

Tolerancing Cylindrical Parts is Within the Skill in the Art

13 Q. That's essentially a tolerance that allows
14 the fastener in this case to still perform its
15 function without being perfectly cylindrical;
16 correct?

17 A. Correct. There's a tolerance on
18 cylindrical parts, cylindrical fasteners for use in
19 aerospace so that they meet the performance
20 requirements.

Q. ...the because manufacturing fastener...

6 Q. ...1 or 2 tenths.

7 Q. Is developing that tolerance a standard
8 task for a design engineer?

9 A. It can be. If a fastener designer -- I
10 presume you mean for a fastener engineer you mean a
11 fastener designer. Someone designing the fastener.

12 Q. Yes.

13 A. For multipiece fasteners, which is my area
14 of expertise, it's up to the fastener designer to
15 tolerance things so that they all fit together and
16 perform as required. But generally the overall
17 envelope, the outside part, the part that the
18 customer sees that has to fit his hole in a wing or a
19 fuselage, generally the customer will specify how
20 much tolerance they're willing to accept on a
21 vendor's product.

Ex. 2033, Pratt Trans., 25:3-26:21

'482 Sur-Reply, pp. 4-5

'082 Sur-Reply, p. 3

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In my opinion, a

POSITA would understand that a "substantially cylindrical pocket" is simply a pocket that is cylindrical or approximately cylindrical such that minor variations in a cylindrical shape fall within the scope of the claim as long as the pocket still performs its intended function of receiving the quick release connector.

Ex. 2005, '482 Morrill Decl., ¶89
see Ex. 2005, '082 Morrill Decl., ¶96

A POSITA would know which quick release connectors/quick-connect systems work and which do not

The claimed quick release connector also requires securing during reciprocation

According to Dr. Pratt, a POSITA would know which configurations would work and which would not

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.

‘482 POR, p. 36; see ‘082 POR, pp. 33-34

Taking that position as true, not all of the examples from my declaration will work as claimed—for instance, threaded fasteners and quarter-turn mechanisms will not work. Ex-1002, ¶¶ 53-57.

Ex. 1033, ‘482 Pratt Decl., ¶40; see Ex. 1033, ‘082 Pratt Decl., ¶28

‘482 Sur-Reply, pp. 12-13
‘082 Sur-Reply, p. 2

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The Function of the Pocket / Bore is Recited in the Claims

“Functional language can promote definiteness because it helps bound the scope of the claims by specifying the operations that the [claimed invention] must undertake.”

Exmark Mfg. Co. v. Briggs & Stratton Power Prods., 879 F.3d 1332, 1346 (Fed. Cir. 2018) (cleaned up)

'482 Patent, claim 1

a quick release connector at the distal end of the piston, wherein the quick release connector is configured to secure a first massaging head while the piston reciprocates a predetermined stroke length at the first speed, wherein the first massaging head has a substantially cylindrical pocket to receive the quick release connector.

'082 Patent, claim 13

a quick-connect system comprising the distal end of the piston and a first massaging head, wherein the quick-connect system is configured to have a proximal end of the first massaging head inserted into or removed from the bore while the piston reciprocates the predetermined stroke length at the first speed.

13. The percussive massager of claim 1, wherein the bore comprises a substantially cylindrical bore.

'482 Sur-Reply, pp. 8-9

'082 Sur-Reply, pp. 6-7

Patent Owner's Demonstrative Exhibit - NOT EVIDENCE

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Construction of “Percussive Massager”

“[T]hat the claim is drawn to a ‘rotary cutter deck’ informs the meaning of the ‘torsional stiffness’ limitation — the claimed structure must possess sufficient stiffness to withstand the torsional loads imposed by the operation of a rotary cutter.”

Deere & Co. v. Bush Hog, LLC, 703 F.3d 1349, 1358 (Fed. Cir. 2012)

Third, the “percussive massager” preamble informs the scope of the claims. Claim 34 claims a “percussive massager,” which informs the meaning of “to reciprocate *at a first speed*” and “*a predetermined stroke length of the piston*” recited in the body of the claim. In other words, the claimed device must operate at a sufficient “first speed” and with a sufficient “stroke length” to operate as a percussive massager.

‘482 Sur-Reply, p. 12; see ‘082 Sur-Reply, p. 10

These arguments and distinctions are consistent with Harris and Pivaroff and clarify the distinction between surface-level vibrating devices (in particular, cosmetic devices) and percussive massagers designed with sufficient stroke length to reach and massage deep muscle tissues. *Id.*

‘482 Sur-Reply, p. 14 ; see ‘082 Sur-Reply, pp. 12-13

‘482 Sur-Reply, pp. 12-15; see ‘082 Sur-Reply, pp. 10-16

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Vibratory and Percussive Massage Were Known to be Distinct

(12) **United States Patent**
Harris et al.

(54) **HAND HELD PERCUSSIVE MASSAGER**
WITH ADJUSTABLE NODES

(75) Inventors: **David Harris; Rudy Woodard**, both of
Nashua, NH (US)

(73) Assignee: **Brookstone Company, Inc.**, Nashua,
NH (US)

(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/489,049**

(22) Filed: **Jan. 21, 2000**

Hand-held vibrating massagers are well known in the art. Such massagers include a handle attached to a vibratory massaging head and driven by an electric motor with limited adjustment for intensity of the vibration. Also known in the art are hand-held percussive massagers, typically having a pair of percussion massage nodes. The heads or nodes of these conventional massagers are in a fixed position in the

perforated anatomy, for example, the torso, arms, and legs, thereby limiting the point of contact of the massage to a pre-set spacing. Moreover, conventional hand-held massagers typically provide either vibratory or percussive massage, but not both. Thus, the consumer is forced to purchase two devices in order to enjoy both types of massage.

Ex. 1006, 1:14-30

Percussive Massagers Feature Vibratory and Percussive Aspects

(12) **United States Patent** **Pivaroff**

(54) **DEEP MUSCLE STIMULATOR DEVICE**

(76) Inventor: **Jake W. Pivaroff**, 2711 E. Coast Hwy.,
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(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 181 days.

(21) Appl. No.: **09/473,792**

(22) Filed: **Dec. 28, 1999**

Many types of a vibrating massage-type devices are known for use on different portions of a person's body, to help relieve stress, or tightened muscles. However, the known devices either **do not vibrate at high enough speeds and/or do not provide sufficient force to reach deep muscle tissues.**

Much of muscle pain stems from various conditions, caused by oversteering or over using muscles. These include strain, lactic acid build-up, scar tissue build-up, etc. The known prior art devices **do not reach deep enough into the muscle tissues** to provide the necessary relief for many persons. Therefore, there exists a need in the art for a deep muscle stimulator, such as **the present invention, which uses percussion and mechanical vibrations that reach deep into the muscle tissue, to stimulate proprioceptive functions.**

Ex. 1007, 1:18-27

Petitioner's 2022-era "Vibration Therapy Device"

1. (Currently Amended) A vibration therapy device, comprising:
 - a housing that includes a handle portion and a head portion[.];
 - an electrical source[.];
 - a motor positioned in the housing[.];
 - a switch for activating the motor[.];
 - a push rod assembly operatively connected to the motor, wherein the push rod assembly ~~includes~~ comprises:
 - a reciprocating shaft having a distal end; and
 - an attachment member coupled to the distal end of the reciprocating shaft, the attachment member comprising a first magnet,
 - 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; and
 - an attachment member that defines the distal end of the push rod assembly, wherein ~~the attachment member is configured to reciprocate in response to activation of the motor at a linear velocity between 0.06 m/s and 0.5 m/s, wherein the attachment member includes a first magnet,~~
 - a reciprocating attachment removably received on the attachment member, wherein the reciprocating attachment includes a second magnet that is magnetically attracted to the first magnet to secure the reciprocating attachment on the attachment member.

Ex. 2014, p.1028

Dr. Pratt Confirms that “Percussive Massagers” Require More Than Reciprocation

14 A. Yes, I see that.

15 Q. So would the device described in this Claim 1
16 on Page 35 of your supplemental declaration meet your
17 requirements for a percussive massager as you've
18 construed that term?

19 MR. BERG: Objection to form.

20 THE WITNESS: I think more accurately is that
21 this device would share a feature with that of a
22 percussion massager. It wouldn't necessarily be a
23 percussion massager if it's not providing percussion
24 forces against the skin or the body.

Ex. 2034, Pratt Depo., 34:15-24

Dr. Pratt Confirms that “Percussive Massagers” Require More Than Reciprocation

2 Q. In the '482 patent, you've proposed construing
3 the term "percussive massager" as a massage device whose
4 piston and massage head reciprocates back and forth.
5 Correct?

6 A. Correct.

7 Q. And then, in this Claim 1, we have a
8 reciprocating shaft and an attachment member or
9 reciprocating attachment -- two different elements --
10 attach to the reciprocating shaft.

11 Do you agree?

12 A. Yeah. But I think there has to be more than
13 just going back and forth.

14 Q. What else is required beyond going just back
15 and forth?

16 A. Well, it needs to -- needs to function as a
17 massager.

Ex. 2034, Pratt Depo., 35:7-17

'482 Sur-Reply, pp. 16-17; see '082 Sur-Reply, pp. 15-16

Patent Owner's Demonstrative Exhibit - NOT EVIDENCE

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Applicant Differentiated Rhoades on the Same Basis

Rhoades is directed to a cosmetic instrument (e.g., a microderm abrasion device) that is not a percussive massager, as recited in the claims. Rhoades' microderm abrasion device has head portions that can mate to various types of treatment attachments for "treating skin and/or body parts by abrasion, cleaning, polishing, lighting, or oxygenation" (Rhoades at Abstract), which are all performed on the surface of the skin, rather than massage treatments. Rhoades further describes that a "motion generator may move the attachments by vibrating, spinning, oscillating, or propagating sonic waves through the head portions" (*Id.*), which are for treating the surface of the skin.

Ex. 1004, p. 2534

Rhoades

[0078] It is believed that an area of human skin or a body part may be treated with a treatment attachment attached to device or tool 110 as described above (e.g., such as to cosmetically treat, cold treat, heat treat, light treat, oxygen treat, rejuvenate, dean, polish (e.g., such as to buff), abrade, and exfoliate the skin or a body part), as a moving action of the motion generator and treatment attachment (e.g., such as of applicator attachment 200, brush attachment 300, or oxygenating attachment 700 and porous attachment 1000 of FIGS. 8-11 below) helps stimulate skin, muscle, body part, and tissue to revitalize the treated area. It is appreciated that, in

Ex. 2009, Rhoades

Mabuchi

As described above, the beauty treatment device of this invention makes it possible to remove subcutaneous fat, stimulate subcutaneous muscular tissues and prevent the skin from loosening or wrinkling by patting the skin surface with the patter assembly 6. In addition, these

Ex. 1005, Mabuchi, 5:52-56

'482 Patent, Grounds 3 & 6 – Element 34[e] '082 Patent, Ground 3 – Elements 1[e]/18[c] Petitioner's Inconsistent Claim Constructions

“[W]hen a petitioner advances different positions before the Board and a district court, that petitioner is *required* to explain why those different positions are warranted.”

Tesla, Inc. v. Intellectual Ventures II LLC, IPR2025-00340, Paper 18, *3 (Informative: Nov. 5, 2025)
(citing *Revvo Techs., Inc. v. Cerebrum Sensor Techs., Inc.*, IPR202500632, Paper 20, *3-5 (Precedential: Nov. 3, 2025))

X. CLAIM CONSTRUCTION

Petitioner interprets the claims according to *Phillips*. 37 C.F.R. §42.100(b).

To resolve this Petition, Petitioner does not believe that any term requires construction.³

'482 Pet., p. 15;
see '082 Pet., p.3

Therabody's Proposal

the distal end of the piston includes a structure that *is specially designed and adapted to quickly and easily secure the first massaging head to the piston* regardless of rotational alignment while the piston reciprocates a predetermined stroke length at the first speed, *not merely capable of doing so*

Ex. 2013, p. 10;
see Ex. 1013, p. 15

³'482 Sur-Reply, pp. 20-23; see '082 Sur-Reply, pp. 23-26

Mabuchi Does Not Satisfy Petitioner's Narrower Construction

- Petitioner never explains how Mabuchi's magnetic connector is "specifically designed and adapted" for connection "regardless of rotational alignment while the piston reciprocates" and "not merely capable of doing so"
- Mabuchi is *silent* as to connection during reciprocation

24 Q. Do you agree that Mabuchi does not expressly
25 describe the patter assembly being changed while the
1 piston reciprocates -- sorry -- while the actuator
2 reciprocates?
3 A. Yeah. Mabuchi does not describe attachment or
4 removal of the massage head while it reciprocates.
5 Q. And Mabuchi doesn't describe whether the space
6 guide needs to be removed or not for changing the patter
7 assembly. Correct?
8 A. He doesn't describe changing the patter
9 assembly during operation, other than to say that it's
10 easy to attach and remove.
11 Q. But it being easy to attach and remove isn't
12 necessarily related to attaching and removing while the
13 actuator is reciprocating, does it?
14 A. It could. Mabuchi doesn't address that.

Ex. 2034, Pratt Depo., 69:24-70:14

'482 Sur-Reply, pp. 20-23; see '082 Sur-Reply, pp. 25-26

Patent Owner's Demonstrative Exhibit - NOT EVIDENCE

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