioner’s

attempted combination of Mabuchi and Harris in Ground 4. For example, Petitioner argued that Mabuchi, as “a device for treating the face,” “requires different specifications” than Fuhr, as “a chiropractic device for adjusting musculoskeletal structures.” *Id.*, p.1022. Harris is directed to a “percussive massager” that provides “an effective therapeutic massage to the various contours of the body” and is not “a device for treating the face.” Ex. 1006, 1:5-7, 1:33-38; Ex. 2005, ¶119.

Even further, Petitioner argued that “Fuhr does not disclose an attachment member magnetically secured to a reciprocating shaft” such that a POSITA “would not have looked to Fuhr when designing the linear velocity of Mabuchi, which is a magnetically connected device.” Ex. 2014, p.1022. Similarly, Harris does not disclose a magnetically secured attachment mechanism; Harris, rather, discloses that percussive nodes 20 are threaded onto percussive massage node mounts 14. Ex. 1006, 3:67-4:4, 4:36-39.

Now that Petitioner seeks to invalidate the '482 Patent, it conveniently takes the opposite position, arguing that a POSITA would understand that the speed characteristics of Mabuchi’s magnetically connected attachment could be “readily” modified in view of teachings directed to other types of devices, including percussive massagers (although Harris fails to disclose any actual speed or RPM) without any consideration of Mabuchi’s magnetic connection mechanism. Petitioner’s original arguments regarding Mabuchi should be credited over its new,

contradictory arguments set forth in the Petition at least because Petitioner’s original arguments are supported by analysis of Mabuchi’s intended purpose and limitations rather than reliance on mere “design choice” without any analysis as in the Petition.

Accordingly, challenged claim 38 of the ’482 Patent is not obvious over Mabuchi in view of Harris.

3. Ground 5: Petitioner Fails to Establish that Mabuchi in view of Harris and Further in View of Pivaroff Render Claims 37 and 38 Obvious

Because Petitioner’s analysis of Mabuchi in view of independent claim 34 is flawed, as explained above, all challenged dependents claims are not unpatentable in view of Mabuchi, Harris, and Pivaroff because Petitioner does not rely on Harris or Pivaroff to cure any of the above-noted deficiencies of Mabuchi in Ground 3. Ex. 2005, ¶121. The following arguments regarding challenged dependent claim 38 are in addition to the previous arguments regarding challenged independent claim 34.

a) Claim 38

Petitioner’s second attempt to address claim 38 fails for the same reason as its first attempt (*see* Section VII.C.2.(a), *supra*) and for additional reasons.

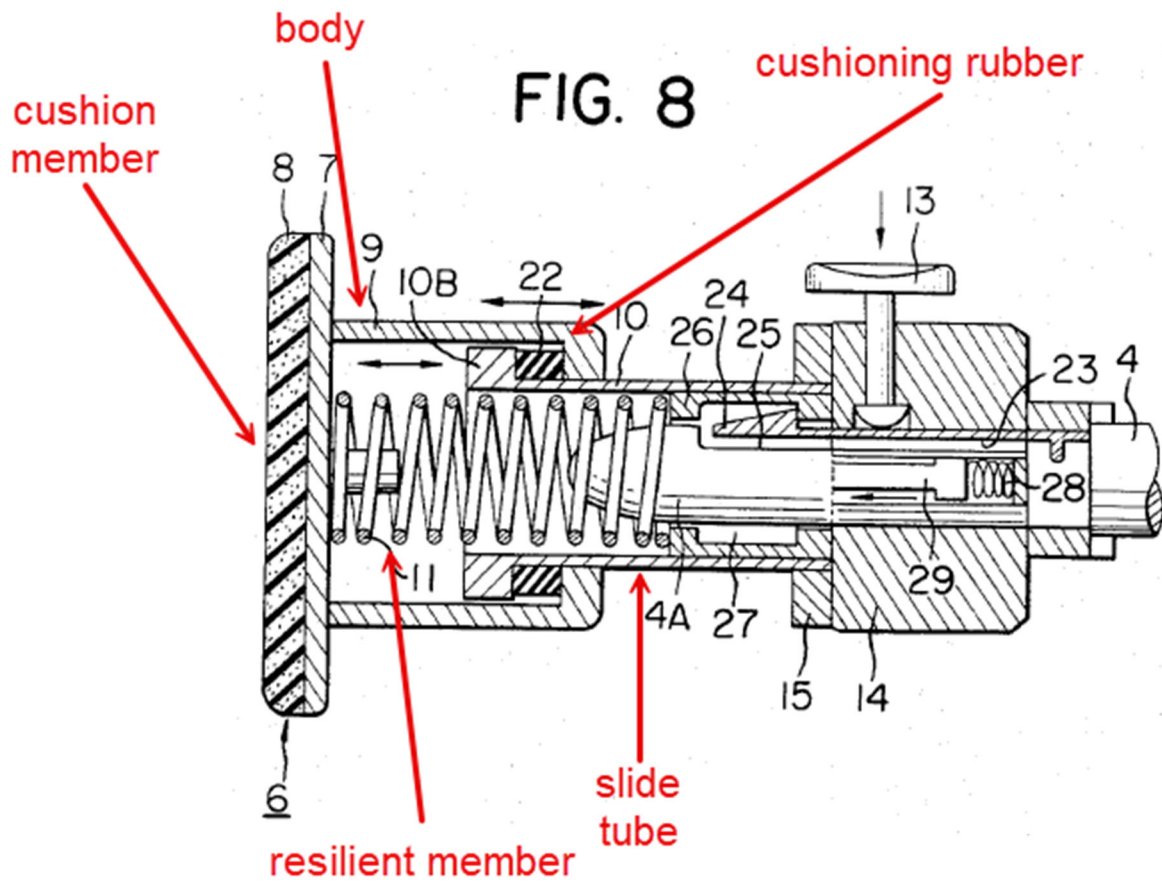
As explained above, Mabuchi is silent as to speed but explains that its cosmetic beauty device: (1) is designed to mimic a person tapping or patting their skin; and (2) is in a different category of device from devices “intended mainly for

the massage of the muscular tissues,” also known as “massagers.” Ex. 1005, 1:13-28. Petitioner’s argument that because Pivaroff’s motor operates between 2000 to 3600 RPM, Mabuchi’s actuator 4 would *as well* is baseless and unsupported, and again, Petitioner’s declarant fails to provide any meaningful insight into this conclusory assertion beyond adding the words “readily available design choice.” Ex. 1002, ¶154.

In short, there is no reason why one skilled in the art would have modified Mabuchi’s beauty treatment device to operate between 2000 to 3600 RPM. Simply because Pivaroff’s *percussive massager* designed for deep muscle stimulation and as an advance over “known devices [that] do not vibrate at high enough speeds” operates within a certain speed range does not provide any basis for a POSITA to have modified Mabuchi’s beauty treatment device meant to pat a user’s face to operate *at those same speeds*. Ex. 1007, 1:15; Ex. 2005, ¶122. Again, Petitioner understood this commonsense distinction between Mabuchi and percussive devices when it was prosecuting its own patent but now advocates the opposite.

Even further, when the complex structure of the pater assembly 6 is considered, which Petitioner altogether ignores, the reciprocating speed proposed by Petitioner is unlikely to even be possible and at the very least would render Mabuchi unsuitable for its intended use as a cosmetic patting device. In short, the pater assembly 6 of Mabuchi includes a body 9 that reciprocates independently of the

patter slide tube 10, and the motion of the patter slide tube 10 is transmitted to the body 9 via the spring 11 so that the cushioning member 8 contacts, but does not press, the skin. Ex. 1005, 2:58-3:5, FIG. 8 (below with annotations). If the patter assembly 6 were reciprocated at between 2000 to 3600 RPM, the spring 11 would very likely surge or float, which is a phenomenon that occurs when a spring loses control of its connected mass, in this case the body 9 and the connected plate member 7 and cushion member 8. In simple terms, the actuator 4, cycling at between 2000 and 3600 RPM, would move faster than the spring 11 and body 9 could react, causing undesirable and damaging vibrations in the patter assembly 6. Ex. 2005, ¶¶123-24.



If someone were to seriously consider modifying Mabuchi to operate at 2000 to 3600 RPM, which is not supported by any evidence of record, the spring 11 would need to be made excessively strong for its intended purpose of absorbing force against the user's skin such that it would no longer operate to absorb impact during contact with the user's skin. *Id.*, ¶125. In other words, even if a POSITA were to modify Mabuchi to operate at Pivaroff's speeds—again, which is not supported by any evidence of record—such a modification would either cause the patten assembly 6 to vibrate undesirably or would require that the spring 11 be made so strong that it could not absorb any impact of the cushion member 8 on the user's face—either of which would render Mabuchi's beauty treatment device unsuitable for its intended purpose. *Id.*

Accordingly, challenged claim 38 of the '482 Patent is not obvious in view of Mabuchi in view of Harris and Pivaroff.

**4. Ground 6: Pivaroff in view of Mabuchi Does Not Render
Claims 34, 35 and 58-60 Obvious**

**(1) A POSITA Would Not Have Been Motivated to
Modify Pivaroff in View of Mabuchi**

Petitioner's second attempt to invalidate challenged independent claim 34 rearranges Pivaroff and Mabuchi but remains fundamentally flawed. Indeed, the entire basis for Petitioner's combination of Pivaroff and Mabuchi is that "[they] both

describe percussive massage devices, and are directed to solving similar technical problems.” Pet., p.56. This is demonstrably false, and Petitioner’s entire obviousness argument is tainted by this flawed premise. *See Luv n’Care, Ltd. v. Laurain*, 98 F.4th 1081, 1100 (Fed. Cir. 2024) (stating that “[o]bviousness is a question of law based on underlying facts ... include[ing]: (1) the scope and content of the prior art; (2) differences between the prior art and the claims at issue” and that “it is error to reach a conclusion of obviousness until all those factors are considered”); Ex. 2005, ¶126.

First, Mabuchi does not disclose or describe or even suggest a percussive massager (instead it is designed to avoid operating as a massager) nor are its features applicable to 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.” *See id.*, 1:26-28.

Pivaroff is directed to the very sort of “conventional patting device” described in Mabuchi as “belong[ing] to the category of massager” “which is intended mainly for the massage of muscular issue.” Indeed, Pivaroff is expressly described as being

a “deep muscle stimulation device” that “provide[s] deep muscle tissue with kinetic forms of percussion and concussion vibration so as to benefit damaged muscles in a patient.” Ex. 1007, Abstract. Pivaroff further describes its “deep muscle stimulating device” as being “developed for use by professionals in the chiropractic, medical and physical therapy fields” for “patients who suffer chronic pain in both everyday life and professional athletes.” *Id.*, 3:65-4:22; *see also* Ex. 2005 ¶126.

Second, Pivaroff’s disclosure focuses on a novel hollow head 44, which includes a titanium hollow body 46 filled with loosely packed granular material 50 and attached to a metallic cap 48. Ex. 1007, 2:55-60. The granular material 50 can include diamond, ruby, copper, bloodstone, garnet, malachite, and carbon. *Id.*, 2:63-65. The assembled 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. According to Pivaroff, this combination of the head 44 containing loosely packed granular material 50 and the high-speed reciprocation provide desirable improvements over the prior art. *Id.*, 3:48-60. Pivaroff is not concerned with and does not even suggest that its head 44 is removable or replaceable. Ex. 2005, ¶132.

Third, as explained above, Petitioner previously argued to the Patent Office that the differences between Mabuchi as “a beauty device that parts the skin with a patten” and Fuhr as “a chiropractic instrument for use in chiropractic adjustment of

musculoskeletal structures” counsel against their combination, particularly in view of Fuhr’s speed as a chiropractic device and Mabuchi’s magnetic connection. Ex. 2014, p.1022. Petitioner now advances the contrary argument—that Mabuchi is actually a “percussive massage device[]” such that a POSITA would look other percussive massagers, such as Pivaroff, to modify Mabuchi. *See* Pet., pp.56-57. Again, Petitioner’s original interpretation of Mabuchi should be credited as it is supported by thoughtful analysis of Mabuchi’s intended use and design while Petitioner’s new interpretation of Mabuchi ignores Mabuchi’s express disclosures and teachings.

(2) Claim 34, Element 34[c]:

Claim elements 34[b] and [c] require, in part, “a piston in the housing” and “a motor at least partially within the housing,” respectively. Pivaroff discloses that “the deep muscle stimulation device 10 of the present invention includes a body 12 comprised of an elongated, substantially hollow handle 14, a top element or housing 16, and a hollow head 44.” Ex. 1007, 2:30-33. With respect to claim element 34[b], Petitioner asserts that “Rod 38 is within top element or housing 16.” Pet., p.59. However, with respect to claim element 34[c], Pivaroff states that “[a]n electrical motor 24 is mounted within the elongated, hollow handle 14” and that the “rotating electrical motor [is] held in a hollow handle,” that is, the motor is not even partially within the “top element or housing 16” as required by claim 34. *Id.*, 2:37-39,

Abstract, FIG. 6 (below with annotations). This is confirmed by Pivaroff's illustrations, which show the motor 24 (red) entirely within and at the very bottom of the handle 14 (green) and not even partially within the "top element or housing 16" (incorrectly labeled as the topmost 14 in Figure 6). See Ex. 2005, ¶¶129-131.

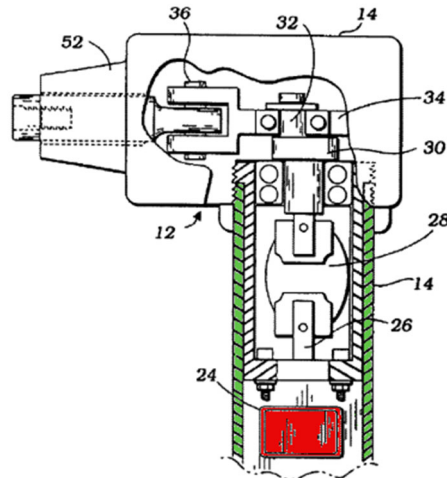


Fig. 6

Petitioner sidesteps Pivaroff's clear disclosure by arguing that "[a] POSITA would understand that [the] hollow handle 14 is part of the housing of device 10." Pet., p.60. Earlier in its Petition, Petitioner boldly claims that "a POSITA would understand that the 'housing' of Pivaroff is not limited to the top hollow housing 16, but rather covers the exterior of the device, including handle 14." *Id.*, p.59. Petitioner's arguments are directly contrary to Pivaroff's express disclosure.

To be clear, Pivaroff's deep muscle stimulating device 10 has: (1) "a body comprised of an elongated substantially hollow handle 14"; (2) "a top element or housing 16"; and (3) "a hollow head 44." Ex. 1007, 2:30-33. Pivaroff expressly

describes its “housing 16” separately from its “handle 14” and illustrates the handle 14 as being threaded to the housing 16. Dr. Pratt’s unsupported testimony cannot contradict Pivaroff’s unambiguous disclosure. Ex. 2005, ¶131; *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].”).

Moreover, Pivaroff and the ’482 Patent both separately describe a housing (16 in Pivaroff/102+104 in the ’482 Patent) and a handle (14 in Pivaroff/106+108 in the ’482 Patent). Neither Pivaroff nor the ’482 Patent describes a “housing” as including or covering a handle. Thus, Petitioner’s interpretation of the “housing” as recited in claim 34 is not only contrary to Pivaroff but is also contrary to the ’482 Patent. Indeed, Petitioner’s interpretation of the “housing” in claim 34 as including a handle (Pet., p.59) renders claim 57 unintelligible because it depends from claim 34 and introduces a handle as a part of the percussive massager, not as part of the housing.

As shown and described in Pivaroff, the motor 24 is entirely contained within the handle 14 and is not even partially within the housing 16. Accordingly, Pivaroff does not disclose, teach, or even suggest this claim limitation.

(3) Claim 34, Element 34[e]:

There is no reason why a POSITA would have replaced Pivaroff's threaded connection between its head 44 and rod 38 with Mabuchi's magnetic connection as Petitioner alleges, nor would a Petitioner have had a reason expectation of success with such a modification. Ex. 2005, ¶132. But even if such a modification was obvious, the resulting device would still fail to disclose or even suggest "a quick release connector at the distal end of the piston, wherein the quick release connector is configured to secure a first massaging head while the piston reciprocates" because Mabuchi's magnetic connection requires a particular angular alignment for connection that is unsuitable for connection during reciprocation.

First, Petitioner's alleged motivation for a POSITA to have incorporated Mabuchi's magnetic connection mechanism into Pivaroff's percussive massager is based *exclusively* on Mabuchi's teachings. See Pet., pp.57-58, 62. In detail, Petitioner argues that a POSITA's motivation for its proposed modification of Pivaroff would include "that 'positive connection can be ensured without positioning' ... while also allowing changing of the hollow body to 'be easily accomplished.'" *Id.*, p.62 (quoting Ex. 1005, 8:33-43). But Pivaroff is entirely unconcerned with the ease with which the hollow head 44 could be changed. Indeed, Pivaroff is silent as to the head 44 ever being removed from the massager. See *generally* Ex. 1007; Ex. 2005, ¶132. Rather, Pivaroff suggests that the head 44

is attached to the massager and then never removed (nor that it is designed or intended to be removed). *See Therabody, Inc. v. Hyperice IP Subco, LLC*, PGR2025-00013, Paper 8, *39 (July 2, 2025) (“Petitioner does not point to a teaching in Pivaroff suggesting a desire to use different hollow bodies or an interest in replacing massaging heads. Indeed, on the current record, Pivaroff appears to use a single head that is not replaceable.”).

Further to this point, Pivaroff’s disclosure focuses on the head 44 containing one very particular combination of materials:

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.

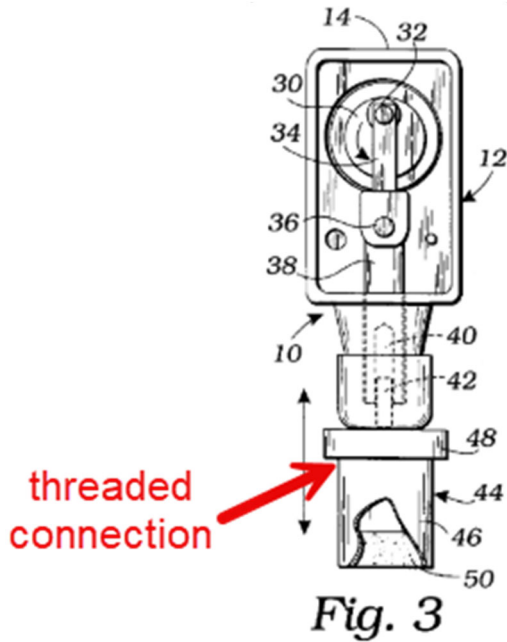
Ex. 1007, 3:20-23, claims 1 and 4-7. There is simply no reason why a POSITA would be motivated to replace this “improved” and “extraordinary” design, let alone redesign Pivaroff’s percussive massager to make removing this particular head “easily accomplished.” Petitioner’s alleged motivation to modify Pivaroff in view of Mabuchi smacks of hindsight reconstruction. *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.”).

Second, the only *possible* variable element in Pivaroff is the combination of granular materials in the head 44 (despite Pivaroff disclosing and claiming the single best combination of the granular materials). Ex. 1007, 2:60-65. Pivaroff explains that the “granular materials ... are mixed together and inserted within the head [44]¹⁷,” and that the hollow body 46 “includes an inner chamber, which contains loosely packed granular material 50.” *Id.*, 2:55-60. Pivaroff also explains that “[t]he hollow head 44 includes a hollow body 46 and a cap element 48 held thereon, as by means of threads formed there between.” *Id.*

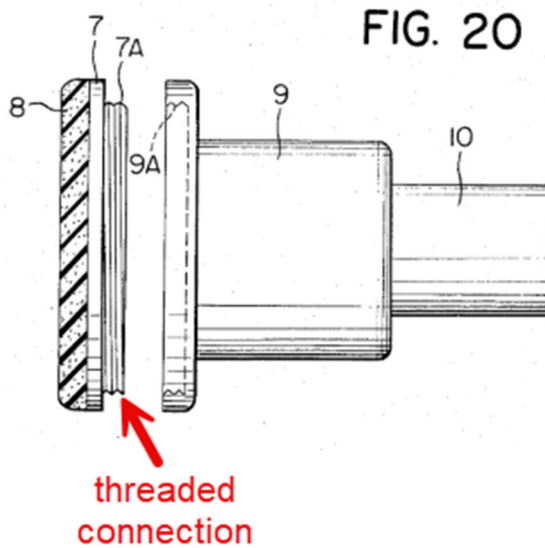
Thus, even if a POSITA were to be motivated to modify or change Pivaroff’s head 44, the process for doing so is by changing the constitution of granular material 50 within the head 44 by unscrewing the body 46 from the cap 48 to access the inner chamber in the body 46, not by changing the entire head 44. Ex. 2005, ¶132. To this end, Mabuchi specifically discloses and suggests using the same type of threaded connection when assembling the padder assembly 6 as is used to assemble Pivaroff’s head 44. *Id.*; see Ex. 1005, 8:44-52 (“This screw-in mechanism for

¹⁷ In this sentence, Pivaroff refers to the “head” by numeral 50, but this is an apparent clerical error as “50” designates the granular material while “44” is repeatedly used to refer to the “hollow head.”

connecting the plate member 7 to the patten body 9 is convenient not only in changing the cushion member 8 but also in assembling the patten slide tube 10.”).



Pivaroff, FIG. 3



Mabuchi, FIG. 20

Third, numerous characteristics of Pivaroff and Mabuchi would have dissuaded a POSITA from making Petitioner’s proposed modification and evidence a POSITA’s lack of reasonable expectation of success in such a combination.

Initially, Pivaroff explains that “[t]he granular material is loosely held within the hollow head and only fills between 1/4 and 1/3 of the volume of the inner chamber....” Ex. 1007, 2:44-62. The head 44 is then reciprocated at a speed of between 2000 to 3600 RPM and a stroke of between 1/8 to 1/2 inch. *Id.*, 3:44-64.

According to Pivaroff:

[I]t 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.

Petitioner's own disclosures and representations confirm that a POSITA would not have been motivated to apply, nor would have had a reasonable expectation of success in applying, Mabuchi's magnetic connection arrangement to Pivaroff's high-speed, high-amplitude, high-momentum deep muscle stimulating device.

In its patent application no. 17/705,300, filed March 2022 (approximately 8.5 years *after* the effective filing date of the Challenged Claims), Petitioner described a "preferred embodiment" of a vibrating therapy device in which "the massage attachment is secured to the vibration therapy device via magnets" with "a magnet [] included in the massage attachment and a complementary magnet [] included in the attachment member." Ex. 2022, ¶[0047]. Petitioner represented that:

It will be appreciated that the low amplitude of about 3.0 mm allows the magnetic connection between the magnet in the attachment member on the end of the push rod assembly to remain secured in place during reciprocation and use of the device. ***With a higher amplitude (or linear***

velocity), the massage attachment may disconnect during use. The amplitude combined with the frequencies or speeds discussed herein allows for magnetic securement of the attachment member.

Id. In the detailed description of this embodiment, Petitioner described that “The first and second magnets 27 are strong enough to hold the reciprocating attachment 19 on the attachment member 26 during reciprocation, and, in particular, with the reciprocation occurring in the any of the frequency and amplitude ranges discussed herein” and, went on to describe a *maximum* amplitude of 5.0mm and a *maximum* speed of 3000 RPM but preferred values of about 3.0mm and up to 2400 ppm. *Id.*, ¶¶[0047], [0104].

Pivaroff, on the other hand, discloses that its particularly high-momentum head reciprocates between 1/8 and 1/2 inch (3.175mm to 12.7mm) at between 2000 to 3600 RPM, which substantially outstrips Petitioner’s maximum values of 5.0mm and 3000 RPM for a magnetically connected attachment. Ex. 1007, 3:44-47, 61-64. Indeed, Pivaroff was designed to remedy problems in the art of “not reach[ing] deep enough into the muscle tissue to provide the necessary relief” by having a substantially increased stroke coupled with high-speed reciprocation along with a high-momentum head design. *Id.*, 1:21-26, 3:25-30. Applicant’s own disclosure (again, 8.5 years *after* the effective filing date of the Challenged Claims) concedes that magnetic connections are susceptible to “disconnect[ing] during use” in view of “amplitude combined with the frequencies or speeds” and overcomes this

shortcoming with magnetic connections by providing a device with “a reduced amplitude (compared to the prior art),” contrary to Pivaroff’s design and intent. Ex. 2022, ¶¶[0041], [0047].

Further, Petitioner relied on these particular limitations of magnetic connections and their susceptibility to disconnections in high-speed, high-amplitude applications in prosecuting its patent, arguing that its “present disclosure explains that the linear velocity is also optimized to ensure the magnetic securement of the attachment member during reciprocating movement” and that, because “Fuhr does not disclose an attachment member magnetically secured to a reciprocating shaft,” “a [POSITA] would not have looked to Fuhr when designing the linear velocity of Mabuchi, which is a magnetically connected device.” Ex. 2014, p.1022.

Thus, Petitioner’s position, *as of at least 2022*, was that magnetic connection of massage attachments was unsuitable for use in high-speed, high-amplitude applications, such as Pivaroff, confirming that a POSITA *in 2013* (and without the benefit of the ’482 Patent’s disclosure) would not have been motivated to modify Pivaroff to use Mabuchi’s magnetic connection nor would have had a reasonable expectation of success in such a combination.

Building on this, Pivaroff’s high-speed, high-amplitude nature is compounded with its particularly heavy head 44 and is further compounded by the loosely packed nature of the granules within the hollow head 44, which increases the force exerted

on the connection between the head 44 and the rod 38. As explained in Pivaroff, “the movement of the mixed grains ... within the interior hollow chamber ... during reciprocally [sic] motion thereof, is transferred to a patient’s body.” Ex. 1007, 3:24-30. This movement of loosely pack granules within the hollow head 44 would generate immense momentum (or inertia) in the head 44, placing very substantial forces on the connection attachment between the head 44 and the rod 38 as the head 44 is stopped at its farthest extent and changes direction, when the movement of the loose granules would *also* but separately have to be stopped and reversed. Ex. 2005, ¶¶133-34. Dr. Pratt testified that he did not conduct any analysis of the movement of the loose material within the head 44 of Pivaroff. Ex. 2033, 71:3-6.

Consistent with Petitioner’s 2022-era understanding of magnetic connections in percussive devices and its 2022-era understanding of the limitations of Mabuchi’s magnetic connection, a POSITA would certainly have understood that the magnetic connection in Mabuchi—designed for low-speed, low-impact “pat[ting]” of a user’s face—is entirely unsuited for use in and not reasonably likely to be successful in Pivaroff’s high-speed, high-amplitude percussive massager featuring a particularly high-momentum head. Ex. 2005, ¶135. Accordingly, a POSITA would not have been motivated to make such a modification nor would a POSITA have had any reasonably likelihood of success in such a combination.

Fourth, even if Pivaroff and Mabuchi were combined as Petitioner alleges, Mabuchi's magnetic connection requires a particular angular orientation between the patten assembly 6 and the actuator 4 for successful connection. *See* Section VII.C.1.(c).(2), *supra*; Ex. 2005, ¶136. Thus, modified Pivaroff would still not allow for the head 44 to be connected to the massager without alignment. *See* Pet., p.40. Instead, a POSITA would recognize that modifying Pivaroff to have Mabuchi's magnetic connection would require that the angular orientation of the head 44 match that of the rod 38 so that opposite poles of the magnets 43 and 44 are aligned to allow connection, otherwise the magnets would repulse each other and prevent connection. Thus, Petitioner's combination of Pivaroff and Mabuchi, even if accepted, fails to read on Petitioner's interpretation of this claim limitation.

In sum: (1) Petitioner's threadbare alleged motivation why a POSITA would have modified Pivaroff in Mabuchi does not withstand scrutiny because it relies exclusively on Mabuchi's teachings and Mabuchi's intended use as a beauty treatment device and is contradicted by the evidence of record, including Petitioner's previous position regarding the limitations of Mabuchi's magnetic connection in view of the speed of Fuhr's chiropractic adjustment tool; (2) a POSITA would not have been motivated to even attempt, and would not have had any reasonable expectation of success in, the alleged combination because a magnetic connection between the head 44 and the rod 38 would not be sufficiently strong to retain the

novel head 44 including loosely filled granular material at Pivaroff's speeds of 2000 to 3600 RPM; and (3) even if Pivaroff and Mabuchi were combined as Petitioner alleges, Mabuchi fails to disclose a connection structure that does not require alignment, thereby failing to meet Petitioner's interpretation of this claim limitation. Ex. 2005, ¶¶132-36. Accordingly, Petitioner has not shown that challenged independent claim 34 is obvious in view of Pivaroff and Mabuchi.

5. Ground 7: Petitioner Fails to Establish that Pivaroff in view of Mabuchi, further in view of Harris Renders Claims 36-38, 40-41 and 43-46 Obvious

Because Petitioner's analysis of Pivaroff in view of Mabuchi with respect to independent claim 34 is flawed, as explained above, all challenged dependents claims are not unpatentable in view of Pivaroff, Mabuchi, and Harris because Petitioner does not rely on Harris to cure any of the above-noted deficiencies of Pivaroff and Mabuchi. Ex. 2005, ¶137.

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

Respectfully submitted,

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CERTIFICATE OF COMPLIANCE

Pursuant to 37 C.F.R. §42.24(d), the undersigned hereby certifies that this paper contains 18,048 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

Pursuant to 37 C.F.R. § 42.6, the undersigned certifies the foregoing Patent Owner's Response and supporting materials (Exhibits 2005-2028 and 2031-2033) was served, today, September 24, 2025, by electronic mail upon the following:

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