

Therabody, Inc.
v.
Hyperice IP Subco, LLC

Petitioner's Presentation For PGR2024-00053 and PGR2025-00013

U.S. Patent Nos. 11,857,482 and 11,938,082

February 4, 2026

Petitioner Therabody Ex-1035, 0001

Overview

- '482 and '082 Patents
- Overview of the prior art
- Claim Construction
- Percussive Massager Limitations (Mabuchi Grounds 482 and 082)
- Quick Release Connector Limitations (Mabuchi and Pivaroff Grounds)
- Motor Housing Limitations (Pivaroff)
- Motivations
- Written Description

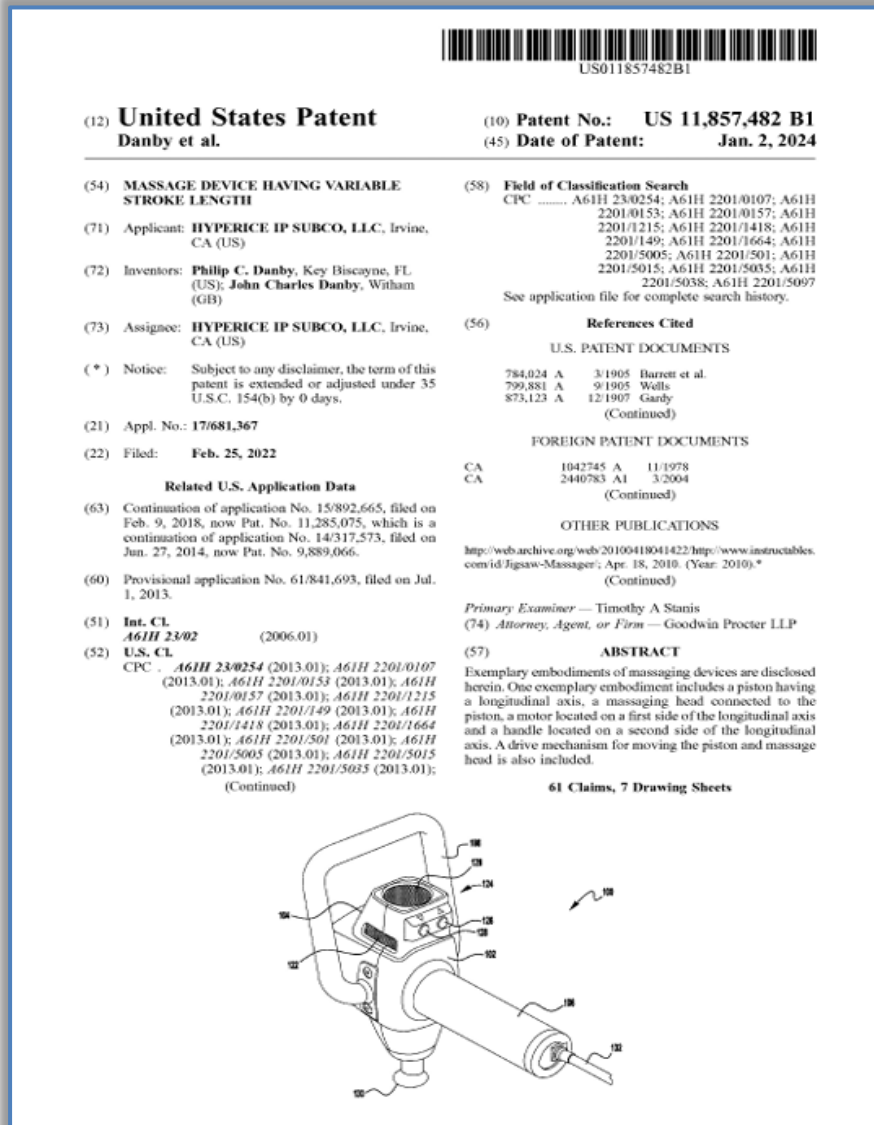
Petitioner Therabody Ex-1035, 0002

Overview

- '482 and '082 Patents
- Overview of the prior art
- Claim Construction
- Percussive Massager Limitations (Mabuchi Grounds 482 and 082)
- Quick Release Connector Limitations (Mabuchi and Pivaroff Grounds)
- Motor Housing Limitations (Pivaroff)
- Motivations
- Written Description

Petitioner Therabody Ex-1035, 0003

'482 and '082 Patents: "Massage Device Having Variable Stroke Length"



(57)

ABSTRACT

Exemplary embodiments of massaging devices are disclosed herein. One exemplary embodiment includes a piston having a longitudinal axis, a massaging head connected to the piston, a motor located on a first side of the longitudinal axis and a handle located on a second side of the longitudinal axis. A drive mechanism for moving the piston and massage head is also included.

Petitioner Therabody Ex-1035, 0004

'482 Patent at Cover; '082 Patent at Cover

Challenged Patents Focus on the Elements of a Massager

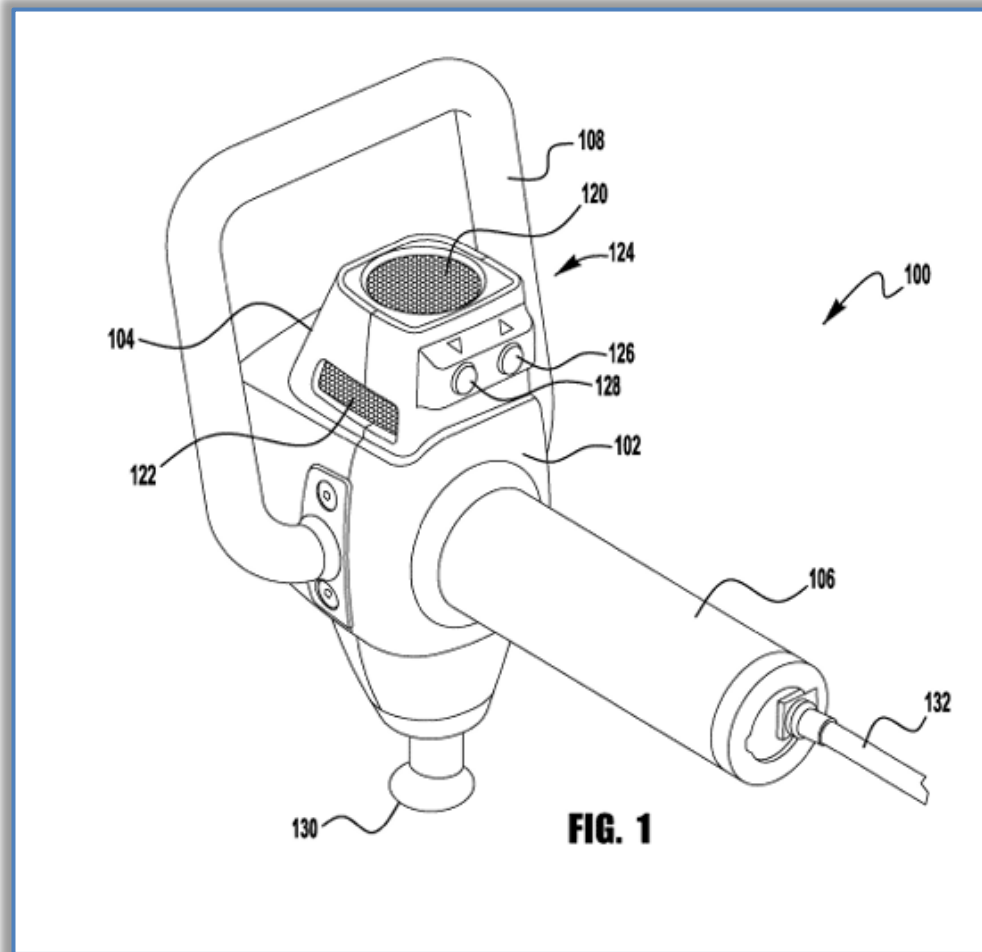


FIG. 1 is a perspective view of an exemplary embodiment of a hand-held massaging device 100. The exemplary massaging device 100 includes a main housing 102 that houses a motor and a drive unit and an upper housing 104 that includes a heat sink and a fan. In addition, massaging device 100 includes a first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

Petitioner Therabody Ex-1035, 0006

E.g., '482 Patent at Fig. 1; 3:34-41

Challenged Patent Claims Directed to a “quick-connect system”

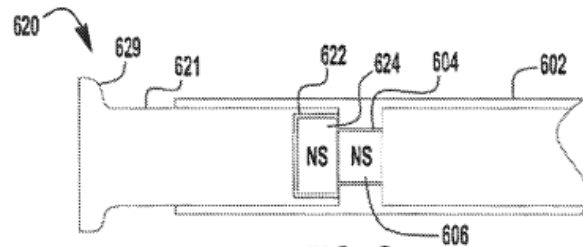


FIG. 6

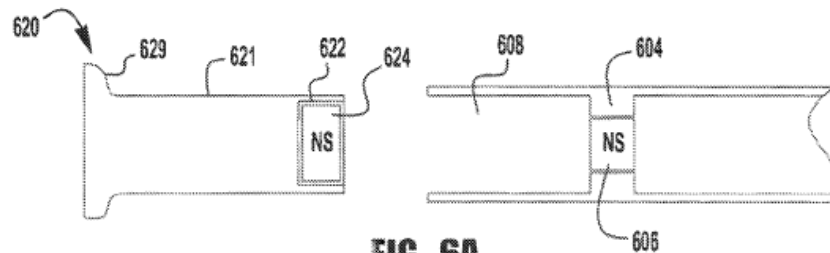


FIG. 6A

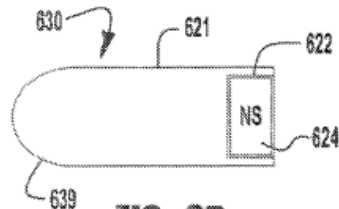


FIG. 6B

FIGS. 6 and 6A illustrate an exemplary embodiment of a quick-connect system 600 for connecting a massaging head 620 to a piston 602. When providing a deep tissue massage using a massaging device, such as, for example, massaging device 100, it may be desirable to switch massaging heads to work on different muscles or different portions of muscles during the massage. The exemplary quick-connect system 600 allows a user to quickly switch massaging heads 620. Moreover, the exemplary quick-connect system 600 may be used without turning off the massaging device 100.

To remove massaging head 620, a user need only apply a sufficient amount of force to separate the two magnets 606, 624. The strength of the magnets 606, 624 are sized to prevent the massaging head 620 from separating from the piston 602 during normal use, and yet allow a user to quickly remove and replace the massaging head 620.

Petitioner Therabody Ex-1035, 0007

E.g., '482 Patent at 6:47-56, 7:4-9; Figs. 6, 6A, 6B,

Challenged Independent Claims

'482 Patent Claim 34

34. A percussive massager comprising:
a housing;
a piston in the housing having a proximal end and a distal end;
a motor at least partially within the housing and operatively connected to the proximal end of the piston, wherein the motor is configured to cause the piston to reciprocate at a first speed;
a drive mechanism between the motor and the piston that controls a predetermined stroke length of the piston; and
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 Claims 1 and 18

1. A percussive massager comprising:
a housing;
a piston having a proximal end and a distal end, the distal end of the piston having a bore;
a motor operatively connected to the proximal end of the piston, wherein the motor is configured to cause the piston to reciprocate at a first speed;
a drive mechanism that controls a predetermined stroke length of the piston; and
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.

18. A method of assembling a percussive massager, the method comprising:
operatively connecting a motor to a proximal end of a piston, wherein the motor is configured to cause the piston to reciprocate at a first speed, wherein a distal end of the piston has a bore,
providing a drive mechanism configured to control a predetermined stroke length of the piston; and
providing a quick-connect system comprising the distal end of the piston and a first massaging head, wherein a proximal end of the first massaging head is configured to be inserted into or removed from the bore while the piston reciprocates the predetermined stroke length at the first speed.

Petitioner Therabody Ex-1035, 0008

'482 Patent at Claim 34; '082 Patent at Claims 1, 18

Substantial overlap of issues between challenged patents

Claimed Features	482 Patent	082 Patent
Housing	✓	✓
Piston	✓	✓
Motor	✓	✓
Drive Mechanism	✓	✓
Quick-release connector/quick-connect system	✓	✓
Massaging Head	✓	✓
Massaging head with pocket to receive the quick release connector	✓	
Piston with hollow bore to receive massaging head		✓
Substantially cylindrical pocket/bore	✓	✓

Petitioner Therabody Ex-1035, 0009

'482 Patent at Claim 34; '082 Patent at Claims 1, 18

Disputed Limitations in the Challenged Independent Claims

'482 Patent Claim 34

34. A percussive massager comprising:
a housing;
a piston in the housing having a proximal end and a distal end;
a motor at least partially within the housing and operatively connected to the proximal end of the piston, wherein the motor is configured to cause the piston to reciprocate at a first speed;
a drive mechanism between the motor and the piston that controls a predetermined stroke length of the piston; and
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 1

1. A percussive massager comprising:
a housing;
a piston having a proximal end and a distal end, the distal end of the piston having a bore;
a motor operatively connected to the proximal end of the piston, wherein the motor is configured to cause the piston to reciprocate at a first speed;
a drive mechanism that controls a predetermined stroke length of the piston; and
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.

Petitioner Therabody Ex-1035, 0010

'482 Patent at Claim 34; '082 Patent at Claim 1

Overview

- '482 and '082 Patents
- Overview of the prior art
- Claim Construction
- Percussive Massager Limitations (Mabuchi Grounds 482 and 082)
- Quick Release Connector Limitations (Mabuchi and Pivaroff Grounds)
- Motor Housing Limitations (Pivaroff)
- Motivations
- Written Description

Petitioner Therabody Ex-1035, 0011

'482 Patent Prior Art References

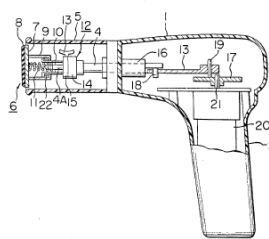
Mabuchi

United States Patent [19] **Patent Number:** 4,513,737
Mabuchi [45] **Date of Patent:** Apr. 30, 1985

[54] **BEAUTY TREATMENT DEVICE**
[75] **Inventor:** Kenichi Mabuchi, c/o Mabuchi Motor Co., Ltd., 14-11, Tateishi 3-chome, Katsushika-Ku, Tokyo, Japan
[73] **Assignee:** Kenichi Mabuchi, Japan
[21] **Appl. No.:** 219,360
[22] **Filed:** Dec. 22, 1980
[30] **Foreign Application Priority Data**
Dec. 29, 1979 [JP] Japan 54-171725
Mar. 10, 1980 [JP] Japan 55-30112[U]
[51] **Int. Cl.:** A61H 7/00
[52] **U.S. Cl.:** 128/52, 124/55
[58] **Field of Search:** 128/52, 51, 55, 24, 273/108

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1,516,717 11/1924 Coleman 128/52
1,545,027 7/1925 Ashlock 128/52
1,660,821 2/1928 Sweetland 128/52

2 Claims, 27 Drawing Figures



Beauty Treatment Device

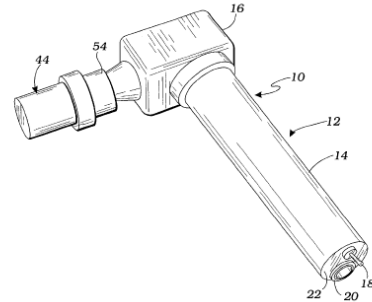
Pivaroff

United States Patent (12) **Patent No.:** US 6,682,496 B1
Pivaroff (45) **Date of Patent:** Jan. 27, 2004

[54] **DEEP MUSCLE STIMULATOR DEVICE**
[75] **Inventor:** Jake W. Pivaroff, 2711 E. Coast Hwy., Suite 200, Corona Del Mar, CA (US) 92625
[73] **Attorney, Agent, or Firm:** James G. O'Neill, Klein O'Neill & Singh, LLP
[51] **Int. Cl.:** A61H 1/00
[52] **U.S. Cl.:** 601/108, 601/97, 601/101, 601/107
[58] **Field of Search:** 601/70, 84, 97, 103, 109-111, 72, 80, 606/237-239

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4,827,914 A * 5/1989 Kawanawa 128/54
4,841,955 A * 6/1989 Evans 128/52

7 Claims, 2 Drawing Sheets



Deep Muscle Stimulator Device

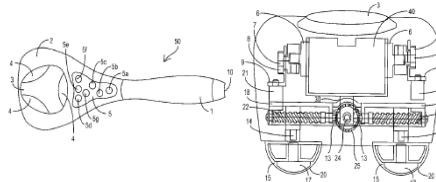
Harris

United States Patent (12) **Patent No.:** US 6,432,072 B1
Harris et al. (45) **Date of Patent:** Aug. 13, 2002

[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)
[51] **Int. Cl.:** A61H 23/02
[52] **U.S. Cl.:** 601/108, 601/111, 601/101, 601/103, 601/70, 113, 70, 72
[58] **Field of Search:** 601/134, 135, 601/97, 101, 103, 107, 108, 110, 111, 112, 113, 70, 72

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4,590,026 A 5/1986 Casella 128/67
5,063,911 A 11/1991 Teramachi 128/32

22 Claims, 4 Drawing Sheets



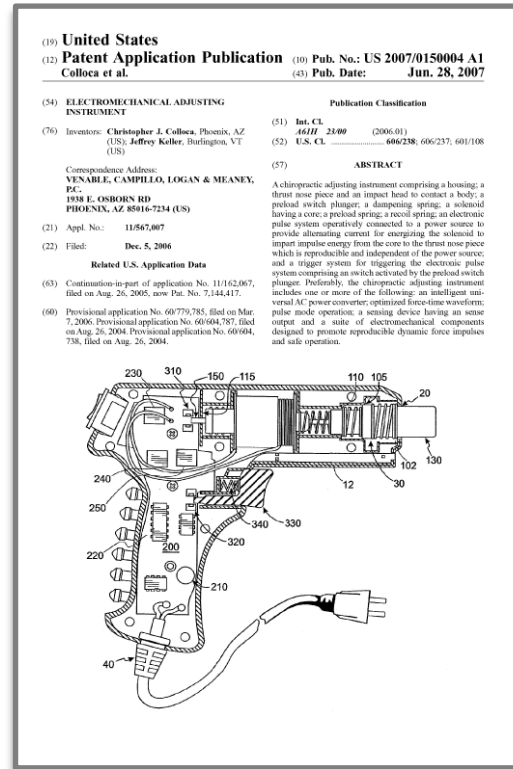
Hand Held Percussive Massager With Adjustable Nodes

Petitioner Therabody Ex-1035, 0012

Ex-1005, Ex-1006, Ex-1007

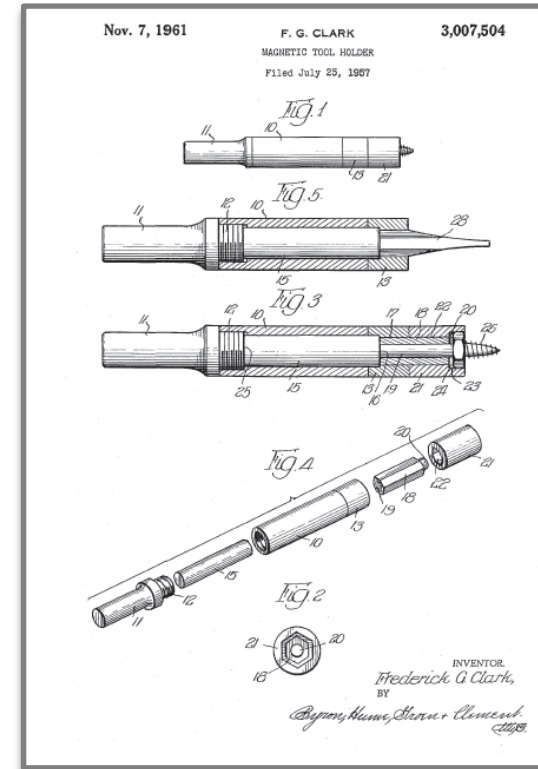
'082 Patent Additional Prior Art References

Colloca



Electromechanical Adjusting Instrument

Clark



Magnetic Tool Holder

Petitioner Therabody Ex-1035, 0013

Ex-1009, Ex-1014

Mabuchi

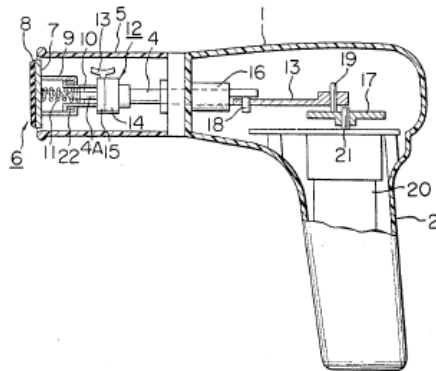
United States Patent [19] **Patent Number:** 4,513,737
Mabuchi [45] **Date of Patent:** Apr. 30, 1985

[54] **BEAUTY TREATMENT DEVICE**
 [75] **Inventor:** Kenichi Mabuchi, c/o Mabuchi Motor Co., Ltd. 14-11, Tateishi 3-chome, Katsushika-Ku, Tokyo, Japan
 [73] **Assignee:** Kenichi Mabuchi, Japan
 [21] **Appl. No.:** 219,360
 [22] **Filed:** Dec. 22, 1980
 [30] **Foreign Application Priority Data**
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 Mar. 10, 1980 [JP] Japan 55-30712[U]
 [51] **Int. Cl.:** A61H 7/00
 [52] **U.S. Cl.:** 128/52; 128/55
 [58] **Field of Search:** 128/52, 51, 55, 24.2; 273/108
 [56] **References Cited**
U.S. PATENT DOCUMENTS
 1,352,894 9/1920 Hoffine 128/51
 1,516,717 11/1924 Coleman 128/52
 1,545,027 7/1925 Ashlock 128/52
 1,660,821 2/1928 Sweetland 128/52

Primary Examiner—Richard C. Pinkham
Assistant Examiner—T. Brown
Attorney, Agent, or Firm—McGlew and Tuttle

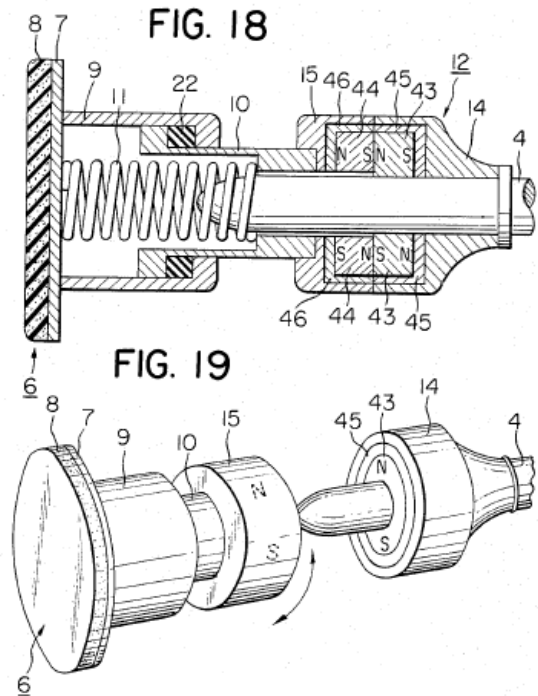
[57] **ABSTRACT**
 A beauty treatment device comprising a device body, a drive unit housed in the device body, an actuator reciprocated by the drive unit, a patter, or patter assembly removably fitted to the actuator, a space guide fitted to the device body to control the reciprocating motion of the patter assembly, and a resilient member fitted to either or both of the patter assembly and the actuator, compressed as the patter advances towards the open end of the space guide and pats a skin surface being patted, wherein the reciprocating patter repeatedly pats the skin surface at a given rate, whereby removing subcutaneous fat and stimulating subcutaneous muscular tissues to prevent the skin surface to be loosened.

2 Claims, 27 Drawing Figures



[57] ABSTRACT

A beauty treatment device comprising a device body, a drive unit housed in the device body, an actuator reciprocated by the drive unit, a patter, or patter assembly removably fitted to the actuator, a space guide fitted to the device body to control the reciprocating motion of the patter assembly, and a resilient member fitted to either or both of the patter assembly and the actuator, compressed as the patter advances towards the open end of the space guide and pats a skin surface being patted, wherein the reciprocating patter repeatedly pats the skin surface at a given rate, whereby removing subcutaneous fat and stimulating subcutaneous muscular tissues to prevent the skin surface to be loosened.



Petitioner Therabody Ex-1035, 0014

Ex-1005 at Cover, Figs. 18-19; '482 Petition (Paper 2) at 27-30

Pivaroff

(12) United States Patent Pivaroff

(10) Patent No.: US 6,682,496 B1
(45) Date of Patent: Jan. 27, 2004

(54) DEEP MUSCLE STIMULATOR DEVICE

(76) Inventor: Jake W. Pivaroff, 2711 E. Coast Hwy., Suite 206, Corona Del Mar, CA (US) 92625

(*) 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

(51) Int. Cl. A61H 1/00

(52) U.S. Cl. 601/108; 601/97; 601/101; 601/107

(58) Field of Search 601/70, 84, 97, 601/101, 107-108, 85, 87, 89, 93, 94, 102, 103, 109-111, 72, 80; 606/237-239

(56) References Cited

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4,513,737 A * 4/1985 Mabuchi 128/52
4,827,914 A * 5/1989 Kamazawa 128/34
4,841,955 A * 6/1989 Evans 128/52

4,858,600 A * 8/1989 Gross et al. 128/65

* cited by examiner

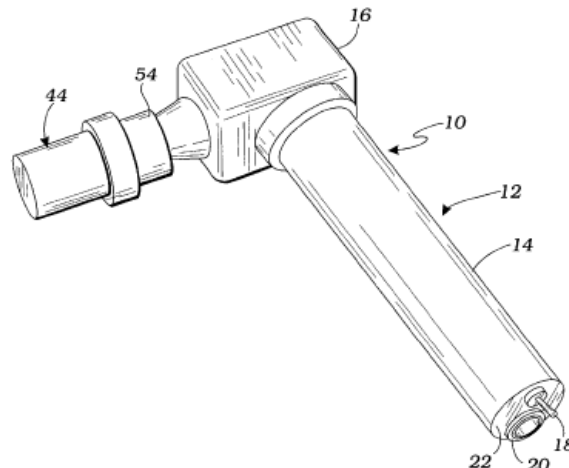
Primary Examiner—Justine R. Yu

(74) Attorney, Agent, or Firm—James G. O'Neill; Klein O'Neill & Singh, LLP

(57) ABSTRACT

A deep muscle stimulation device having a titanium hollow head with loosely packed granular materials held therein is reciprocally mounted in a hollow top and driven by a rotating electrical motor held in a hollow handle so as to provide deep muscle tissue with kinetic forms of percussion and concussion vibration so as to benefit damaged muscles in a patient. The hollow head is connected by a number of reciprocating elements to a finger on a rotating cam so as to have between a 1/8 to 1/2 inch stroke at a high rate of speed to provide deep penetrating muscle tissue stimulation. The device is easy to handle, and includes an on/off switch and an electrical cable-coupling element. The device is made from high strength materials, such as stainless steel or titanium, so as to hold up under heavy use by professionals in a number of disciplines. The granular materials fill approximately 1/3 the volume of the hollow head and are selected from diamonds, rubies, copper, bloodstone, garnet, malachite and carbon.

7 Claims, 2 Drawing Sheets



(57)

ABSTRACT

A deep muscle stimulation device having a titanium hollow head with loosely packed granular materials held therein is reciprocally mounted in a hollow top and driven by a rotating electrical motor held in a hollow handle so as to provide deep muscle tissue with kinetic forms of percussion and concussion vibration so as to benefit damaged muscles in a patient. The hollow head is connected by a number of reciprocating elements to a finger on a rotating cam so as to have between a 1/8 to 1/2 inch stroke at a high rate of speed to provide deep penetrating muscle tissue stimulation. The device is easy to handle, and includes an on/off switch and an electrical cable-coupling element. The device is made from high strength materials, such as stainless steel or titanium, so as to hold up under heavy use by professionals in a number of disciplines. The granular materials fill approximately 1/3 the volume of the hollow head and are selected from diamonds, rubies, copper, bloodstone, garnet, malachite and carbon.

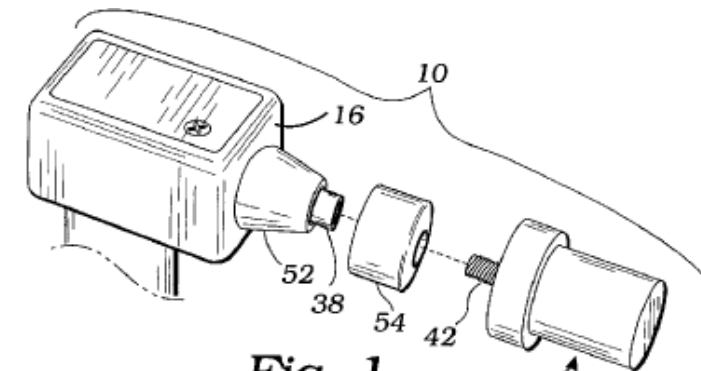


Fig. 1

Petitioner Therabody Ex-1035, 0015

Ex-1007 at Cover, Fig. 1; '482 Petition (Paper 2) at 31-33

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

(10) Patent No.: **US 6,432,072 B1**
(45) Date of Patent: **Aug. 13, 2002**

(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**

(51) Int. Cl. ⁷ **A61H 23/02**

(52) U.S. Cl. **601/108; 601/111; 601/101; 601/103; 601/70**

(58) Field of Search **601/134, 135, 601/97, 101, 103, 107, 108, 110, 111, 112, 113, 70, 72**

(56) **References Cited**

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3,830,232 A	8/1974	McNair	128/33
4,458,676 A	7/1984	Pileggi	128/53
4,590,926 A	5/1986	Courtin	128/67
5,063,911 A	11/1991	Teranishi	128/32

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Primary Examiner—Michael A. Brown

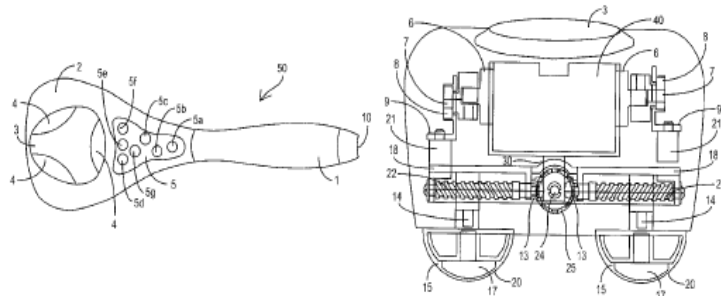
Assistant Examiner—Benjamin K. Koo

(74) Attorney, Agent, or Firm—Hayes Soloway P.C.

(57) **ABSTRACT**

A hand-held massager having a flat vibrating massage head and a pair of percussion massage nodes all being driven by a single internal drive unit. The percussion massage nodes are adjustable for width adjustments being manually controlled by the flat massage head on the opposite side of the massage head. Separate push button controls covered by a sealing membrane are carried on the body of the unit to control power, speed and type of massage.

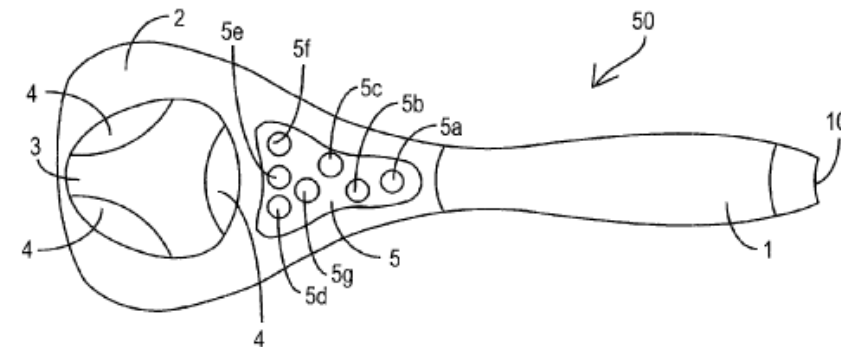
22 Claims, 4 Drawing Sheets



(57)

ABSTRACT

A hand-held massager having a flat vibrating massage head and a pair of percussion massage nodes all being driven by a single internal drive unit. The percussion massage nodes are adjustable for width adjustments being manually controlled by the flat massage head on the opposite side of the massage head. **Separate push button controls covered by a sealing membrane are carried on the body of the unit to control power, speed and type of massage.**



Petitioner Therabody Ex-1035, 0016

Ex-1006 at Cover, Fig. 1; '482 Petition (Paper 2) at 30-31

(19) **United States**
 (12) **Patent Application Publication** (10) Pub. No.: **US 2007/0150004 A1**
 Colloca et al. (43) Pub. Date: **Jun. 28, 2007**

(54) **ELECTROMECHANICAL ADJUSTING INSTRUMENT**
 (76) Inventors: **Christopher J. Colloca**, Phoenix, AZ
 (US); **Jeffrey Keller**, Burlington, VT
 (US)

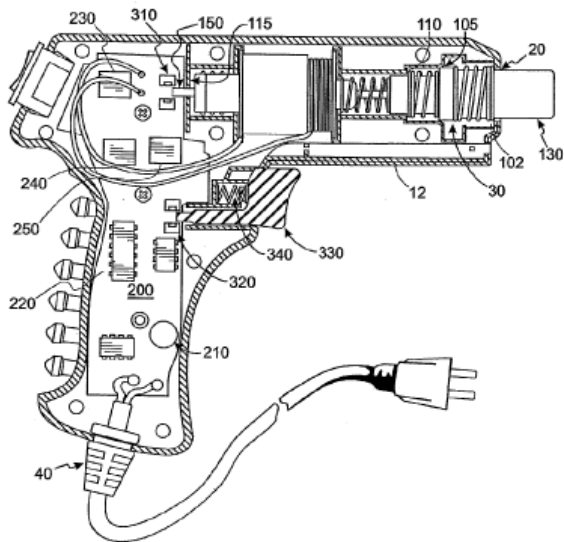
(51) Int. Cl. **A61H 23/00** (2006.01)
 (52) U.S. Cl. **606/238; 606/237; 601/108**

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PHOENIX, AZ 85016-7234 (US)

(21) Appl. No.: **11/567,007**
 (22) Filed: **Dec. 5, 2006**

Related U.S. Application Data
 (63) Continuation-in-part of application No. 11/162,067, filed on Aug. 26, 2005, now Pat. No. 7,144,417.
 (60) Provisional application No. 60/779,785, filed on Mar. 7, 2006. Provisional application No. 60/604,787, filed on Aug. 26, 2004. Provisional application No. 60/604,738, filed on Aug. 26, 2004.

(57) **ABSTRACT**
 A chiropractic adjusting instrument comprising a housing; a thrust nose piece and an impact head to contact a body; a preload switch plunger; a dampening spring; a solenoid having a core; a preload spring; a recoil spring; an electronic pulse system operatively connected to a power source to provide alternating current for energizing the solenoid to impart impulse energy from the core to the thrust nose piece which is reproducible and independent of the power source; and a trigger system for triggering the electronic pulse system comprising an switch activated by the preload switch plunger. Preferably, the chiropractic adjusting instrument includes one or more of the following: an intelligent universal AC power converter; optimized force-time waveform; pulse mode operation; a sensing device having an sense output and a suite of electromechanical components designed to promote reproducible dynamic force impulses and safe operation.



(57) **ABSTRACT**

A chiropractic adjusting instrument comprising a housing; a thrust nose piece and an impact head to contact a body; a preload switch plunger; a dampening spring; a solenoid having a core; a preload spring; a recoil spring; an electronic pulse system operatively connected to a power source to provide alternating current for energizing the solenoid to impart impulse energy from the core to the thrust nose piece which is reproducible and independent of the power source; and a trigger system for triggering the electronic pulse system comprising an switch activated by the preload switch plunger. Preferably, the chiropractic adjusting instrument includes one or more of the following: an intelligent universal AC power converter; optimized force-time waveform; pulse mode operation; a sensing device having an sense output and a suite of electromechanical components designed to promote reproducible dynamic force impulses and safe operation.

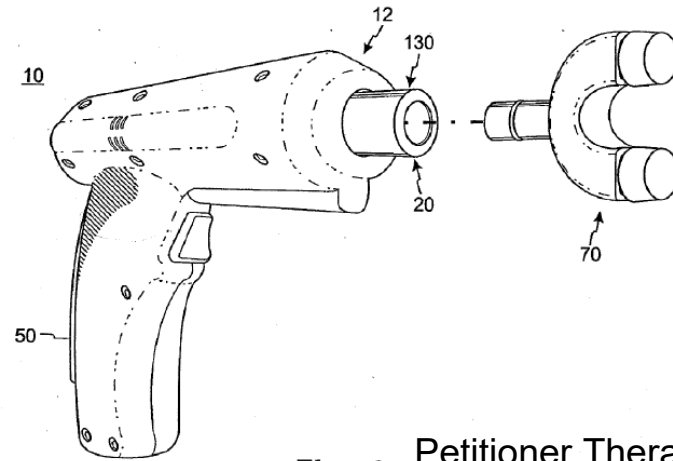


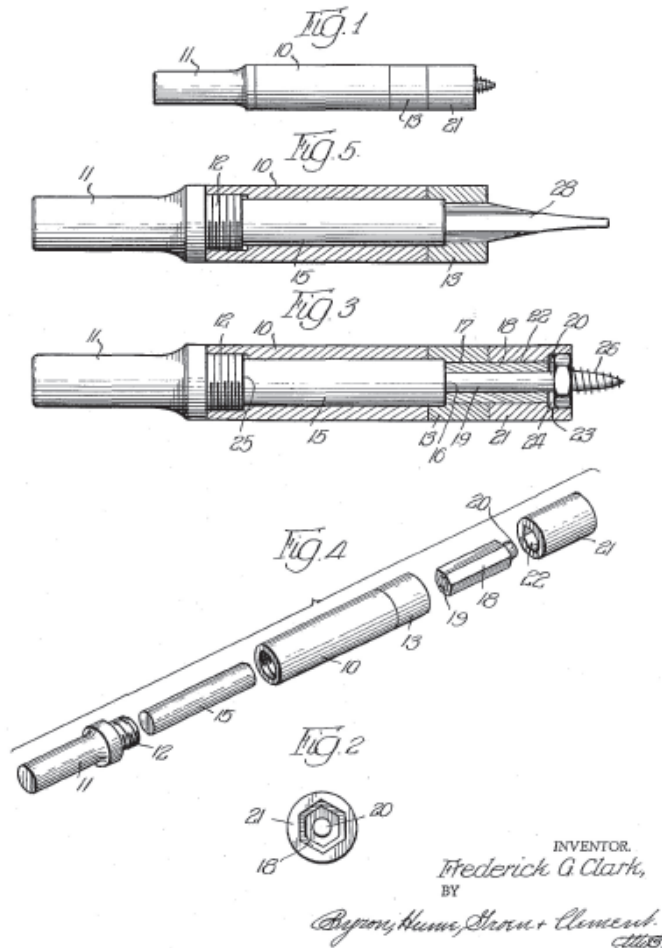
Fig. 2 Petitioner Therabody Ex-1035, 0017
 Ex-1009 at Cover, Fig. 2; '082 Petition (Paper 2) at 31-33

Clark

Nov. 7, 1961

F. G. CLARK
MAGNETIC TOOL HOLDER
Filed July 25, 1957

3,007,504



This invention relates to magnetic tools, and more particularly to tools adapted to magnetically hold and drive a multiplicity of different types of screws or the like.

As is best shown in FIGURE 3, the extended portion of the magnetically permeable member 19 is substantially coplanar with the shoulder 24 of the workpiece holder 21. Thus, when the workpiece is placed in the chamber 23, it is in touching relationship with the extended portion 20. By this arrangement the magnetic forces which are transmitted through the magnetically permeable member 19 from the magnet 15 are utilized to hold the workpiece in driving position.

From the foregoing description it can readily be seen that the workpiece holder 21 may be easily removed from its assembled position and a workpiece holder having a different size or shape chamber 23 substituted therefor.

Petitioner Therabody Ex-1035, 0018

Ex-1014 at Cover, 1:8-10, 3:45-48; 4:1-3; '082 Petition (Paper 2) at 33-34

Asserted Grounds

'482 PGR Grounds

Ground	Summary
1	Claims 34-38, 40, 41, 43-46, and 58-60 are unpatentable under 35 U.S.C. § 112 based on lack of written description support.
2	Claims 34-38, 40, 41, 43-46, and 58-60 are unpatentable under 35 U.S.C. § 112 as indefinite.
3	Claims 34, 35, and 58-60 are unpatentable under 35 U.S.C. § 103 as obvious over U.S. Patent No. 4,513,737 ("Mabuchi") (Ex-1005).
4	Claims 36-38, 40, 41, and 43-46 are unpatentable under 35 U.S.C. § 103 as obvious over Mabuchi in view of U.S. Patent No. 6,432,072 ("Harris") (Ex-1006).
5	Claims 37 and 38 are unpatentable under 35 U.S.C. § 103 as obvious over Mabuchi in view of Harris, further in view of U.S. Patent No. 6,682,496 ("Pivaroff") (Ex-1007).
6	Claims 34, 35, and 58-60 are unpatentable under 35 U.S.C. § 103 as obvious over Pivaroff in view of Mabuchi.
7	Claims 36-38, 40, 41, and 43-46 are unpatentable under 35 U.S.C. § 103 as obvious over Pivaroff in view of Mabuchi, further in view of Harris.

'082 PGR Grounds

Ground	Summary
1	Claims 1-18 are unpatentable under 35 U.S.C. § 112 based on lack of written description support.
2	Claims 13-16 are unpatentable under 35 U.S.C. § 112 as indefinite.
3	Claims 1, 7, 9-11, 13, and 18 are unpatentable under 35 U.S.C. § 103 as obvious over U.S. Patent No. 4,513,737 ("Mabuchi") (Ex-1005) in view of U.S. Publication No. 2007/0150004 ("Colloca") (Ex-1009).
4	Claims 2-4 are unpatentable under 35 U.S.C. § 103 as obvious over Mabuchi in view of Colloca, further in view of U.S. Patent No. 6,432,072 ("Harris") (Ex-1006).
5	Claims 1, 7, 9-11, 13, and 18 are unpatentable under 35 U.S.C. § 103 as obvious over U.S. Patent No. 6,682,496 ("Pivaroff") (Ex-1007) in view of U.S. Patent No. 3,007,504 ("Clark") (Ex-1014).
6	Claims 2-4 are unpatentable under 35 U.S.C. § 103 as obvious over Pivaroff in view of Clark, further in view of Harris.

Petitioner Therabody Ex-1035, 0019

'482 Petition (Paper 2) at 4-5; '082 Petition (Paper 2) at 4

Prior Art and Grounds High-Level Summary

- Mabuchi
 - Massager with an actuator repeatedly reciprocating at a given rate and a magnetbased connection mechanism
- Pivaroff
 - Massager with an actuator repeatedly reciprocating at a given rate and a motor operating at particular speeds
- Harris
 - Hand-held massager with a control panel to select multiple speeds
- Colloca
 - Device with a bore at the distal end to fit an interchangeable head
- Clark
 - Device with interchangeable magnetic heads

Petitioner Therabody Ex-1035, 0020

'482 Petition (Paper 2) at 27-33; '082 Petition (Paper 2) at 25-34

Overview

- '482 and '082 Patents
- Overview of the prior art
- **Claim Construction**
- Percussive Massager Limitations (Mabuchi Grounds 482 and 082)
- Quick Release Connector Limitations (Mabuchi and Pivaroff Grounds)
- Motor Housing Limitations (Pivaroff)
- Motivations
- Written Description

Petitioner Therabody Ex-1035, 0021

The Preamble Is Not Limiting

'482 Patent Claim 34

34. A percussive massager comprising:
a housing;
a piston in the housing having a proximal end and a distal end;
a motor at least partially within the housing and operatively connected to the proximal end of the piston, wherein the motor is configured to cause the piston to reciprocate at a first speed;
a drive mechanism between the motor and the piston that controls a predetermined stroke length of the piston; and
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 1

1. A percussive massager comprising:
a housing;
a piston having a proximal end and a distal end, the distal end of the piston having a bore;
a motor operatively connected to the proximal end of the piston, wherein the motor is configured to cause the piston to reciprocate at a first speed;
a drive mechanism that controls a predetermined stroke length of the piston; and
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.

Petitioner Therabody Ex-1035, 0022

'482 Reply (Paper 29) at 2-4; '482 POR (Paper 27) at 18-21; '082 Reply (Paper 24) at 2-4; '082 POR (Paper 22) at 21-25

The Preamble Is Not Limiting

Federal Circuit

“In general, a preamble limits the invention *if it recites essential structure or steps, or if it is “necessary to give life, meaning, and vitality” to the claim*. Conversely, a preamble is *not limiting* where a patentee defines a *structurally complete invention* in the claim body and uses the preamble *only to state a purpose* or intended use for the invention.”

“percussive massager” Refers to an Intended Use

’482 Patent Claim 34

34. A percussive massager comprising:
a housing;
a piston in the housing having a proximal end and a distal end;
a motor at least partially within the housing and operatively connected to the proximal end of the piston, wherein the motor is configured to cause the piston to reciprocate at a first speed;
a drive mechanism between the motor and the piston that controls a predetermined stroke length of the piston; and
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.

’482 Patent Specification

This invention relates generally to medical devices, and more particularly, to a deep muscle-stimulating device used to increase muscle metabolism, increase the lactic acid cycle and relieve pain.

Vibrating massaging devices are available on the market today; however, those devices suffer from many deficiencies. Many of the prior art massaging devices are bulky, get very hot, are noisy and/or are difficult to use for extended periods of time.

The Claim Body Defines a Structurally Complete Invention

'482 Patent Claim 34

34. A percussive massager comprising:

a housing;

a piston in the housing having a proximal end and a distal end;

a motor at least partially within the housing and operatively connected to the proximal end of the piston, wherein the motor is configured to cause the piston to reciprocate at a first speed;

a drive mechanism between the motor and the piston that controls a predetermined stroke length of the piston; and

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.

'482 Patent Specification

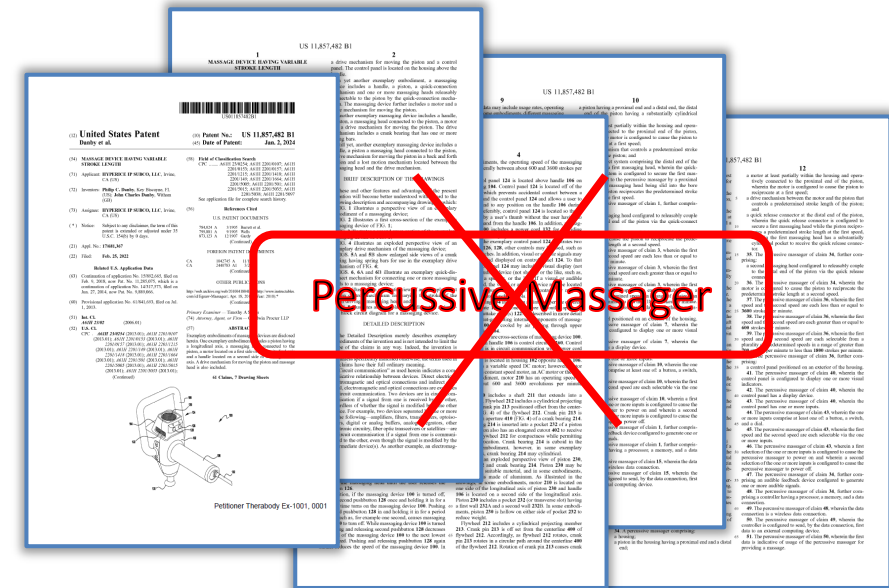
In yet another exemplary embodiment, a massaging device includes a handle, a piston, a quick-connection mechanism and one or more massaging heads releasably connectable to the piston by the quick-connection mechanism. The massaging device further includes a motor and a drive mechanism for moving the piston.

“percussive massager” Is Not in the Written Description

’482 Patent Claim 34

34. A percussive massager comprising:
a housing;
a piston in the housing having a proximal end and a distal end;
a motor at least partially within the housing and operatively connected to the proximal end of the piston, wherein the motor is configured to cause the piston to reciprocate at a first speed;
a drive mechanism between the motor and the piston that controls a predetermined stroke length of the piston; and
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.

’482 Patent Specification



Petitioner Therabody Ex-1035, 0026

’482 Reply (Paper 29) at 4; see also ’082 Reply (Paper 24) at 4

PO Relies on Applicant's Amendment Adding "percussive massager" in the Body of a Separate Claim

1. (Currently Amended) ~~An apparatus~~. A percussive massager comprising:
a housing;
~~a handle~~
a piston having a proximal end and a distal end, the distal end of the piston having a substantially cylindrical bore;
a motor at least partially within the housing and operatively connected to the proximal end of the piston, wherein the motor is configured to cause the piston to reciprocate at a first speed;
a drive mechanism that controls a predetermined stroke length of the piston; and
a quick-connect system comprising ~~release connector at the distal end of the piston and a first massaging head~~, wherein the quick-connect system ~~release connector~~ is configured to secure [[connect a]] the first massaging head to the percussive massager by a proximal end of the massaging head being slid into the bore while the piston reciprocates ~~moves~~ the predetermined stroke length at the first speed.

38. (New) A percussive massager comprising:
a housing;
a piston in the housing having a proximal end and a distal end;
a motor at least partially within the housing and operatively connected to the proximal end of the piston, wherein the motor is configured to cause the piston to reciprocate at a first speed;
a drive mechanism between the motor and the piston that controls a predetermined stroke length of the piston; and
a quick release connector at the distal end of the piston, wherein the quick release connector is configured to secure a first massaging head while the piston reciprocates a predetermined stroke length at the first speed, wherein the first massaging head has a substantially cylindrical pocket to receive the quick release connector.

Petitioner Therabody Ex-1035, 0027

PO Relies on Applicant's Amendment Adding "percussive massager" in the Body of a Separate Claim

1. (Currently Amended) An apparatus, A percussive massager comprising:
a housing;
~~a handle~~
a piston having a proximal end and a distal end, the distal end of the piston having a substantially cylindrical bore;
a motor at least partially within the housing and operatively connected to the proximal end of the piston, wherein the motor is configured to cause the piston to reciprocate at a first speed;
a drive mechanism that controls a predetermined stroke length of the piston; and
a quick-connect system comprising ~~release connector at the distal end of the piston and a first massaging head~~, wherein the quick-connect system ~~release connector~~ is configured to secure [[connect a]] the first massaging head to the percussive massager by a proximal end of the massaging head being slid into the bore while the piston reciprocates moves the predetermined stroke length at the first speed.

Not Challenged

38. (New) A percussive massager comprising:
a housing;
a piston in the housing having a proximal end and a distal end;
a motor at least partially within the housing and operatively connected to the proximal end of the piston, wherein the motor is configured to cause the piston to reciprocate at a first speed;
a drive mechanism between the motor and the piston that controls a predetermined stroke length of the piston; and
a quick release connector at the distal end of the piston, wherein the quick release connector is configured to secure a first massaging head while the piston reciprocates a predetermined stroke length at the first speed, wherein the first massaging head has a substantially cylindrical pocket to receive the quick release connector.

Petitioner Therabody Ex-1035, 0028

PO's "Clear and Express Reliance" Comes Exclusively from Arguments Related to the Body of Unchallenged Claim 1

The record reflects that Applicant intentionally limited all claims to a “percussive massager” rather than an “apparatus” and relied on that distinction to overcome Rhoades. In the final amendment before allowance, Applicant contrasted the claimed invention *as a whole* from Rhoades, stating 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. 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 (annotations added). These arguments confirm Applicant’s use of the preamble as a limitation by using it to define and distinguish the invention *as a whole* and demonstrate Applicant’s clear reliance on the preamble to overcome the cited art by differentiating the invention *as a whole* from Rhoades.

Petitioner Therabody Ex-1035, 0029

PO's "Clear and Express Reliance" Comes Exclusively from Arguments Related to the Body of Unchallenged Claim 1

I. Independent Claim 1 and the Claims Depending Therefrom

Without acceding to the rejection, independent claim 1 has been amended and reconsideration is respectfully requested.

Amended independent claim 1 recites a percussive massager comprising, *inter alia*:

a quick-connect system comprising the distal end of the piston and a first massaging head, wherein the quick-connect system is configured to secure the first massaging head to the percussive massager by a proximal end of the massaging head being slid into the bore while the piston reciprocates the predetermined stroke length at the first speed.

Pivaroff is directed to a deep muscle stimulation device having a titanium hollow head with loosely packed granular materials herein therein (Pivaroff at Abstract). Pivaroff further describes the "hollow head is connected by a number of reciprocating elements to a finger on a rotating cam so as to have between a 1/8 to 1/2 inch stroke" "to provide deep penetrating muscle tissue stimulation" (*Id.*).

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.

Further, Rhoades fails to remedy the deficiencies of Pivaroff with respect to independent claim 1, as amended. As illustrated in the embodiments of the cosmetic instrument in FIGs. 4A and 4B, Rhoades describes that an applicator attachment 200 and brush attachment 30 may be removably or permanently attached to the head portions 120, 140 of the apparatus 100 (See, e.g., Rhoades at para. [0059]). As one example, Rhoades describes that an attachment "can be attached to head portions via adhesive or magnetic forces" (*Id.* at para. [0061]). However, Applicant respectfully submits that the mechanisms used to connect an attachment to a head portion of Rhoades' apparatus 100, individually or in combination with the features of Pivaroff's device, fails to teach or suggest securing "the first massaging head to the percussive massager by a proximal end of the massaging head being slid into the bore while the piston reciprocates the predetermined stroke length at the first speed" as recited in amended claim 1. Rather, Rhoades' apparatus is a cosmetic instrument, not a "percussive massager", and does not include a "quick-connect system" that secures "the first massaging head to the percussive massager by a proximal end of the massaging head being slid into the bore while the piston reciprocates the predetermined stroke length at the first speed" as recited in amended claim 1. Thus, Applicant respectfully submits that Pivaroff and Rhoades, individually or in proper combination, fail to teach or suggest this feature as presently recited in amended claim 1.

Petitioner Therabody Ex-1035, 0030

'482 POR (Paper 27) at 19-20; '482 Sur-reply (Paper 39) at 11; Ex-1004 at 2534, 2536; '082 POR (Paper 22) at 22-24; '082 Sur-reply at 9

The Applicant Never Made a Distinction Related to “percussive massager” in the Context of Claim 38 (Issued Claim 34)

New Claims

New claims 38-65 are added. Independent claim 38 recites a percussive massager comprising, *inter alia*:

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.

Applicant respectfully submits that Pivaroff and Rhoades, individually or in combination, fail to teach or suggest at least “a quick release connector ... 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” as recited in independent claim 38. As described above with respect to claim 1, the Office Action references Pivaroff as teaching a quick release connector as recited in

Rhoades fails to remedy the deficiencies of Pivaroff with respect to independent claim

38. As illustrated in the embodiments of the cosmetic instrument in FIGs. 4A and 4B, Rhoades describes that an applicator attachment 200 and brush attachment 30 may be removably or permanently attached to the head portions 120, 140 of the apparatus 100 (See, e.g., Rhoades at para. [0059]). As one example, Rhoades describes that “treatment attachments may also attach to head portions via threaded mating, magnetic attractive force, adhesive, heat bonding, tape, glue, or other sufficient attachment systems” (*Id.* at para. [0061]). Rhoades shows and describes an exemplary threaded mating connection mechanism for an applicator attachment with respect to FIG. 5. However, Applicant respectfully submits that the applicator attachments of Rhoades’ apparatus 100, individually or in combination with the features of Pivaroff’s device, are silent regarding inclusion of any pocket for receiving a quick release connector and thereby fail to teach or suggest a “a quick release connector ... 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” as recited in claim 38.

Thus, Applicant respectfully submits that Pivaroff and Rhoades, individually or in proper combination, fail to teach or suggest at least a “a quick release connector ... 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” as recited in claim 38.

Petitioner Therabody Ex-1035, 0031

If “percussive massager” Is Construed, Therabody’s Proposed Claim Construction Is Correct

Therabody’s Construction

No construction necessary. If construed: “a massage device whose piston and head reciprocate back and forth”

Consistent with the device described in the patent specification.

Patent Owner’s Construction

“a device that provides a *high-speed, long stroke action* to massage *deep muscle tissue*”

Patent Owner’s construction improperly adds limitations found nowhere in the specification and relies exclusively on extrinsic evidence from years after the priority date

The Massager Described in the Specification Simply has a Piston and Message Head that Reciprocate Back and Forth

Exemplary embodiments of massaging devices are disclosed herein. One exemplary embodiment includes a piston having a longitudinal axis and a massaging head connected to the piston. A motor is located on a first side of the longitudinal axis and a handle is located on a second side of the longitudinal axis. A drive mechanism for moving the piston and message head is also included.

Another exemplary embodiment of a massaging device includes a handle, a piston, a massaging head attached to the piston, a motor, a drive mechanism for converting rotary motion of the motor to linear motion to drive the piston back and forth in a reciprocating motion, a processor, memory, a data connection in circuit communication with the processor and logic for transmitting data between the massaging device and a remote device.

Petitioner Therabody Ex-1035, 0033

PO's Few Citations to the Specification Do Not Support the “long stroke,” “high speed,” or “deep muscle” Limitations in its Construction

Patent Owner's Construction

“a device that provides a *high-speed, long stroke action* to massage *deep muscle tissue*”

This invention relates generally to medical devices, and more particularly, to a deep muscle-stimulating device used to increase muscle metabolism, increase the lactic acid cycle and relieve pain.

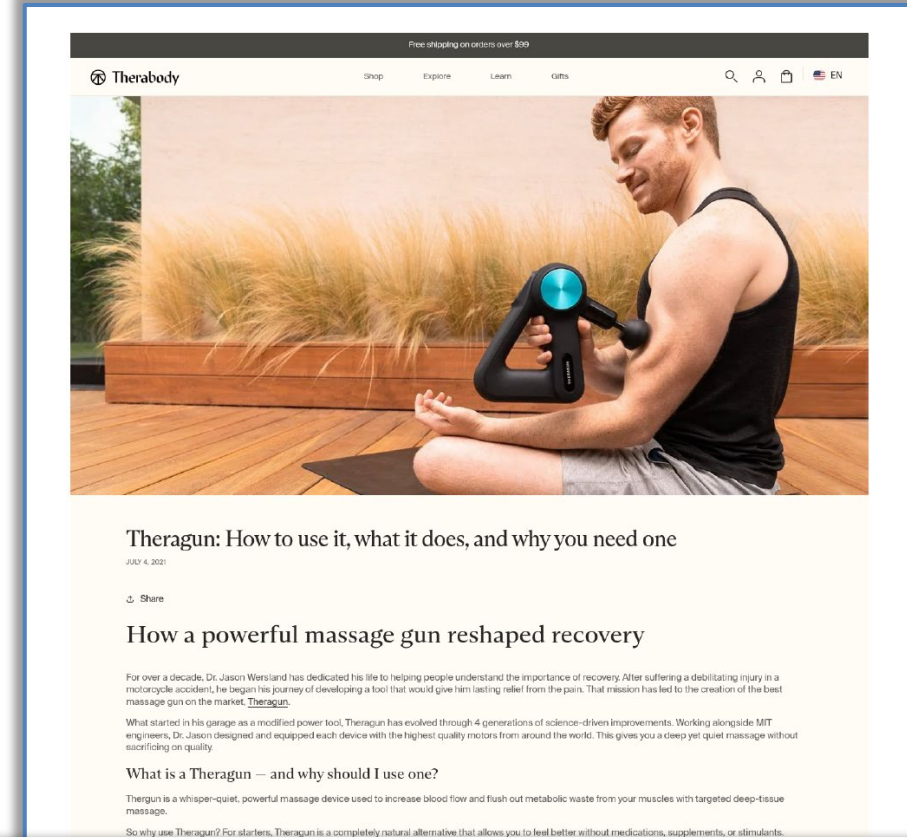
In some instances, it may be desirable to adjust the throw or the stroke length of the massaging head to work on larger or smaller muscle groups, or deeper or shallower points of stress or soreness in the muscles. FIG. 7 illustrates an

Petitioner Therabody Ex-1035, 0034

PO's Support for its Construction Comes Entirely from Later Extrinsic Evidence

Patent Owner's Position

This description is consistent with general definition and description of “percussive massager” as explained in Sections IIA-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.



Theragun: How to use it, what it does, and why you need one

JULY 4, 2021

Petitioner Therabody Ex-1035, 0035

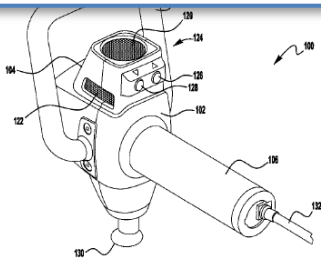
PO's Support for its Construction Comes Entirely from Later Extrinsic Evidence

(12) United States Patent Danby et al.	(10) Patent No.: US 11,857,482 B1
	(45) Date of Patent: Jan. 2, 2024
(54) MESSAGE DEVICE HAVING VARIABLE STROKE LENGTH	(58) Field of Classification Search CPC A61H 23/0254; A61H 2201/0107; A61H 2201/0153; A61H 2201/0157; A61H 2201/1215; A61H 2201/1418; A61H 2201/149; A61H 2201/1664; A61H 2201/5005; A61H 2201/501; A61H 2201/5015; A61H 2201/5035; A61H 2201/5038; A61H 2201/5097 See application file for complete search history.
(71) Applicant: HYPERICE IP SUBCO, LLC , Irvine, CA (US)	
(72) Inventors: Philip C. Danby , Key Biscayne, FL (US); John Charles Danby , Witham (GB)	
(73) Assignee: HYPERICE IP SUBCO, LLC , Irvine, CA (US)	(56) References Cited U.S. PATENT DOCUMENTS 784,024 A 3/1905 Barrett et al. 799,881 A 9/1905 Wells
(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35	

Related U.S. Application Data

(63) Continuation of application No. 15/892,665, filed on Feb. 9, 2018, now Pat. No. 11,285,075, which is a continuation of application No. 14/317,573, filed on **Jun. 27, 2014**, now Pat. No. 9,889,066.

(60) Provisional application No. 61/841,693, filed on **Jul. 1, 2013**.



Demonstrative Exhibit Not Evidence



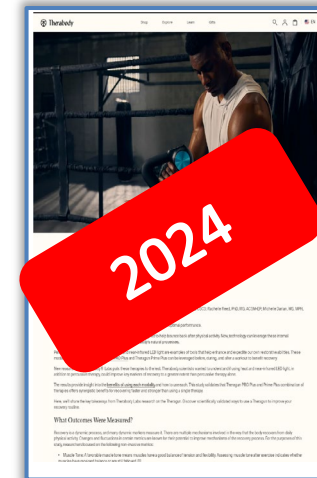
Ex. 2018



Ex. 2019



Ex. 2020



Ex. 2021



Petitioner Therabody Ex-1035, 0036
Ex. 2028

'482 Reply (Paper 29) at 2-3, 22,'082 POR (Paper 22) at 26, '482 Patent at Cover, Exs. 2018-2021, 2028

PO's Expert Undermines "deep muscle" Limitation in its Construction

Patent Owner's Construction

"a device that provides a high-speed, long stroke action to massage *deep muscle tissue*"

9 Q. But it could be relieving -- it could be
10 providing therapeutic effect at shallower points in
11 the muscle as well, right?

12 A. That is what is taught here; that it can be
13 for shallower or smaller muscle groups, yeah, or
14 shallower points.

15 Q. So it doesn't necessarily need to be a
16 stroke length that provides only deep tissue
17 massage, right?

18 A. It needs to be able to provide relief on
19 the muscle.

20 Q. Either deep tissue or not deep tissue?

21 A. That is what is taught here.

Petitioner Therabody Ex-1035, 0037

'482 Reply (Paper 29) at 6; Ex-1024 at 75:9-21; '082 Reply (Paper 24) at 6

PO's Expert Undermines the "high speed" Limitation in its Construction

Patent Owner's Construction

"a device that provides a *high-speed*, long stroke action to massage deep muscle tissue"

11 Q. And sitting here today, you're not aware of
12 anywhere in the '482 patent that uses the phrase
13 "high speed," correct?

14 A. I would have to re-read it just to verify.
15 I can't think of it off the top of my head.

15 Q. So whether or not something is high speed
16 would depend on whether it's providing the desired
17 therapeutic benefit; is that right?

18 A. At least in the discussion of a percussive
19 massager, yes. You could have something that is

4 Q. So for purposes of your construction where
5 it says high speed, would 300 strokes per minute
6 qualify as high speed?

7 A. It could qualify as high speed.

8 Q. How would you determine if it qualified as
9 high speed?

10 A. Again, it's going to depend on
11 experimentation to see if it actually is providing
12 the response needed for relieving the lactic acid
13 buildup as well as the soreness in the muscles at
14 that speed.

Petitioner Therabody Ex-1035, 0038

PO's Expert Undermines the "long stroke" Limitation in its Construction

Patent Owner's Construction

"a device that provides a high-speed, *long stroke action* to massage deep muscle tissue"

23 Q. Now, does the -- does the patent use the
24 term "long stroke action"?

25 A. I don't remember if it uses that term
1 specifically.

2 Q. You would agree with me that none of the
3 citations that you provide to the patent use the
4 term "long stroke action," correct?

5 A. No, they do not.

5 Q. And a percussive massage has to have a long
6 stroke length, according to your definition here in
7 paragraph 57?

8 A. It needs to have a stroke that's long
9 enough to be able to activate the necessary
10 response on the muscle and help with the pain
11 relief within the muscle.

12 Q. So the distance of the stroke length and
13 whether it's a long stroke length or not under this
14 definition would relate to whether or not it gives
15 certain therapeutic benefits; is that right?

16 A. Yes.

17 Q. And where would you draw the line between
18 long stroke action and not long stroke action?

19 A. It's going to be determined from
20 experimentation and testing to determine how well
21 the stroke actually affects the body.

Petitioner Therapy Ex-1005, 0039

PO's Attempt to Backfill Its Construction in Its Sur-Reply Using the Prior Art Fails

Percussive massagers vibrate by virtue of their rapid reciprocating motion and percuss by virtue of their long stroke and impact force, which together provide therapeutic benefit to deep muscle tissue. Ex. 1006, 3:29-41 (Harris describing the “downward stroke” and the “speed of the stroke cycle” controlling the “intensity of the percussion”); Ex. 1007, 1:23-27, 3:47-64 (Pivaroff describing the head being “quickly reciprocated back and forth” to provide “percussion and concussion vibration” and reciprocating “between approximately 1/8 and 1/2 of an inch ... to provide maximum concussion and percussion.”).

Petitioner Therabody Ex-1035, 0040

Harris Does Not Support PO's Construction

Patent Owner's Construction

“a device that provides a *high-speed, long stroke action* to massage deep muscle tissue”

US006432072B1

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

(10) Patent No.: **US 6,432,072 B1**
(45) Date of Patent: **Aug. 13, 2002**

(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(h) by 0 days.

(21) Appl. No.: **09/489,049**
(22) Filed: **Jan. 21, 2000**

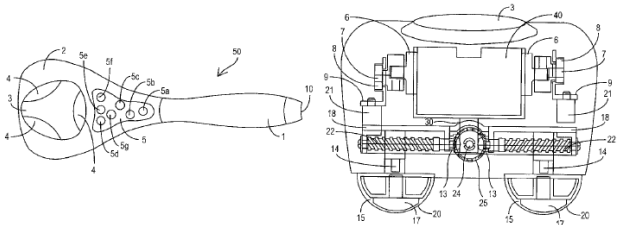
(51) Int. Cl.⁷ **A61H 23/02**
(52) U.S. Cl. **601/108; 601/111; 601/101; 601/103; 601/70**

(58) **Field of Search** **601/134, 135, 601/97, 101, 103, 107, 108, 110, 111, 112, 113, 70, 72**

(56) **References Cited**
U.S. PATENT DOCUMENTS

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22 Claims, 4 Drawing Sheets



down pivot arms 9 attached to spacers 21. The downward stroke of spacers 21 strikes respective housings 18 interposed above percussive massage node mounts 14 to respective percussive massage nodes 20, thereby resulting in percussive driving of the massage nodes 20. Preferably, a screw drive 22 is mounted in respective housing 18 for adjusting the width of the percussive nodes 20 as will be described below. As 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, resulting in greater intensity of the percussion of massage nodes 20. The stroke cycle of spacers 21 may be

Petitioner Therabody Ex-1035, 0041

Ex-1006, 3:29-41

Pivaroff Does Not Support PO's Construction

Patent Owner's Construction

“a device that provides a *high-speed, long stroke action* to massage deep muscle tissue”

(12) **United States Patent**
Pivaroff

(10) Patent No.: US 6,682,496 B1
(45) Date of Patent: Jan. 27, 2004

(54) **DEEP MUSCLE STIMULATOR DEVICE**

(76) Inventor: **Jake W. Pivaroff**, 2711 E. Coast Hwy., Suite 206, Corona Del Mar, CA (US) 92625

(*) 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

(51) Int. Cl.⁷ A61H 1/00
(52) U.S. Cl. 601/108; 601/97; 601/101; 601/107

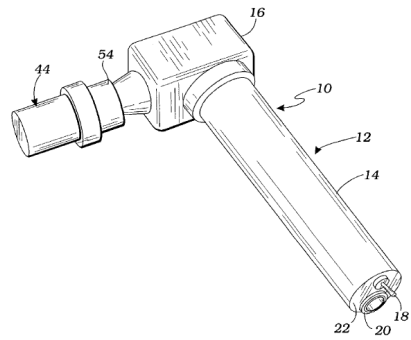
(58) Field of Search 601/70, 84, 97, 601/101, 107-108, 85, 87, 89, 93, 94, 102, 103, 109-111, 72, 80, 606/237-239

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Primary Examiner—Justine R. Yu
(73) Attorney, Agent, or Firm—James G. O'Neill, Klein O'Neill & Singh, LLP

(57) **ABSTRACT**
A deep muscle stimulation device having a titanium hollow head with loosely packed granular materials held therein is reciprocally mounted in a hollow top and driven by a rotating electrical motor held in a hollow handle so as to provide deep muscle tissue with kinetic forms of percussion and concussion vibration so as to benefit damaged muscles in a patient. The hollow head is connected by a number of reciprocating elements to a finger on a rotating cam so as to have between a 1/8 to 1/2 inch stroke at a high rate of speed to provide deep penetrating muscle tissue stimulation. The device is easy to handle, and includes an on/off switch and an electrical cable-coupling element. The device is made from high strength materials, such as stainless steel or titanium, so as to hold up under heavy use by professionals in a number of disciplines. The granular materials fill approximately 1/2 the volume of the hollow head and are selected from diamonds, rubies, copper, bloodstone, garnet, malachite and carbon.

7 Claims, 2 Drawing Sheets



2. Description of Related Art

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 overstretching 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.

the shaft 26 and coupling system 28 at that speed. This rotational speed is transferred to a reciprocating motion, as shown by arrow 56 in FIG. 3, whereby the head 44 is quickly reciprocated back and forth 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. This stimulates the proprioceptive functions and provides relief in increasing strength for a person suffering from chronic pain and restricted movement to under conditioned and/or damaged muscle tissue. Furthermore, the selected mixture of granular materials in the hollow head 44 provide even further deep muscle relief.

The head 44 moves or reciprocates between approximately 1/8 and 1/2 of an inch, preferably about 1/4 inch to provide maximum concussion and percussion, and, therefore, maximum muscle relief.

Petitioner Therabody Ex-1035, 0042

Ex-1007 at 1:12-27, 3:47-64

“massaging head” Requires No Construction

’482 Patent Claim 34

34. A percussive massager comprising:
a housing;
a piston in the housing having a proximal end and a distal end;
a motor at least partially within the housing and operatively connected to the proximal end of the piston, wherein the motor is configured to cause the piston to reciprocate at a first speed;
a drive mechanism between the motor and the piston that controls a predetermined stroke length of the piston; and
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 1

1. A percussive massager comprising:
a housing;
a piston having a proximal end and a distal end, the distal end of the piston having a bore;
a motor operatively connected to the proximal end of the piston, wherein the motor is configured to cause the piston to reciprocate at a first speed;
a drive mechanism that controls a predetermined stroke length of the piston; and
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.

Petitioner Therabody Ex-1035, 0043

’482 Reply (Paper 29) at 9; ’482 POR (Paper 27) at 23-24; ’082 Reply (Paper 24) at 9; ’082 POR (Paper 22) at 27-28

“massaging head” Requires No Construction

Therabody's Construction

N/A

Patent Owner's Construction

“the end piece of the *percussive massager* that contacts the user's body *to provide percussive massage*”

Patent Owner's proposed construction is a transparent attempt to incorporate “percussive massager” into the body of the claim

PO's Expert Admits That "massaging head" Has a Broader Meaning

Patent Owner's Construction

"the end piece of the *percussive massager* that contacts the user's body *to provide percussive massage*"

14 Q. Okay. So can you point me to a passage in
15 the specification that limits message head to
16 percussive massager heads?

17 A. A message head doesn't necessarily need to
18 be percussive message only. But within the context
19 of this patent, it's describing that the message
20 heads are for percussive message, based off of the
21 claim language.

21 So if instead of saying "a percussive
22 massager," it said "an apparatus," would you have a
23 different understanding of what massaging head
24 meant in the claims?

25 A. If it said "an apparatus," at that point it
1 would no longer be limiting the massaging head to a
2 percussive message device at that point.

4 It's understo|pd that the part that makes
5 contact with the person in relation to the
6 percussive device or the percussive message device
7 as described is the message head.

Petitioner Therabody Ex-1035, 0045

Overview

- '482 and '082 Patents
- Overview of the prior art
- Claim Construction
- Percussive Massager Limitations (Mabuchi Grounds 482 and 082)
- Quick Release Connector Limitations (Mabuchi and Pivaroff Grounds)
- Motor Housing Limitations (Pivaroff)
- Motivations
- Written Description

Petitioner Therabody Ex-1035, 0046

Mabuchi Is a “percussive massager” under Either Construction

'482 Patent Claim 34

34. A percussive massager comprising:
a housing;
a piston in the housing having a proximal end and a distal end;
a motor at least partially within the housing and operatively connected to the proximal end of the piston, wherein the motor is configured to cause the piston to reciprocate at a first speed;
a drive mechanism between the motor and the piston that controls a predetermined stroke length of the piston; and
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 1

1. A percussive massager comprising:
a housing;
a piston having a proximal end and a distal end, the distal end of the piston having a bore;
a motor operatively connected to the proximal end of the piston, wherein the motor is configured to cause the piston to reciprocate at a first speed;
a drive mechanism that controls a predetermined stroke length of the piston; and
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.

Petitioner Therabody Ex-1035, 0047

'482 Reply (Paper 29) at 2-4; '482 POR (Paper 27) at 42-52; '482 Sur-reply (Paper 39) at 18-20; '082 POR (Paper 22) at 50-59, '082 Reply (Paper 24) at 15-19, and '082 Sur-reply (Paper 34) at 16-18

Mabuchi Include All of the Elements of a “percussive massager”

'482 Patent Claim 34

34. A percussive massager comprising:

a housing;

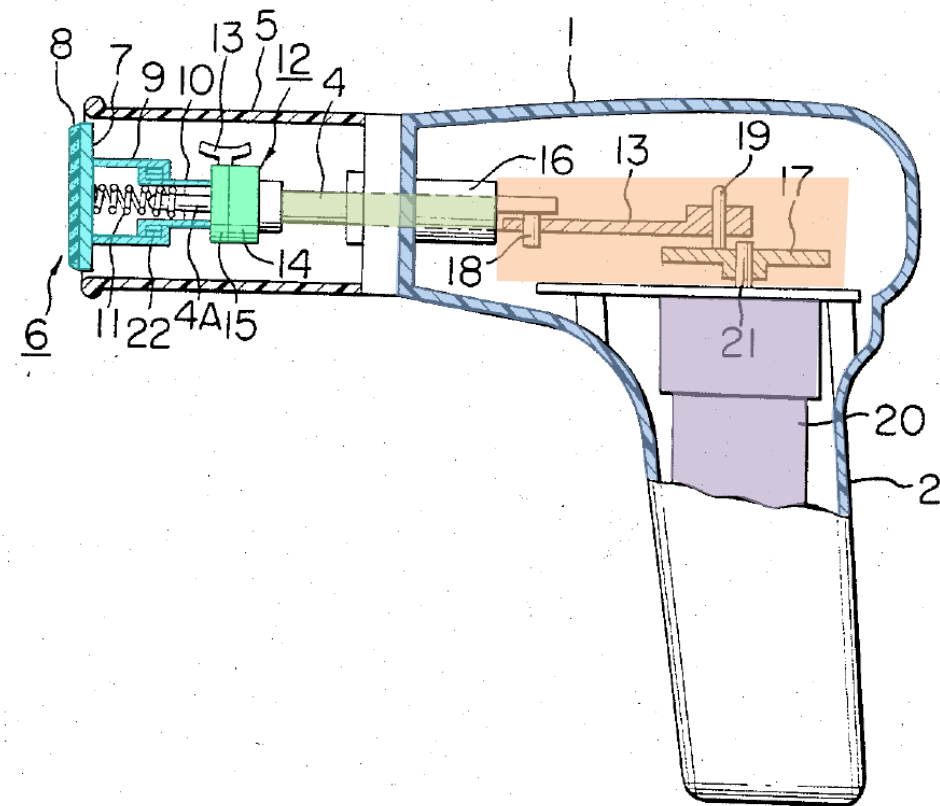
a piston in the housing having a proximal end and a distal end;

a motor at least partially within the housing and operatively connected to the proximal end of the piston, wherein the motor is configured to cause the piston to reciprocate at a first speed;

a drive mechanism between the motor and the piston that controls a predetermined stroke length of the piston; and

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.

Mabuchi Figure 1

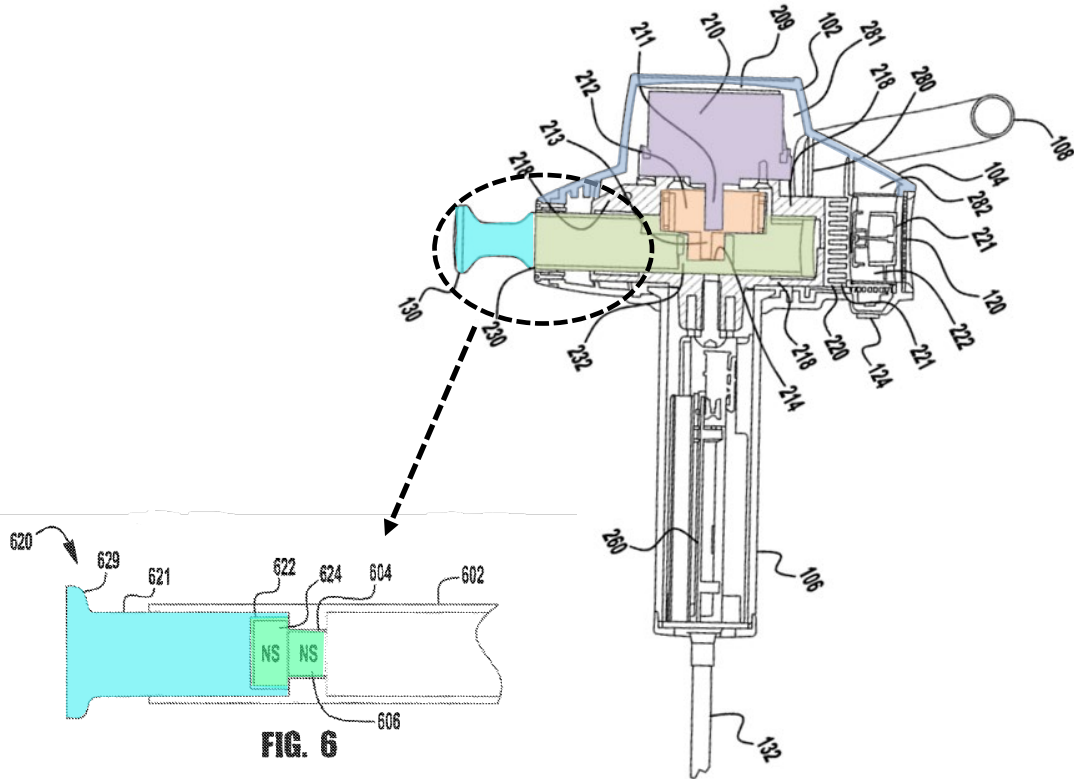


Petitioner Therabody Ex-1035, 0048

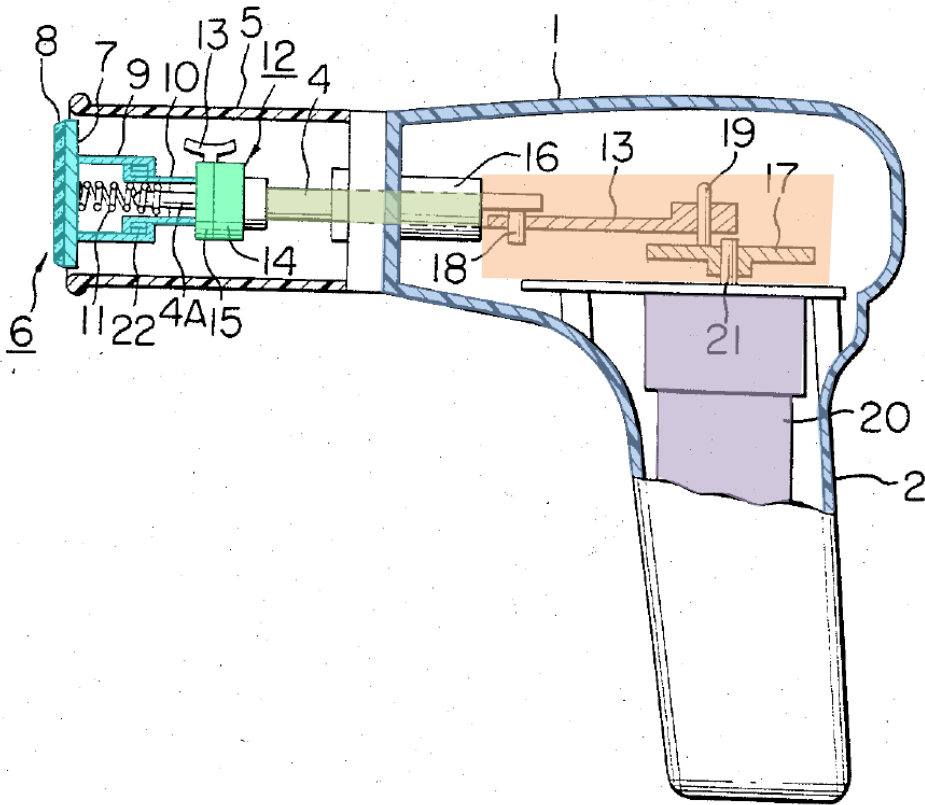
Mabuchi at Fig. 1 (annotated)

Mabuchi Includes the Same “percussive massager” Elements As the ‘482 and ‘082 Patents in a Similar Arrangement

’482 Patent Figures 1 and 6



Mabuchi Figure 1



Petitioner Therabody Ex-1035, 0049

Mabuchi at Fig. 1 (annotated)

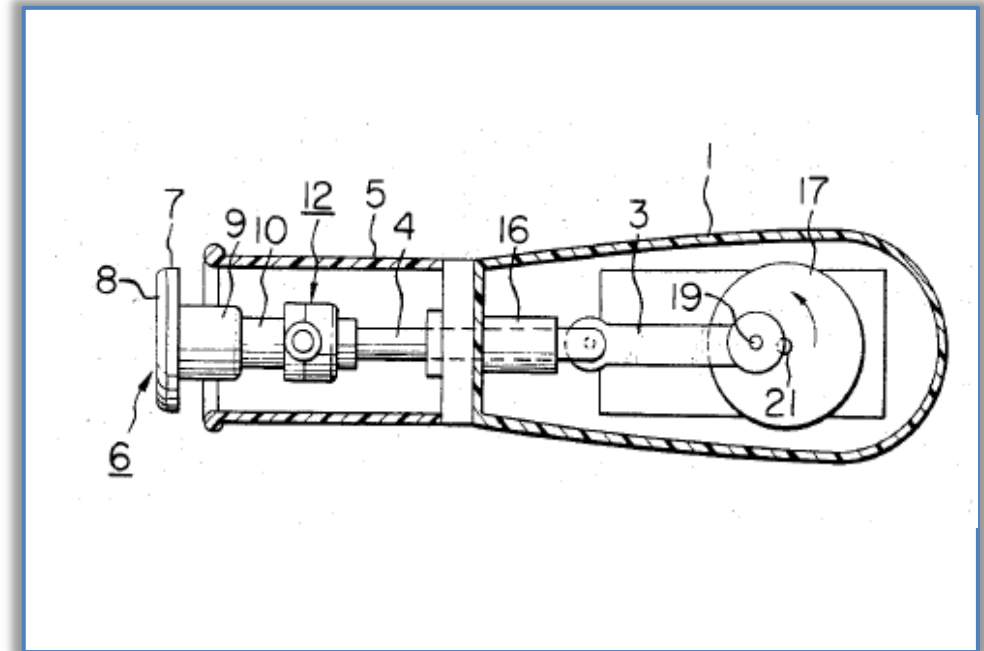
Mabuchi Teaches a Device That Repeatedly Impacts the Skin at a Given Speed, Stimulating the Muscular Tissues

1. Field of the Invention

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

As described above, the beauty treatment device of this invention makes it possible to stimulate subcutaneous muscular tissues and prevent the loosening of the skin by repeatedly patting the skin surface at a given speed. In addition, the beauty treatment device of this

This connecting mechanism 12 utilizing the different polarities of the magnets 43 and 44 ensures positive connection of the actuator 4 and the pater assembly 6, both of which are subjected to vibrations caused by high-speed reciprocating motion. In addition, positive connection can be ensured without positioning the actuator 4 and the pater assembly 6.



Petitioner Therabody Ex-1035, 0050

Mabuchi Teaches a Percussive Massager that Incorporates Additional Beauty-Related Features

2. Description of the Prior Art

It is a wide-spread practice as beauty treatment to repeatedly tap or pat the skin surface with fingertips or palms. Conventionally, various apparatuses have been invented to produce similar face-lifting effects, in which included are an apparatus for applying vibrations to the skin surface and an apparatus for patting part of the body.

The vibrator, however, only presses and/or kneads the skin, causing the skin to stretch. This may result in loosening of the skin or wrinkles in some cases. On the other hand, the conventional patting device which is intended mainly for the massage of the muscular tissues, not for beauty treatment of the skin. In this sense, the conventional patting device belongs to the category of massager.

It is an object of this invention to provide a beauty treatment device which repeatedly pats the skin by causing a pater or pater assembly to hit the skin at a given rate to impact the skin surface.

It is another object of this invention to provide a beauty treatment device having such a construction that a space guide is provided to maintain a distance between a device body and the skin surface being patted, and both a plate member and a cushion member comprising a pater assembly fitted to an actuator are adapted to protrude slightly from the end face of the space guide.

Petitioner Therabody Ex-1035, 0051

PO Claims That Mabuchi's Space Guide and Patter Assembly Prevent it From Operating as a Percussive Massager

PO's Response

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 patter 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 patter 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.

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.

Petitioner Therabody Ex-1035, 0052

But PO Admits That Without These Features Mabuchi Would Operate As a Percussive Massager

PO's Response (Space Guide):

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 patter 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*;

PO's Response (Patter Assembly):

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 patter 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.

Petitioner Therabody Ex-1035, 0053

Patent Owner's Distinction of Rhodes Is Not Applicable to Mabuchi

Patent Owner's Position

"During prosecution, Applicant distinguished Rhoades from the claimed percussive massager on this same basis, arguing that 'Rhoades is directed to a cosmetic instrument ... that is not a percussive massager' because it "perform[s] [treatments] on the surface of the skin, rather than massage treatments." Ex. 1004, p.2534."

Rhoades

[0032] In addition to the treatment specified above, according to embodiments, skin and body parts, as described above, may be treated by applying oxygen, illuminating with light, radiating cold into, or radiating heat onto the skin and body part. Thus, one or more (e.g., a series) of these rejuvenation, oxygenating, lighting, cooling, heating, cleansing, and/or polishing treatments may be used to improve the skin and body parts subject to the treatment. Such improvements include improvement in the appearance of fine lines, wrinkles, stretch marks, acne, large pores, sluggish skin, non-inflammatory acne, acne scars, surgical scars, rough or coarse textured skin, age spots, blotchy skin conditions, burns, wounds, abrasions, and sun damaged skin. In addition, such treatments include rejuvenation, cleansing, and/or polishing of the skin to soften the skin, smooth the skin, soothe the skin. For example, one or more treatments may be used to treat the skin and body parts, such as to improve the appearance and texture of the skin and reducing roughness, rough patches, and callused skin.

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 padder assembly 6. In addition, these effects can be enhanced by changing the shape or patting intensity of the padder assembly 6 or using a magnet as a part of the padder assembly 6 in accordance with the portion being treated or the purpose of treatment. To achieve this, the padder assembly 6 requires to be interchangeable. Furthermore, the padder assembly 6 must be securely connected to the actuator 4 to prevent unwanted disengagement.

Petitioner Therabody Ex-1035, 0054

Patent Owner's Has Accused Therabody's Theraface Pro—A Beauty Product—of Being a “percussive massager”

U.S. Patent No. 11,857,482	<u>TheraFace PRO</u>
	The accused product is a percussive massager:
	
34. A percussive massager comprising:	

Therabody® Launches First-of-its-Kind TheraFace PRO™ – Creating New Facial Health Category and Redefining the Way People Care for their Face

APRIL 8, 2022

TheraFace PRO offers six unique modalities:

- **Percussive facial therapy:** Reduces tension and relaxes facial muscles, including three attachments. Theragun’s proprietary percussive therapy is defined as having a unique combination of frequency, amplitude and torque which offer 16mm of muscle depth, TheraFace PRO’s amplitude is at 3mm muscle depth which makes it perfect for facial muscle relaxation.
 - Flat: General use for the entire face, neck, and chest
 - Cone: More precise treatment for targeted areas such as around the eyes, smile lines, and pressure points
 - Micropoint: Maximizes circulation in larger areas such as the forehead, cheeks, and chest

Petitioner Therabody Ex-1035, 0055

Overview

- '482 and '082 Patents
- Overview of the prior art
- Claim Construction
- Percussive Massager Limitations (Mabuchi Grounds 482 and 082)
- Quick Release Connector Limitations (Mabuchi and Pivaroff Grounds)
- Motor Housing Limitations (Pivaroff)
- Motivations
- Written Description

Petitioner Therabody Ex-1035, 0056

Mabuchi Teaches the “quick release connector” and “quick-connect system” Limitations

'482 Patent Claim 34

34. A percussive massager comprising:
a housing;
a piston in the housing having a proximal end and a distal end;
a motor at least partially within the housing and operatively connected to the proximal end of the piston, wherein the motor is configured to cause the piston to reciprocate at a first speed;
a drive mechanism between the motor and the piston that controls a predetermined stroke length of the piston; and
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 1

1. A percussive massager comprising:
a housing;
a piston having a proximal end and a distal end, the distal end of the piston having a bore;
a motor operatively connected to the proximal end of the piston, wherein the motor is configured to cause the piston to reciprocate at a first speed;
a drive mechanism that controls a predetermined stroke length of the piston; and
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.

Petitioner Therabody Ex-1035, 0057

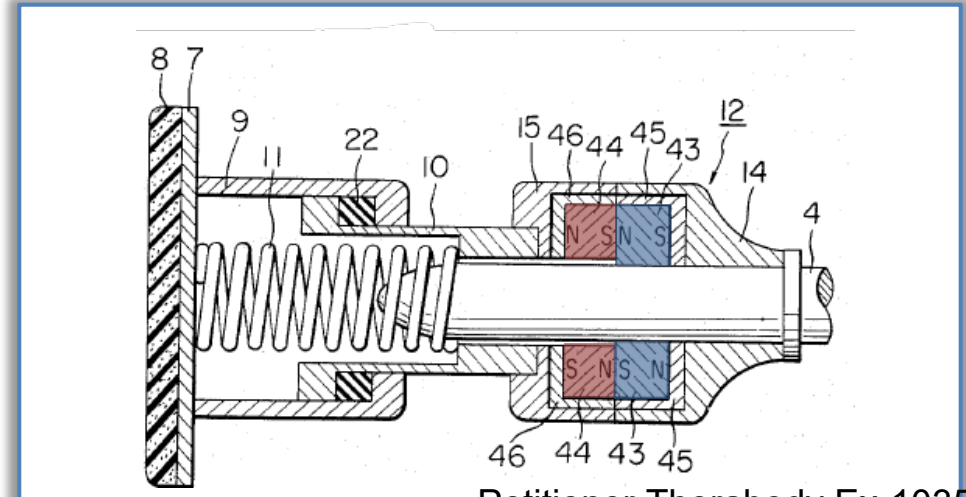
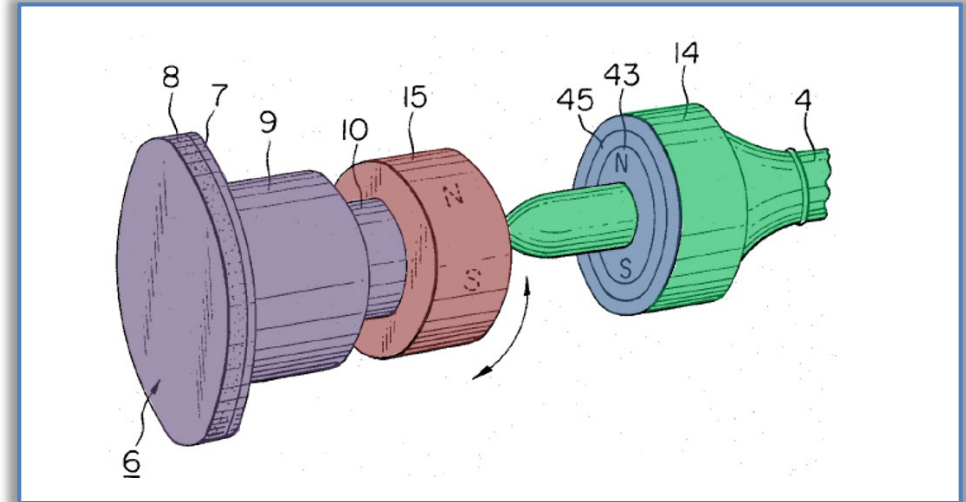
'482 Reply (Paper 29) at 17-21; '482 POR (Paper 27) at 53-63; '482 Sur-reply (Paper 39) at 20-26; '082 POR (Paper 22) at 53-63; '082 Reply (Paper 24) at 17-21; and '082 Sur-Reply (Paper 34) at 20-26

Mabuchi Discloses Easy Attachment and Removal of the Patter Assembly

When connecting the patter assembly 6 to the actuator 4, the end face of the actuator is brought in close contact with the end face of the flange 15. This causes the magnet 43 implanted in the coupling 14 and the magnet 44 implanted in the flange 15 to attract with each other, bringing the actuator 4 and the patter assembly 6 in position.

This connecting mechanism 12 utilizing the different polarities of the magnets 43 and 44 ensures positive connection of the actuator 4 and the patter assembly 6, both of which are subjected to vibrations caused by high-speed reciprocating motion. In addition, positive connection can be ensured without positioning the actuator 4 and the patter assembly 6.

The changing of the patter assembly 6 can be easily accomplished since the actuator 4 and the patter assembly 6 are automatically disconnected merely by turning each other.



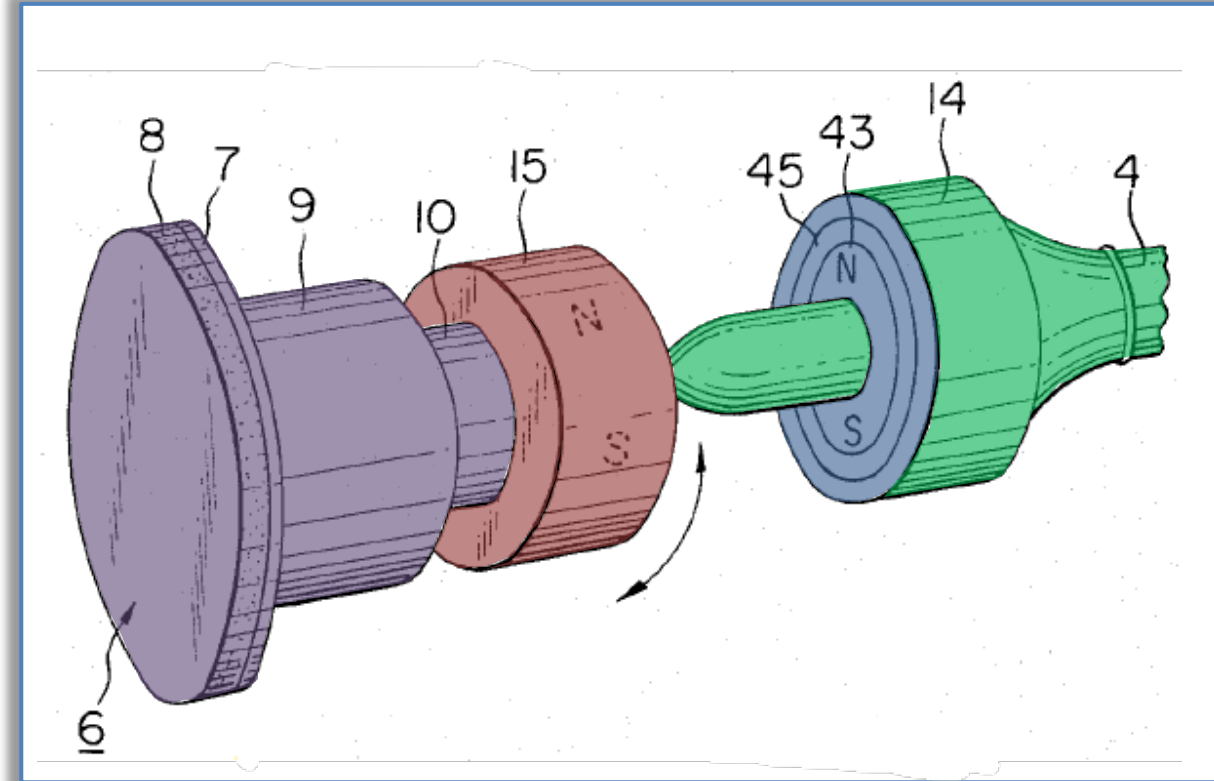
Petitioner Therabody Ex-1035, 0058

Mabuchi Discloses Easy Attachment and Removal of the Patter Assembly

'482 Patent Claim 34

34. A percussive massager comprising:

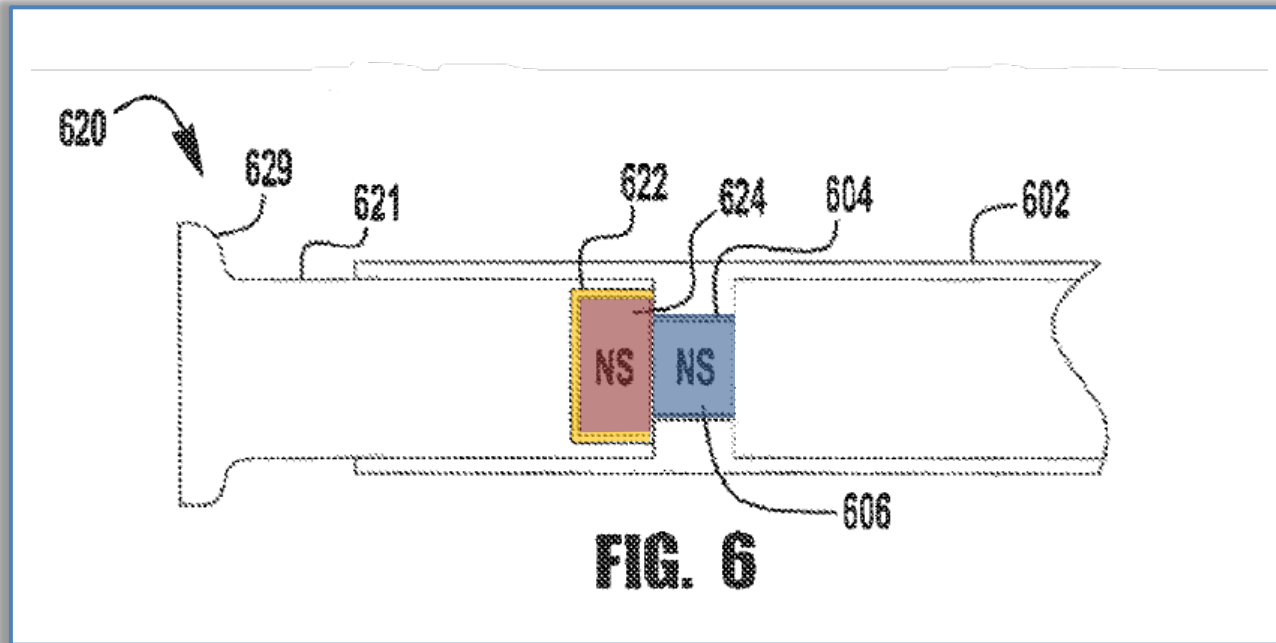
- a housing;
- a piston in the housing having a proximal end and a distal end;
- a motor at least partially within the housing and operatively connected to the proximal end of the piston, wherein the motor is configured to cause the piston to reciprocate at a first speed
- a drive mechanism between the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



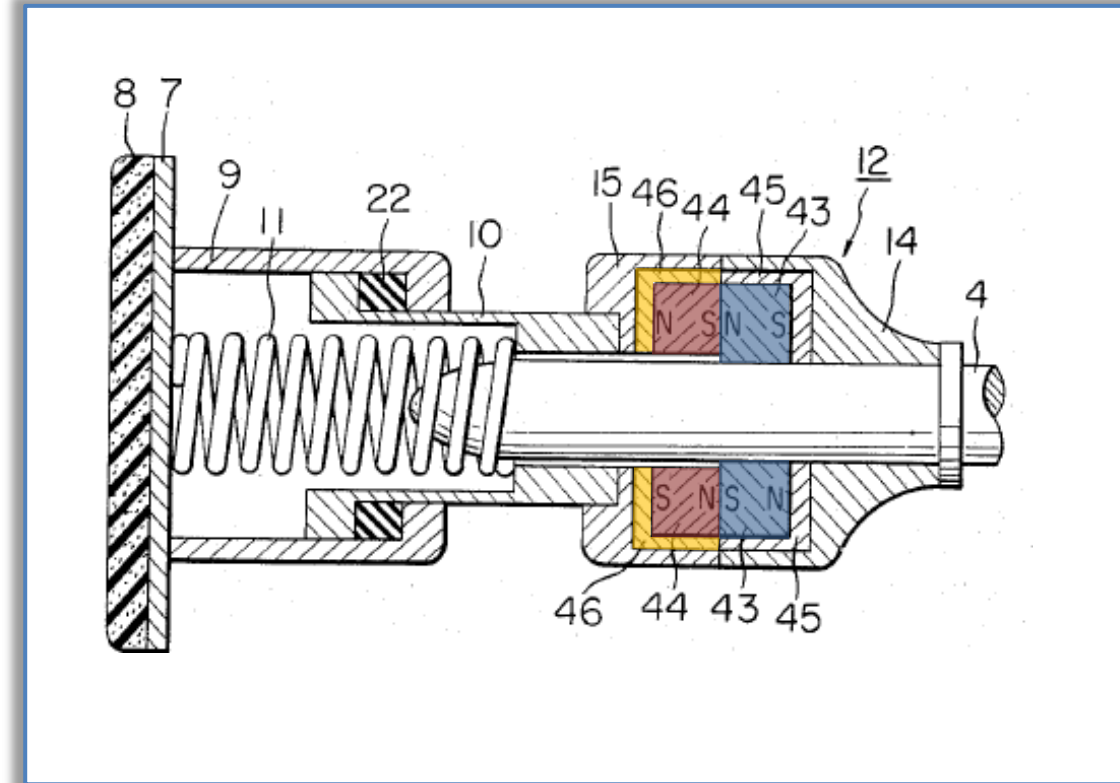
Petitioner Therabody Ex-1035, 0059

Mabuchi Discloses A Nearly Identical Connection Mechanism As The '482 and '082 Patents

'482 Patent Figure 6



Mabuchi Figure 18



Petitioner Therabody Ex-1035, 0060

Ex-1005, Fig. 18 (annotated), '482, Fig. 6 (annotated) '482 Petition (Paper 2) at 37-42; see also '082, Fig. 6; '082 Petition (Paper 2) at

40-44

Mabuchi's Patter Assembly Can Be Secured While It Reciprocates, Regardless of the Space Guide

PO Response

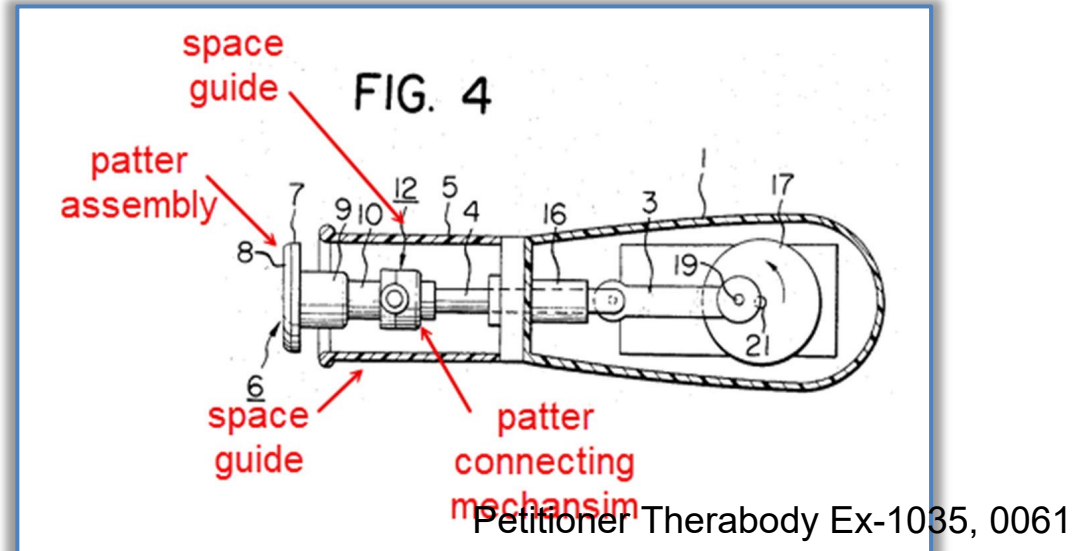
Petitioner fails to consider that replacing the patter assembly 6 would require removing the space guide 5 so that the patter assembly 6 could be inserted into or removed from the actuator 4 while it reciprocates. Indeed, attempting to insert or remove the patter assembly 6 without removing the space 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.

Mabuchi

When connecting the patter assembly 6 to the actuator 4, the end face of the actuator is brought in close contact with the end face of the flange 15. This causes the magnet 43 implanted in the coupling 14 and the magnet 44 implanted in the flange 15 to attract with each other, bringing the actuator 4 and the patter assembly 6 in position.

This connecting mechanism 12 utilizing the different [polarities] of the magnets 43 and 44 ensures positive connection of the actuator 4 and the patter assembly 6, both of which are subjected to vibrations caused by high-speed reciprocating motion.

Mabuchi



The Petition Demonstrates How Mabuchi Satisfies Therabody's District Court Claim Construction Proposal

Petition

Mabuchi discloses a quick release connector at the distal end of actuator 4.

Ex-1002 ¶109. In particular, the “patter connecting mechanism” in Mabuchi’s Figures 18 and 19 (shown below) includes magnet 43 implanted in the coupling 14 and the protruding actuator head, all located at the distal end of actuator 4. Ex-1005, 7:67-8:10. These elements form a quick release connector: “The changing of the patter assembly 6 can be easily accomplished since the actuator 4 and the patter assembly 6 are automatically disconnected merely by turning each other.” *Id.*, 8:40-43.

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*

The Petition Demonstrates How Mabuchi Satisfies Therabody's District Court Claim Construction Proposal

Petition

Mabuchi also discloses that the quick release connector “is configured to secure a first massaging head while the piston reciprocates a predetermined stroke length at the first speed.” Ex-1002 ¶¶110-116. For example, Mabuchi discloses that patten assembly 6 (i.e., the “first massaging head”) is configured to be attached to actuator 4 merely by “the end face of the actuator [being] brought in close contact with the end face of the flange 15.” Ex-1005, 8:26-28. “This causes the magnet 43 implanted in the coupling 14 and the magnet 44 implanted in the flange 15 to attract with each other, bringing the actuator 4 and the patten assembly 6 in position.” *Id.*, 8:28-32. Mabuchi teaches that this design prevents the patten assembly 6 from unintentionally separating from the actuator 4 during use, yet allows a user to quickly remove and replace the patten assembly 6:

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*

Petitioner Therabody Ex-1035, 0063

The Petition Demonstrates How Mabuchi Satisfies Therabody's District Court Claim Construction Proposal

Petition

A person of ordinary skill in the art would understand that the Mabuchi patter connecting mechanism is configured to secure the massage head while the piston reciprocates a predetermined stroke length at a first speed. Ex-1002 ¶¶110-113. Mabuchi discloses that the purpose of the patter connecting mechanism is to allow for “changing the shape or patting intensity of the patter assembly 6 . . . in accordance with the portion being treated or the purpose of treatment,” and thus patter assembly 6 must be “interchangeable” while also “securely connected to the actuator 4 to prevent unwanted disengagement.” Ex-1005, 5:52-64. The patter connecting mechanism of Figures 18 and 19 utilizes the “attracting force caused by different polarities on the two magnets 43 and 44.” *Id.*, 8:11-15. Mabuchi notes that the device can be operated before the patter assembly 6 is connected: “In this state, or in the state where the actuator 4 is connected to the patter assembly 6, the patter assembly 6 is operated.” *Id.*, 8:15-18 (emphasis added). And Mabuchi discloses that magnet 43 in coupling 14 and magnet 44 inside flange 15 “ensures positive connection of the actuator 4 and the pattern assembly 6, both of which are subjected to vibrations caused by high-speed reciprocating motion.” *Id.*, 8:33-37.

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*

Petitioner Therabody Ex-1035, 0064

The Petition Demonstrates How Mabuchi Satisfies Therabody's District Court Claim Construction Proposal

Petition

Moreover, Mabuchi discloses that, using this patten connecting mechanism, a “positive connection can be ensured *without positioning* the actuator 4 and the patten assembly 6.” *Id.*, 8:33-39 (emphasis added). A POSITA would understand that configuring a connecting system to ensure a positive connection without positioning (i.e., aligning) the actuator 4 and the patten assembly 6 suggests that the connecting mechanism is configured to secure the patten assembly to the actuator while the actuator is reciprocating. Ex-1002 ¶113. This is confirmed by the file history, where the Applicants distinguished a prior art device by arguing that its head “*must be aligned* in one orientation” to secure it to the piston, and thus failed to teach or suggest a similar limitation of a “quick release connector is configured to connect the first massaging head while the piston moves between the minimum reciprocation stroke length and the maximum reciprocation stroke length at the first speed.” Ex-1004 at 2356-57; Ex-1002 ¶¶114-116. In other words, 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. Ex-1002 ¶116.

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*

Petitioner Therabody Ex-1035, 0065

Mabuchi's Patter Assembly Does Not Require Alignment of Magnetic Connector

PO sur-reply

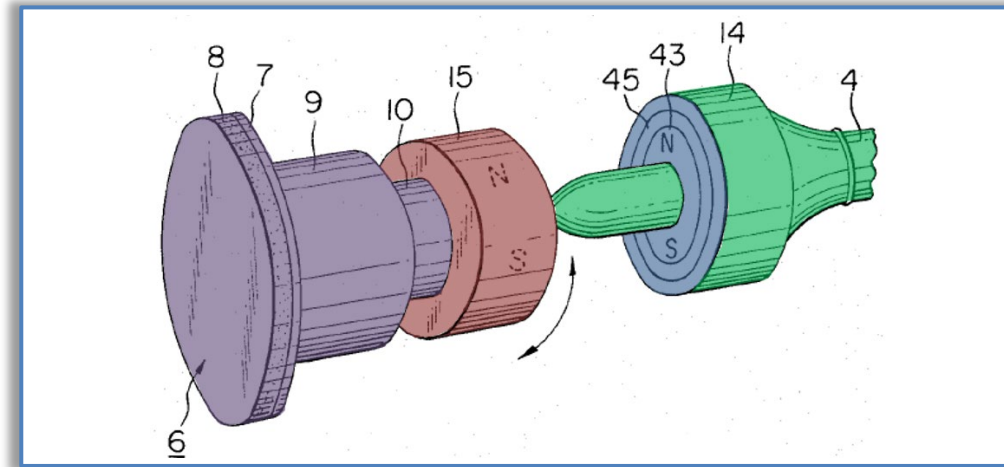
As best understood, Petitioner's broader post-grant construction of Element 34[e] is "a connection mechanism where the massaging head is designed to be secured without the need to align it to the piston." Pet., p.40. Fatal to Petitioner's argument, Mabuchi's magnetic connection system requires alignment for connection.

Mabuchi

When connecting the patter assembly 6 to the actuator 4, the end face of the actuator is brought in close contact with the end face of the flange 15. This causes the magnet 43 implanted in the coupling 14 and the magnet 44 implanted in the flange 15 to attract with each other, bringing the actuator 4 and the patter assembly 6 in position.

This connecting mechanism 12 utilizing the different polarities of the magnets 43 and 44 ensures positive connection of the actuator 4 and the patter assembly 6, both of which are subjected to vibrations caused by high-speed reciprocating motion. In addition, positive connection can be ensured without positioning the actuator 4 and the patter assembly 6.

Mabuchi



Petitioner Therabody Ex-1035, 0066

'482 Petition (Paper 2) at 39-42'482 PO Sur-reply (Paper 29) at 24; '482 Reply (Paper 27) at 19-20;

Ex-1005 at 8:26-39, Fig. 19 (annotated)

Overview

- '482 and '082 Patents
- Overview of the prior art
- Claim Construction
- Percussive Massager Limitations (Mabuchi Grounds 482 and 082)
- Quick Release Connector Limitations (Mabuchi and Pivaroff Grounds)
- **Motor Housing Limitations (Pivaroff)**
- Motivations
- Written Description

Petitioner Therabody Ex-1035, 0067

Pivaroff's Motor Is “ at least partially within the housing”

'482 Patent Claim 34

34. A percussive massager comprising:
a housing;
a piston in the housing having a proximal end and a distal end;
a motor at least partially within the housing and operatively connected to the proximal end of the piston, wherein the motor is configured to cause the piston to reciprocate at a first speed;
a drive mechanism between the motor and the piston that controls a predetermined stroke length of the piston;
and
a quick release connector at the distal end of the piston, wherein the quick release connector is configured to secure a first massaging head while the piston reciprocates a predetermined stroke length at the first speed, wherein the first massaging head has a substantially cylindrical pocket to receive the quick release connector.

Petitioner Therabody Ex-1035, 0068

'482 Reply (Paper 29) at 26-27; '482 Sur-reply (Paper 39) at 29-30

Pivaroff Discloses That Its Hollow Handle Contains the Motor, Thereby Acting as a Housing for the Motor

As shown in the drawings, 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**.

The elongated handle **14** is preferably made of metal, such as stainless steel or titanium, and includes an on/off switch **18** and an electric cable connection port **20**, preferably formed flush with a bottom surface **22** of the handle **14**. An electrical motor **24** is mounted within the elongated, hollow handle **14**, and includes a central rotary arbor or shaft **26**, driven by the motor. The rotary shaft **26** is coupled by any

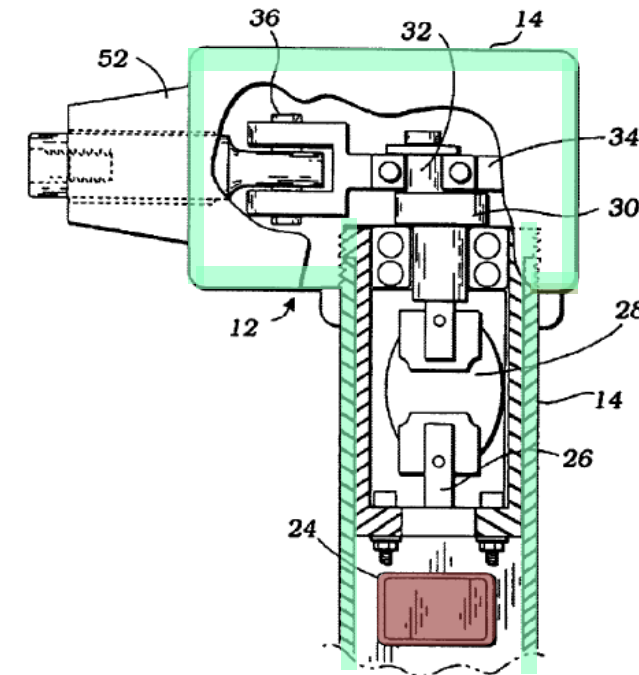


Fig. 6

Petitioner Therabody Ex-1035, 0069

Ex-1007, 2:30-40; Fig. 6 (annotated)

PO Rejects its Own Expert's View and Assumes "housing" in Pivaroff Is Coextensive with the Claimed "housing" in the '482 Patent

PO sur-reply

The motor 24 is *entirely* in the handle 14 and *entirely* outside of the housing 16. POR, pp.77-78. No amount of obfuscation or **contrary expert testimony** can overcome Pivaroff's express disclosure.

Petitioner attempts to twist the record by asserting that the claimed "housing" includes Pivaroff's handle 14. First, this ignores the disclosures of both the '482 Patent and Pivaroff, which separately describe the housing and handles. POR, p.79.

PO's Expert

20 Q. Generally, in your experience as a
21 mechanical engineer, are you familiar with
22 housings?

23 A. **I am familiar with housings.**

24 Q. What is -- what are housings?

25 A. **Housings typically are the outer component**
1 **that contains the movable parts within it** or parts
2 of the machine itself.

482 Patent

Main housing 102 contains a first cavity **281**. Upper housing **104** contains a second cavity **282**. First cavity **281** and second cavity **282** are separated by a barrier **280**. **Motor housing 209** and **drive housing 218** are located in the first cavity **281**. Heat sink **220** is located in second cavity **282**. The exemplary embodiment describes **a main housing 102 and upper housing 104. These may be portions made up of a single structure or multiple structures secured to each other.**

Petitioner Therabody Ex-1035, 0070

Overview

- '482 and '082 Patents
- Overview of the prior art
- Claim Construction
- Percussive Massager Limitations (Mabuchi Grounds 482 and 082)
- Quick Release Connector Limitations (Mabuchi and Pivaroff Grounds)
- Motor Housing Limitations (Pivaroff)
- **Motivations**
- Written Description

Petitioner Therabody Ex-1035, 0071

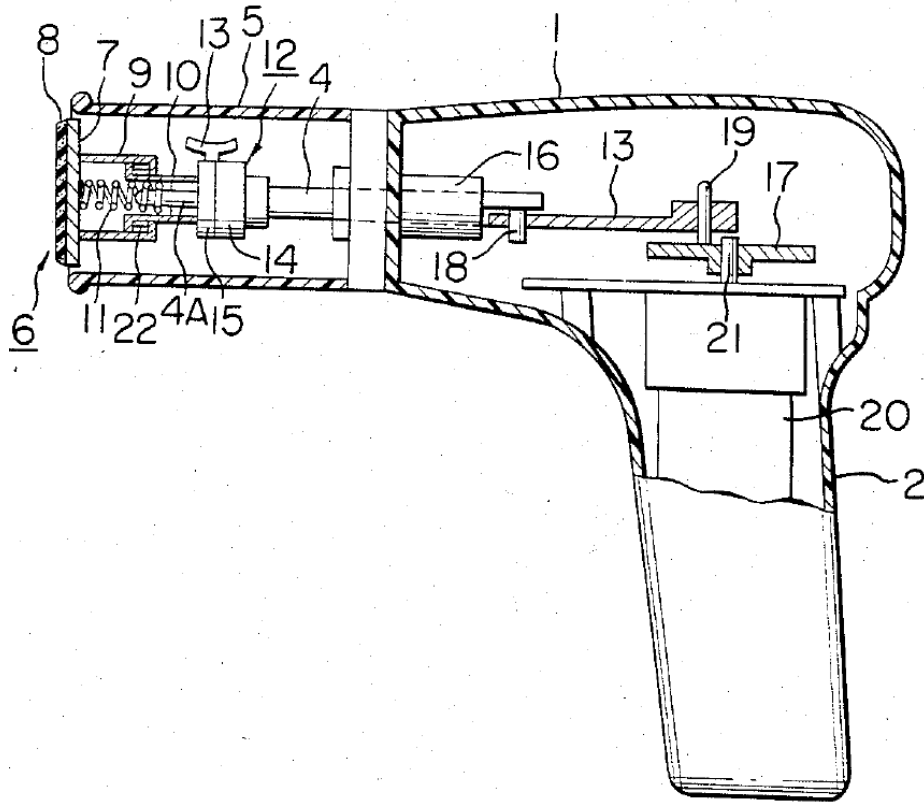
Combinations

- Mabuchi-Harris ('482 Ground 4)
- Mabuchi-Harris-Pivaroff ('482 Ground 5)
- Pivaroff-Mabuchi ('482 Ground 6)
- Pivaroff-Mabuchi-Harris ('482 Ground 7)
- Mabuchi-Colloca ('082 Ground 3)
- Mabuchi-Colloca-Harris ('082 Ground 4)
- Pivaroff-Clark ('082 Ground 5)
- Pivaroff-Clark-Harris ('082 Ground 6)

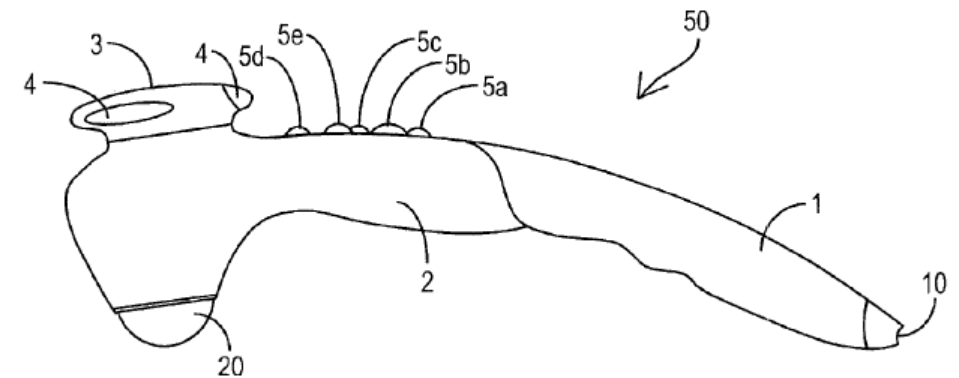
Petitioner Therabody Ex-1035, 0072

A POSITA Would Have Been Motivated To Combine Mabuchi and Harris (Ground 4, '482 Patent)

Mabuchi



Harris



Petitioner Therabody Ex-1035, 0073

A POSITA Would Have Been Motivated to Combine Mabuchi and Harris

Mabuchi and Harris are analogous art

Both relate to massage devices and address similar technical problems (i.e., providing treatment that can vary depending on the user and targeted use).

A POSITA would have had a reasonable expectation of success in combining Mabuchi and Harris

Both teach compatible systems – including similar motor and drive systems that power massagers for similar purposes.

Harris's benefits

The control panel 5 preferably comprises a capacitive switch having an elastomeric membrane activator, sealed to the handle, and covering a plurality of touch sensitive control buttons or switches, including power control button 5a, speed setting control button 5b, LED speed indicator 5c, and various massage program buttons 5d–g for setting massage sensation, intensity and frequency of the vibrations of the percussive massage nodes 20 and vibratory massage head 3.

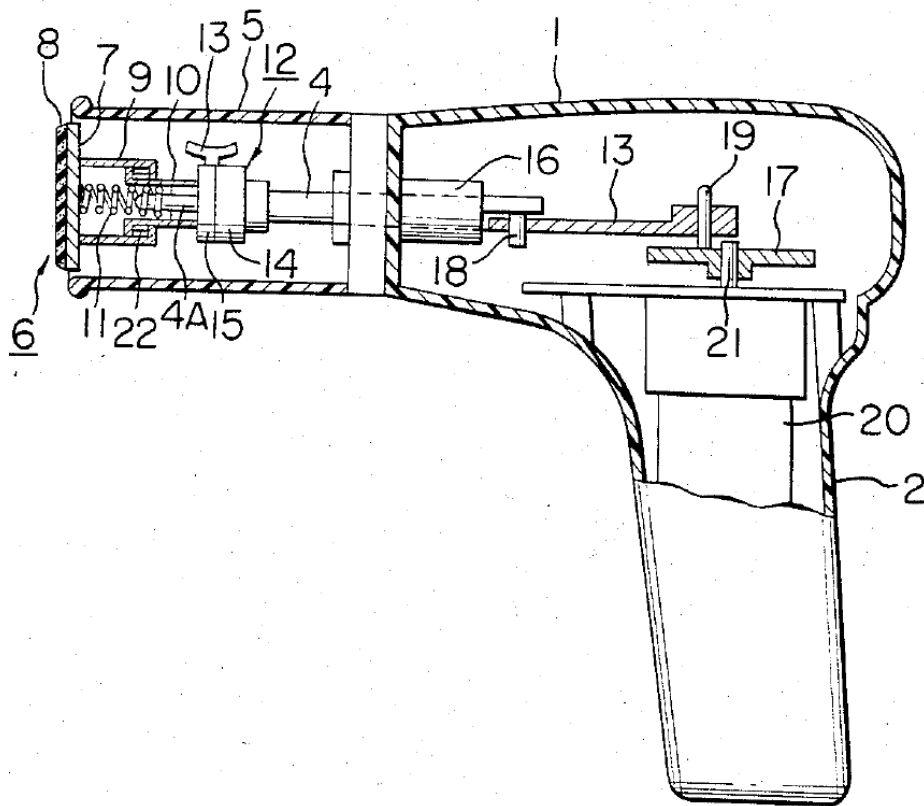
Harris discloses a control panel that allows the motor to be driven at multiple speeds.

Petitioner Therabody Ex-1035, 0074

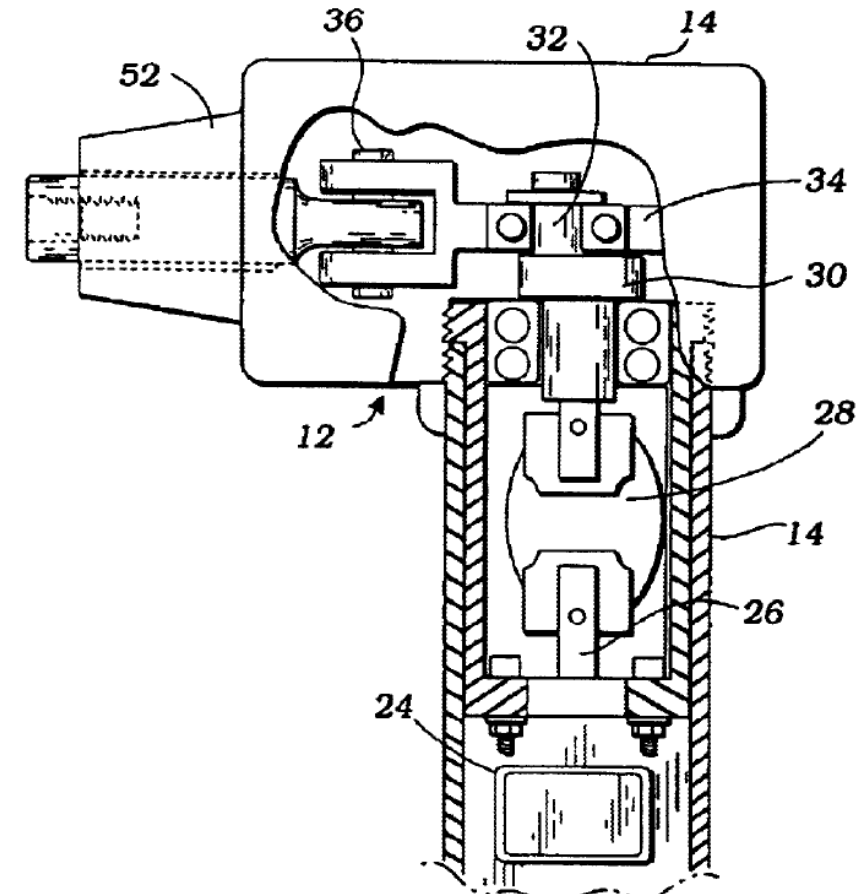
'482 Petition (Paper 2) at 46-48; 1006 at 2:49-57

A POSITA Would Have Been Motivated To Combine Mabuchi with Pivaroff (Ground 5, '482 Patent)

Mabuchi



Pivaroff



Petitioner Therabody Ex-1035, 0075

A POSITA Would Have Been Motivated to Combine Mabuchi-Harris with Pivaroff

Mabuchi and Pivaroff are analogous art

Both relate to massage devices and address similar technical problems (i.e., providing treatment that can vary depending on the user and targeted use). Both also teach removable massaging heads to provide massage.

A POSITA would have had a reasonable expectation of success in combining Mabuchi and Pivaroff

Both teach compatible systems – including similar motor and drive systems that power massagers for similar purposes.

Pivaroff's benefits

Upon operation of the on/off switch **18** the electric motor will be operated. Preferably, the electric motor operates at a speed of between about 2000 to 3600 RPM, so as to rotate the shaft **26** and coupling system **28** at that speed. This rotational speed is transferred to a reciprocating motion, as shown by arrow **56** in FIG. 3, whereby the head **44** is quickly reciprocated back and forth 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.

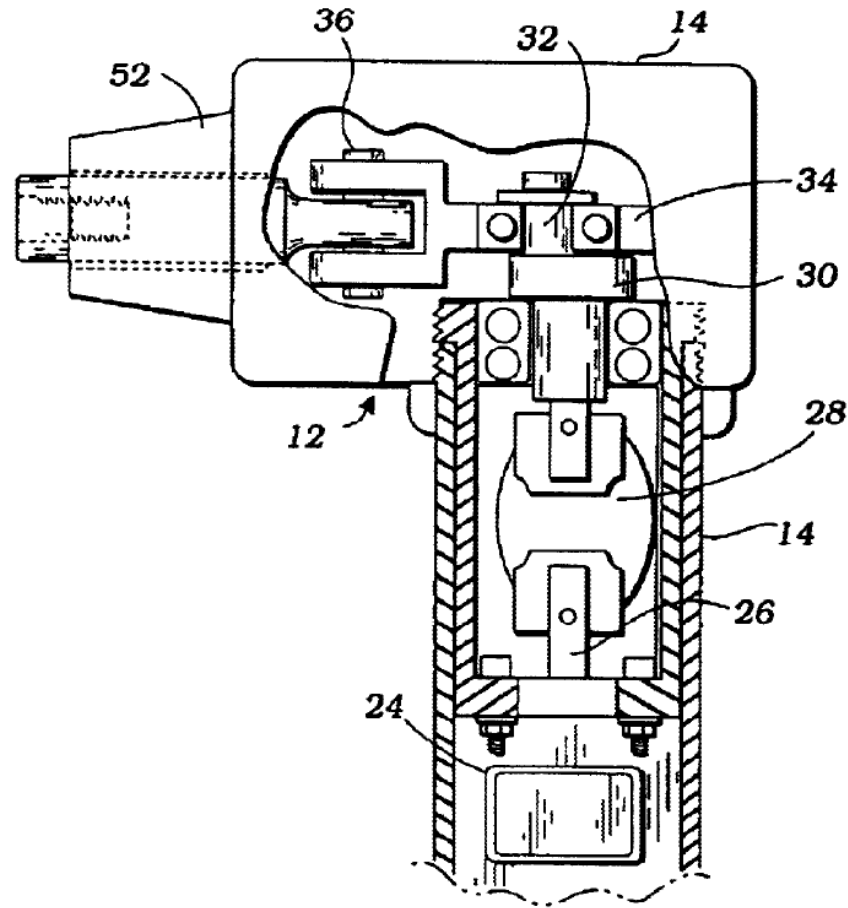
Pivaroff discloses preferred ranges of speed for the reciprocating motion.

Petitioner Therabody Ex-1035, 0076

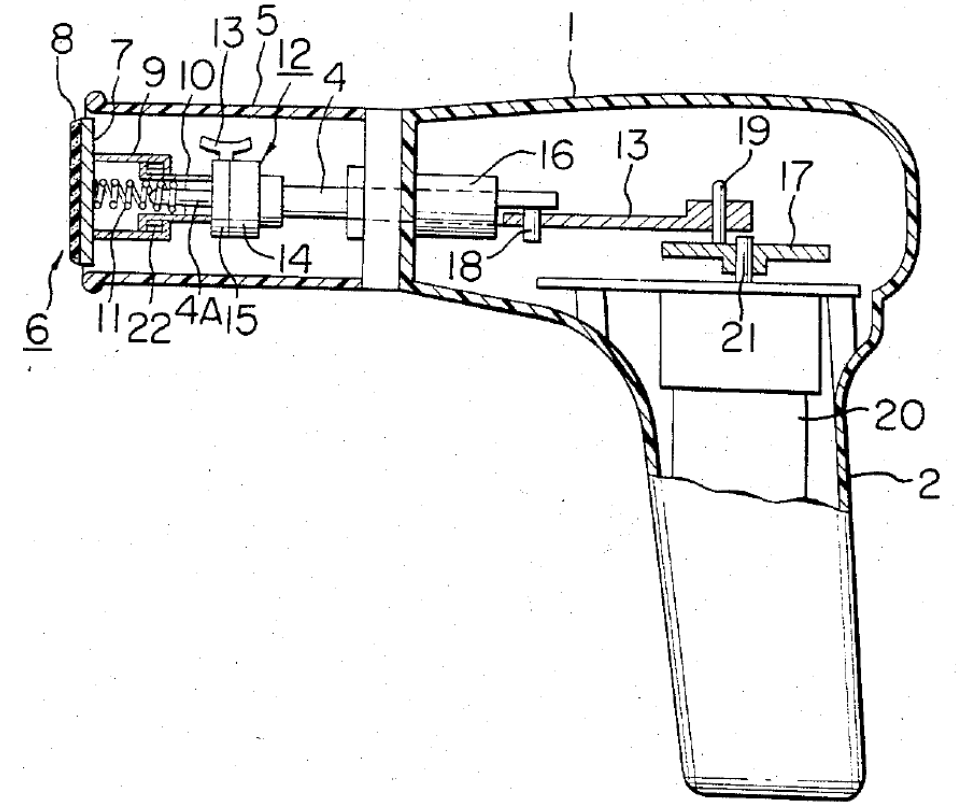
'482 Petition (Paper 2) at 53-56; Ex-1006 at 3:44-54

A POSITA Would Have Been Motivated To Combine Pivaroff and Mabuchi (Ground 6, '482 Patent)

Pivaroff



Mabuchi



Petitioner Therabody Ex-1035, 0077

A POSITA Would Have Been Motivated to Combine Pivaroff and Mabuchi

Pivaroff and Mabuchi are analogous art

Both relate to massage devices and address similar technical problems (i.e., providing treatment that can vary depending on the user and targeted use). Both also teach removable massaging heads to provide massage.

A POSITA would have had a reasonable expectation of success in combining Pivaroff and Mabuchi

Both teach compatible systems – including similar motor and drive systems that power massagers for similar purposes.

Mabuchi's benefits

This connecting mechanism 12 utilizing the different [polarities] of the magnets 43 and 44 ensures positive connection of the actuator 4 and the patten assembly 6, both of which are subjected to vibrations caused by high-speed reciprocating motion.

The changing of the patten assembly 6 can be easily accomplished since the actuator 4 and the patten assembly 6 are automatically disconnected merely by turning each other.

Mabuchi discloses a magnetic connection mechanism.

Petitioner Therabody Ex-1035, 0078

'482 Petition (Paper 2) at 56-58; Ex-1005 at 8:33-43

PO Argues No Motivation to Combine Because Pivaroff Does Not Suggest Replacing Attachment Heads

PO's Sur-Reply (Pivaroff)

Pivaroff does not disclose "different [] heads," it describes "various mixtures of [] granular materials." Ex. 1007, 2:63-67. Pivaroff also does not disclose any advantages of the different mixtures. Ex. 2034, 80:8-11. Rather, the different mixtures represent Pivaroff's inventive process that led to *the single mixture* that provides "improved and extraordinary results;" Pivaroff does not suggest ever using the non-preferred mixtures.

Petitioner Therabody Ex-1035, 0079

A POSITA Would Have Understood Pivaroff to Teach or Suggest Interchangeable Heads

The hollow head **44** includes a hollow body **46** and a cap element **48** held thereon, as by means of threads formed there between. The hollow body **46** and cap **48** are preferably formed from titanium, or other suitable metal. The hollow body **46** includes an inner chamber, which contains loosely packed granular material **50**. The granular material is loosely held within the hollow head and only fills between $\frac{1}{4}$ and $\frac{1}{2}$ of the volume of the inner chamber, and preferably about one third. Various granular materials, such as diamond, ruby, copper, bloodstone, garnet, malachite or carbon are mixed together and inserted within the head **50**. It has been found that various mixtures of these granular materials produce improved and superior results. Set forth below in tabular form are various preferred mixtures of the same, in grains, which preferably total between approximately 335 to about 500 grains:

DIA	RUBY	COPPER	BLOODSTONE	GARNET	MALACHITE	CARBON	TOTAL GRAINS
50	100	100	100				350
30	50	200	20			50	350
75		100	50	50	150	50	475
50	150	150	100			50	500
25	100	130	50	25		50	380
15	35	200				100	350
15	40	200				100	355
50	75	100		25		100	350
10	25	200				100	335
25	70	200				100	375
20	30	200			GOLD 20	100	370

Petitioner Therabody Ex-1035, 0080

PO's Expert Acknowledged That Pivaroff Is Not Limited to a Threaded Connection

1 Q. It says: the titanium hollow head being
2 attached to a linkage means coupled to a finger to
3 allow reciprocation of the hollow head a
4 predetermined amount, in a rapid manner, determined
5 by the speed of the electric motor.

6 Do you see that?

7 A. I do see that.

8 Q. Pivaroff doesn't mention a threaded
9 connection there, right? He instead refers to a
10 linkage means?

11 MR. KELLAR: Objection to form.

12 THE WITNESS: He does state a linkage means
13 between the two.

14 BY MR. BERG:

15 Q. As a mechanical engineer, would you
16 understand that there are other linkage means that
17 could be used in addition to a threaded connection?

18 A. Yes, I understand that you could use other
19 means to connect the two together.

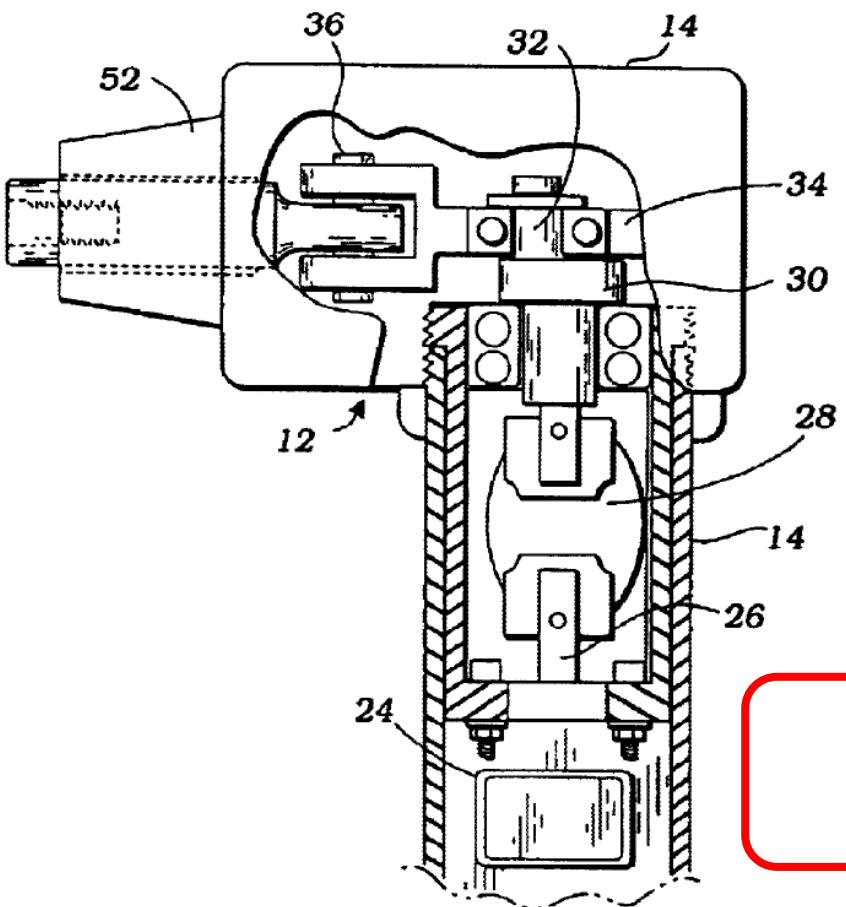
17 Q. And a person of skill in the art would
18 understand that there's multiple types of links
19 that could be used that meet those criteria, right?

20 A. A POSITA would recognize that there are
21 multiple types, and they would have to make sure
22 whatever they use is strong enough to allow for it
23 to reciprocate without coming apart and detached.

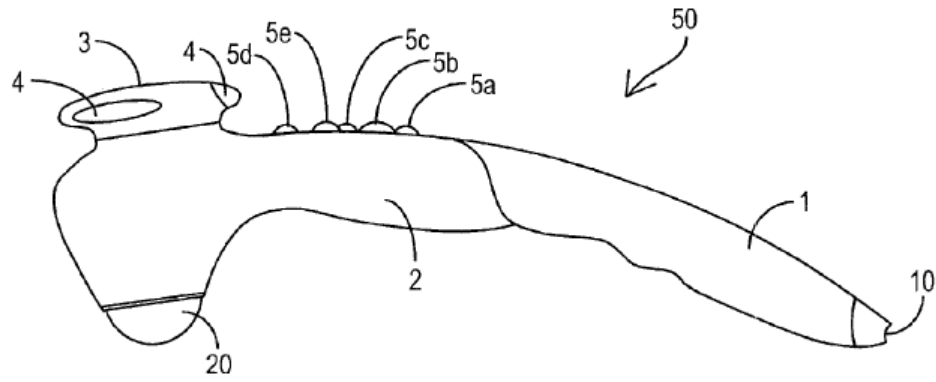
Petitioner Therabody Ex-1035, 0081

A POSITA Would Have Been Motivated To Combine Pivaroff with Harris (Ground 7, '482 Patent)

Pivaroff



Harris

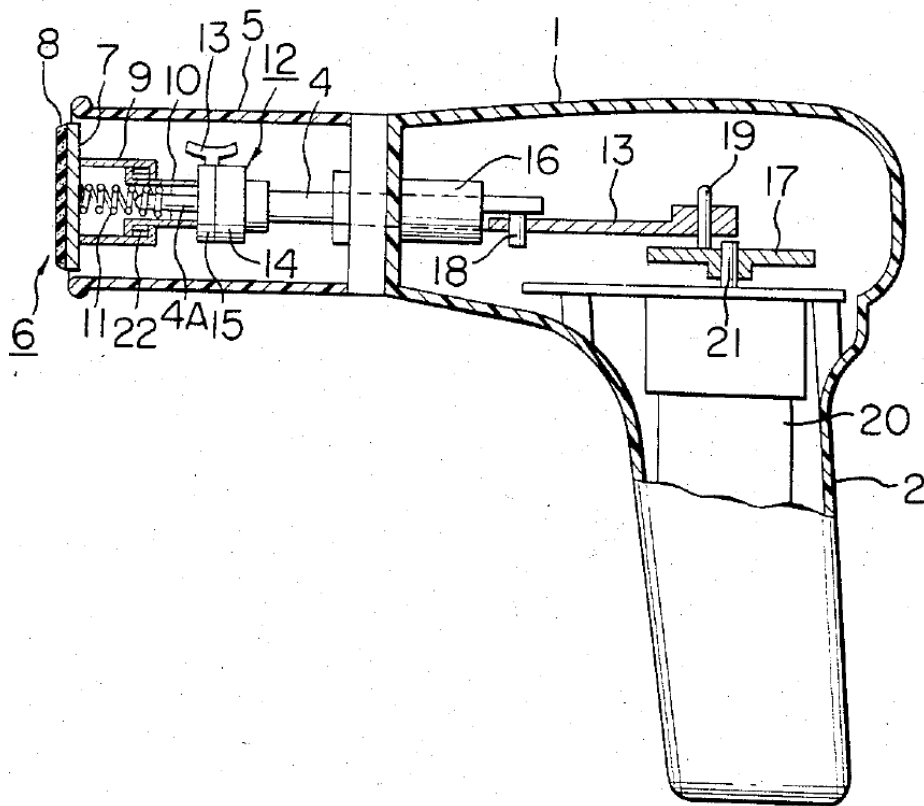


Not Challenged

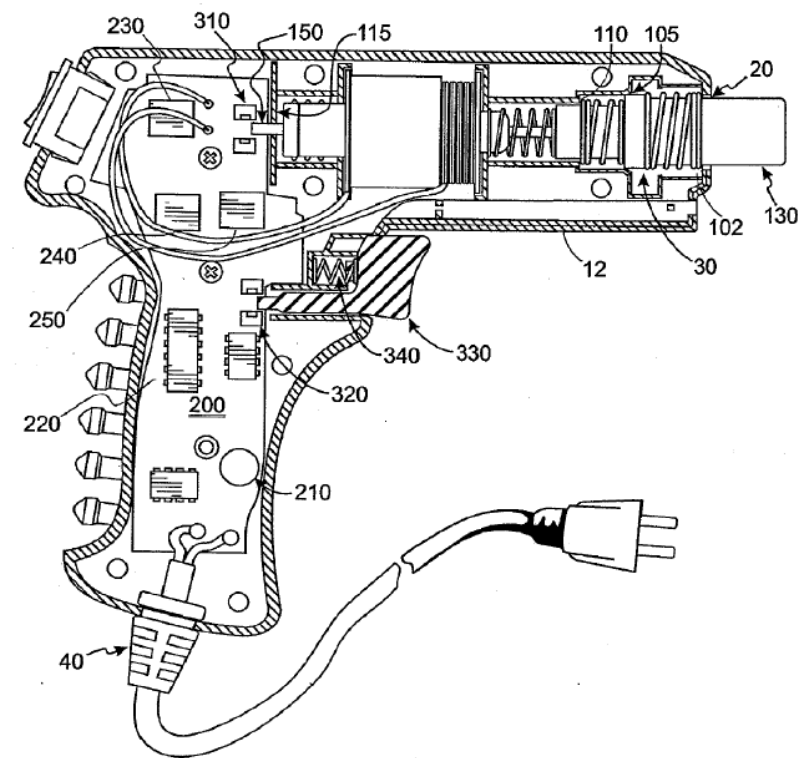
Petitioner Therabody Ex-1035, 0082

A POSITA Would Have Been Motivated To Combine Mabuchi and Colloca (Ground 3, '082 Patent)

Mabuchi



Colloca



Petitioner Therabody Ex-1035, 0083

A POSITA Would Have Been Motivated to Combine Mabuchi and Colloca

Mabuchi and Colloca are analogous art

Both relate to massage devices and address similar technical problems (i.e., providing treatment that can vary depending on the user and targeted use). Both also teach removable massaging heads to provide massage.

A POSITA would have had a reasonable expectation of success in combining Mabuchi and Colloca

Both teach compatible systems – that include interchangeable heads that can easily be inserted or removed.

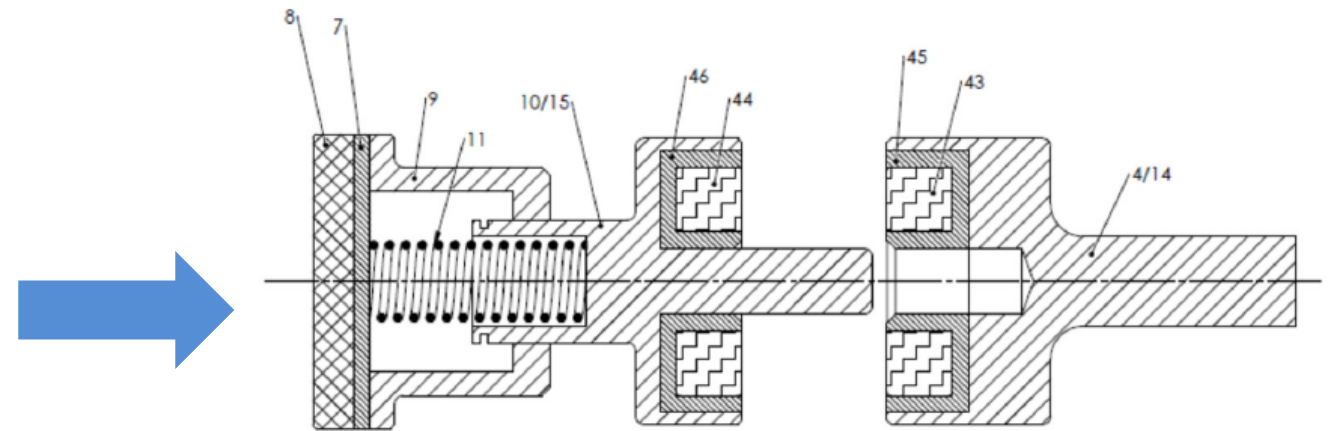
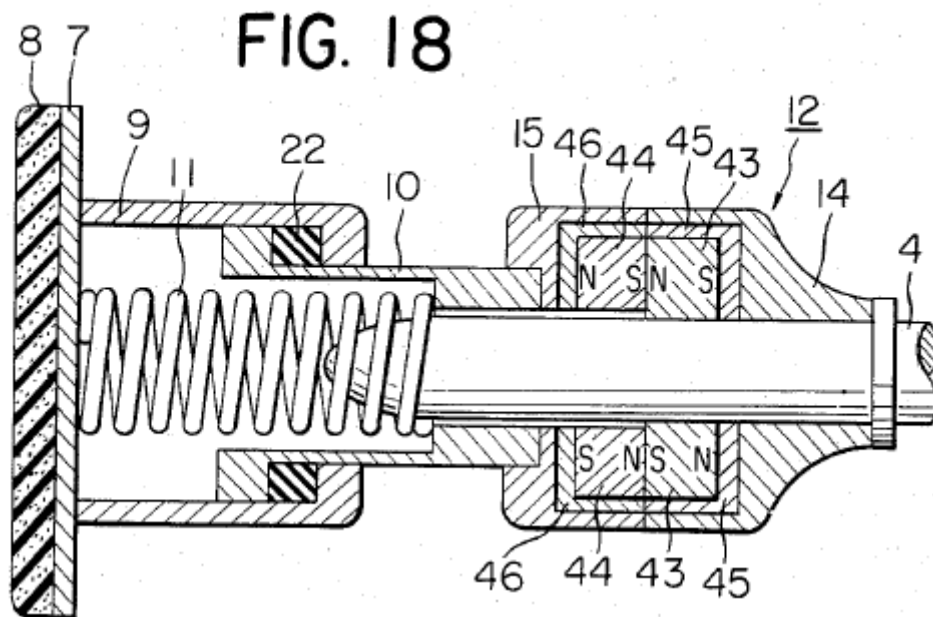
Colloca's benefits

[0034] FIGS. 7-11 show numerous views a preferred embodiment of the components of the electromechanical drive mechanism 100. Specifically, FIG. 11 shows a dampening spring 120, a thrust nose piece 130, a preload spring 145, a preload switch plunger 150 (comprising a plunger rod 151 and an plunger cap 152), a recoil spring 160, a coupler 170, a solenoid 180 having a core 185 and a shock absorber 190. In this preferred embodiment, the thrust nose piece 130 is adapted to be movably mounted in the housing 10 and includes an outer end 136, an outer end shank 138 adapted to couple to at least one impact head 70, and a preload side 131 adapted to couple to the preload switch plunger 145.

Colloca discloses a bore to accept an interchangeable head.

Petitioner Therabody Ex-1035, 0084

A POSITA Would Have Been Motivated to Combine Mabuchi and Colloca



Mabuchi Fig. 18 modified in view of Colloca (Ex-1002 ¶124)

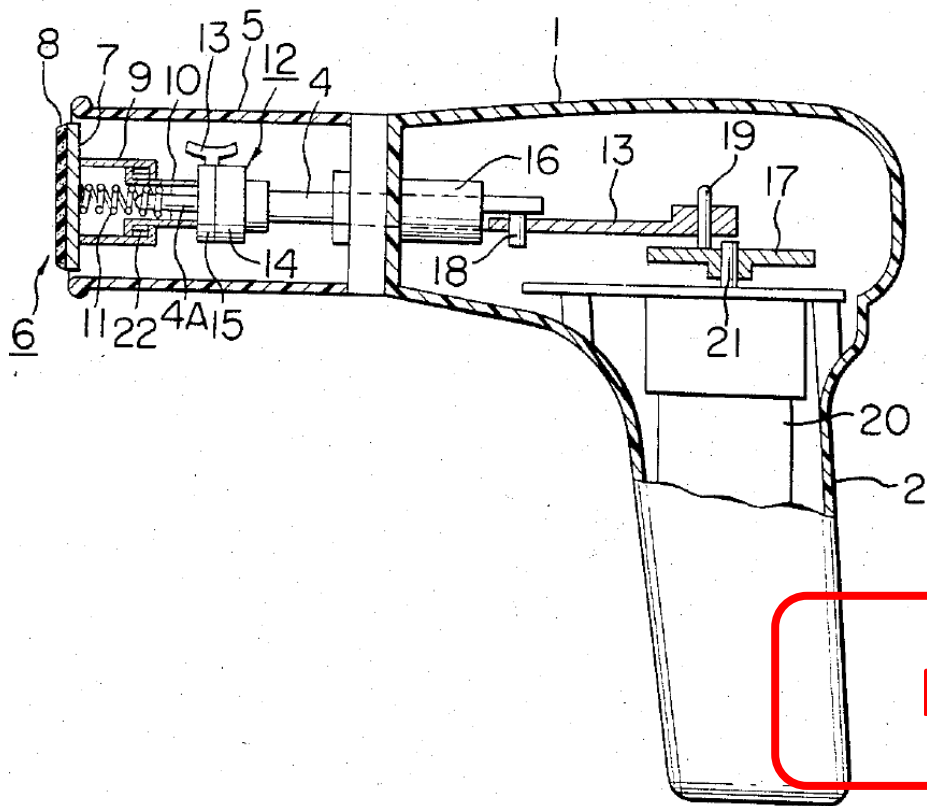
Petitioner Therabody Ex-1035, 0085

Demonstrative Exhibit Not Evidence

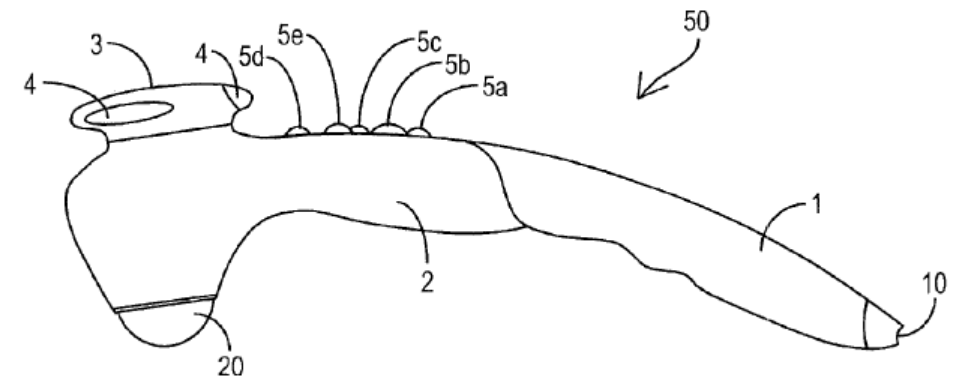
'082 Petition (Paper 2) at 37-39; Ex-1002, ¶¶120-124; Ex-1005, Fig. 18

A POSITA Would Have Been Motivated To Combine Mabuchi-Colloca with Harris (Ground 4, '082 Patent)

Mabuchi



Harris

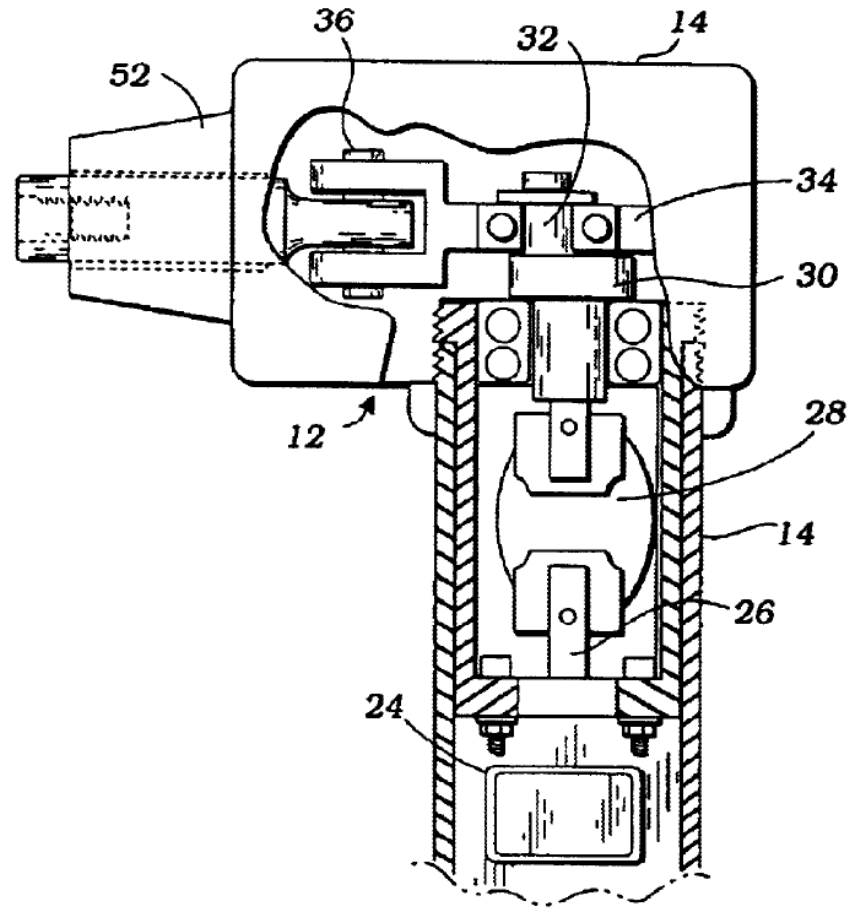


Not Challenged

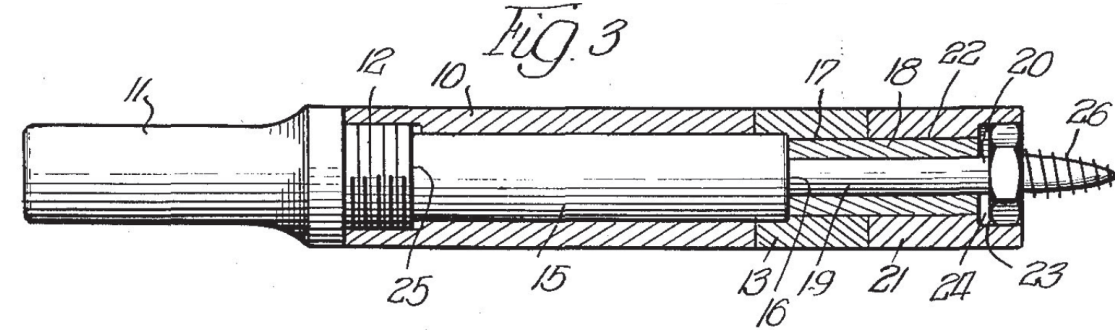
Petitioner Therabody Ex-1035, 0086

A POSITA Would Have Been Motivated To Combine Pivaroff and Clark (Ground 5, '082 Patent)

Pivaroff



Clark



Petitioner Therabody Ex-1035, 0087

A POSITA Would Have Been Motivated to Combine Pivaroff and Clark

Clark is reasonably pertinent to the '082 Patent

Clark addresses the problems of (i) secure retention under dynamic loading, (ii) alignment and guidance into a receiver, and (iii) fast, tool-free interchange.

A POSITA would have had a reasonable expectation of success in combining Pivaroff and Clark

Both teach compatible systems – that include interchangeable heads that can easily be inserted or removed.

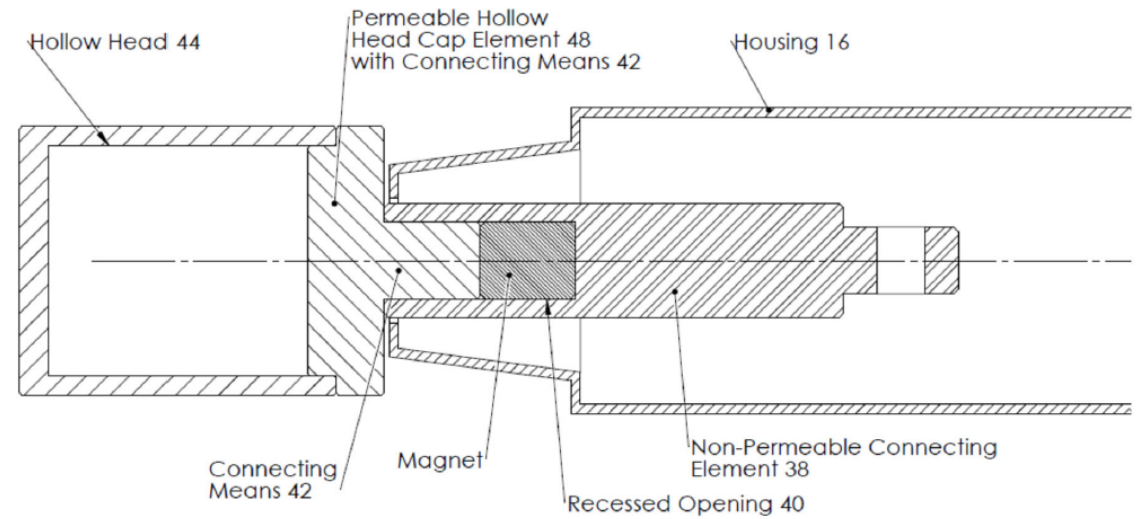
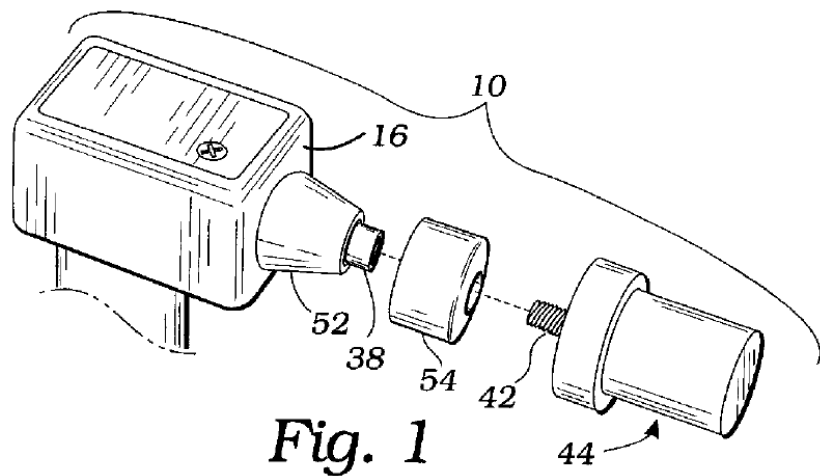
Clark's benefits

It is an object of this invention to provide a new and improved magnetic tool adapted to receive, interchangeably, a plurality of tool endings such as bits, sockets, and the like, but which is capable of driving screws and similar fasteners while the same are magnetically held in contact with the tool.

Clark discloses a magnetic connection to facilitate interchange of tool endings.

Petitioner Therabody Ex-1035, 0088

A POSITA Would Have Been Motivated to Combine Pivaroff and Clark



Pivaroff Fig. 5 modified in view of Clark (Ex-1002 ¶184)

Petitioner Therabody Ex-1035, 0089

PO Argues No Motivation to Combine Because Clark Is Non-Analogous Art

PO's Sur-Reply (Clark)

Petitioner argues that “the engineering problems implicated” by the ’082 Patent include “secure retention under dynamic loading....” Reply, p.26. Dr. Pratt, however, confirmed that the dynamic loading in the ’082 Patent is reciprocation but in Clark the dynamic loading is rotational.

Clark is simply not pertinent to the problem of “a quick-connect system configured to permit insertion/removal of the head’s proximal end while the piston reciprocates,” as Petitioner now characterizes the ’082 Patent, because Clark is silent as to reciprocal motion. Because Clark is not “pertinent to the particular problem with which the inventor is involved,” Clark does not qualify as prior art and Grounds 5 and 6 fail.

Petitioner Therabody Ex-1035, 0090

PO's Reciprocation/Rotational Distinction Is Irrelevant

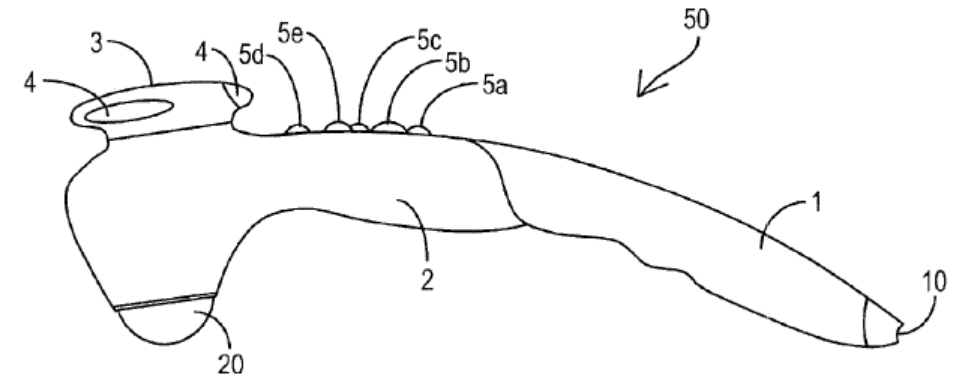
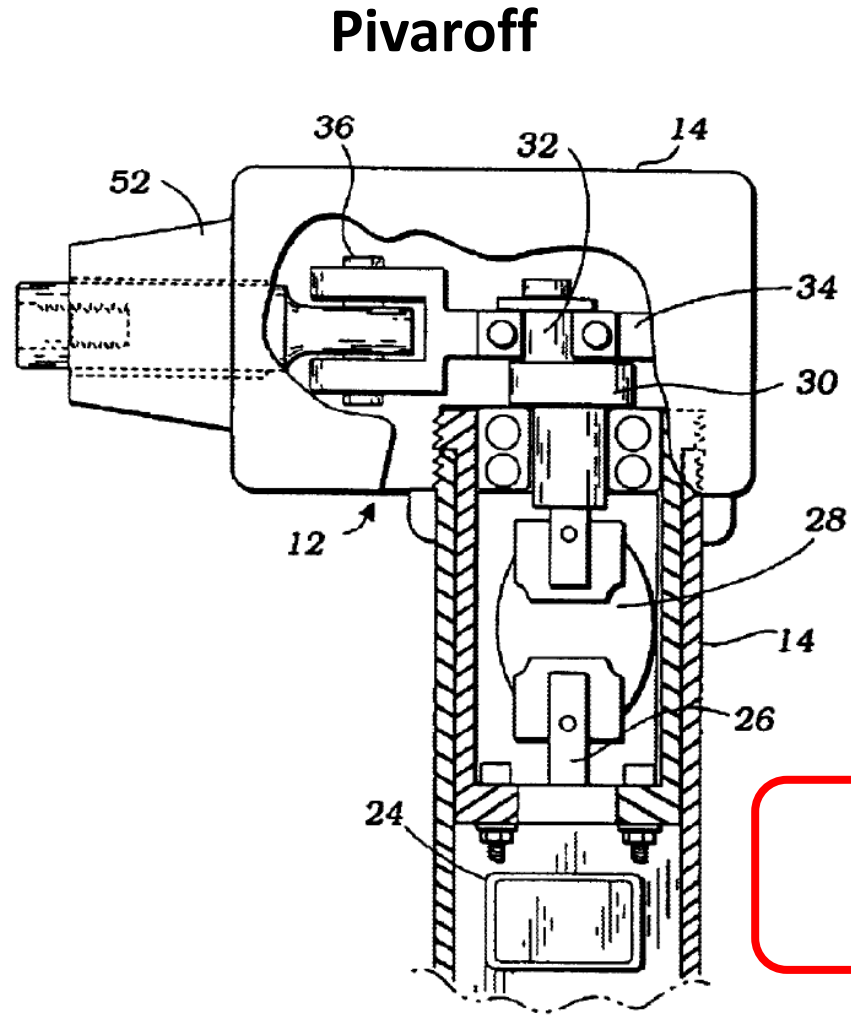
- As Dr. Pratt opined, Clark's teachings of magnet placement, female receiver geometry, and removable workpieces holders are pertinent to the problems of the '082 Patent.

In my opinion, Clark addresses these problems by using a magnetized female receiver architecture that magnetically retains and drives different workpiece holders while allowing rapid substitution. Ex-1014, 1:1-25, 1:66-70, 4:1-3.

75. A POSITA developing the female receiver on the tool side of a percussive device would naturally consult designs for magnetic, quick-change receivers used in hand-held tools. Clark's teachings—magnet placement, female-receiver geometry, and removable workpiece holders—directly address the coupling problem addressed by the '082 Patent. A POSITA would view Clark as a blueprint for a magnetic, female-side receiver and would then dimension the magnet, seat, and geometry for the percussive load case using routine mechanical design.

Petitioner Therabody Ex-1035, 0091

A POSITA Would Have Been Motivated To Combine Pivaroff-Clark with Harris (Ground 6, '082 Patent)



Not Challenged

Petitioner Therabody Ex-1035, 0092

Similar Subject Matter (Massagers and/or Interchangeable Heads) in All References

- Mabuchi
 - “repeatedly pats the skin by causing a patter or patter assembly to hit the skin at a given rate to impact the skin surface”
 - “the patter assembly 6 requires to be interchangeable”
- Pivaroff
 - “deep muscle stimulation device”
 - “connection means” such as screw threads
- Harris
 - “hand-held massager having both vibratory and percussive massage capabilities”
- Colloca
 - thrust nose piece 130 with a bore “adapted to the at least one impact head 70”
- Clark
 - “workpiece holder 21 may be easily removed from its assembled position and a workpiece holder having a different size or shape chamber 23 substituted therefor”

Petitioner Therabody Ex-1035, 0093

Overview

- '482 and '082 Patents
- Overview of the prior art
- Claim Construction
- Percussive Massager Limitations (Mabuchi Grounds 482 and 082)
- Quick Release Connector Limitations (Mabuchi and Pivaroff Grounds)
- Motor Housing Limitations (Pivaroff)
- Motivations
- **Written Description**

Petitioner Therabody Ex-1035, 0094

Ground 1A: “First Massaging Head” Having a “Pocket to Receive the Quick Release Connector”

'482 Patent Claim 34

34. A percussive massager comprising:

a housing;

a piston in the housing having a proximal end and a distal end;

a motor at least partially within the housing and operatively connected to the proximal end of the piston, wherein the motor is configured to cause the piston to reciprocate at a first speed;

a drive mechanism between the motor and the piston that controls a predetermined stroke length of the piston; and

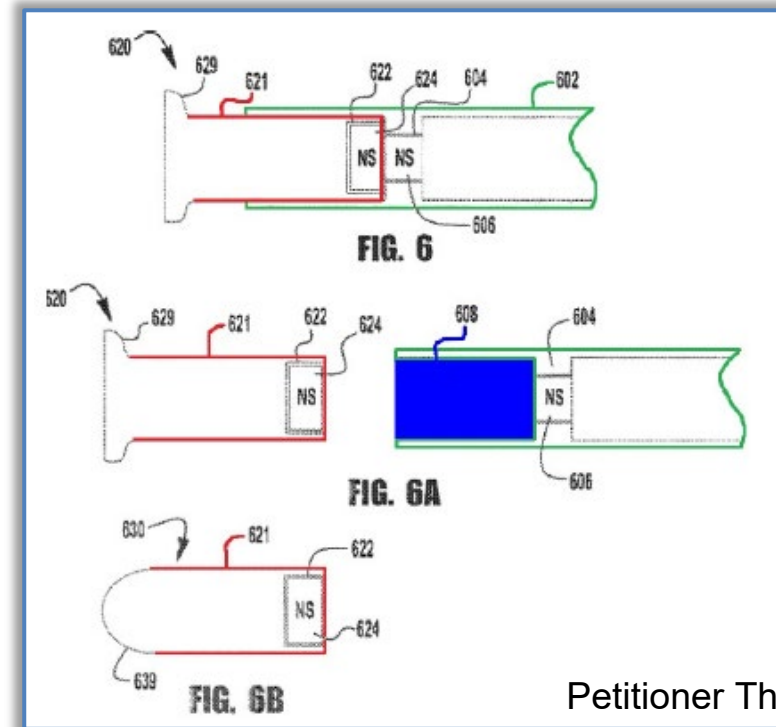
a quick release connector at the distal end of the piston, wherein the quick release connector is configured to secure a first massaging head while the piston reciprocates a predetermined stroke length at the first speed, ***wherein the first massaging head has a substantially cylindrical pocket to receive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

Petitioner Therabody Ex-1035, 0095

Antecedent Basis for “Quick Release Connector”

- Claim 34 recites “the first massaging head has a substantially cylindrical pocket to receive the quick release connector.”
- Antecedent basis for “the quick release connector” is “a quick release connector at the distal end of the piston.”
- The “pocket” in the massaging head does not “receive the quick release connector” at the distal end of the piston.

Accordingly, when the shaft **621** of massaging head **620** is slide into opening in bore **608**, the magnets **606** and **624** are attracted to one another and magnetically hold massaging head **620** firmly in place.



Petitioner Therabody Ex-1035, 0096

Board's Preliminary Finding Overlooks the Antecedent Basis for "Quick Release Connector"

Board's Preliminary Finding

The '482 patent discloses that "[m]assaging head 620 includes a shaft 621 having a cylindrical pocket 622 at the distal end. Located within the cylindrical pocket 622 is a magnet 624." *Id.* at 6:63–65. The '482 patent explains "when the shaft 621 of massaging head 620 is slid into opening in bore 608, the magnets 606 and 624 are attracted to one another and magnetically hold massaging head 620 firmly in place." *Id.* at 6:67–7:3.

Based on the current record and these descriptions in the '482 patent, we agree with Patent Owner that the evidence better shows possession of a massage head with a cylindrical pocket that receives the quick release connector.

Petitioner's Position

The Board did not consider the context of "the quick release connector."

Antecedent basis for "the quick release connector":
at the distal end of the piston

Magnet 624 is not "at the distal end of the piston," but is in the shaft of the attachment.

Thus, magnet 624 cannot be part of the claimed "quick release connector."

Petitioner Therabody Ex-1035, 0097

'482 Institution Decision (Paper 8) at 19; '082 Institution Decision (Paper 8) at 12; '482 Reply (Paper 29) at 12-13; '082 Reply (Paper

24) at 10

Patent Owner's Arguments Are Incorrect

Patent Owner's Rebuttal	Petitioner's Position
"Even if understood in an <i>unduly</i> narrow sense, the pocket 622 in the massaging head 620 . . . receives at least one-half of the quick release connector consisting of two oppositely arranged magnets 624/606"	Patent Owner's argument fails to account for the antecedent basis of "the quick release connector," which is at the distal end of the piston. Patent Owner's argument that both magnet 606 on the piston and magnet 624 on the attachment shaft make up the quick release connector conflicts with Claim 34.
"Petitioner misleadingly combines these two recitations of claim 34 into a single quote, which is another basis for dismissing this Ground."	Petitioner correctly pointed to the antecedent basis of the claim limitation.
"Once attached, the magnets 606/624 are at the distal end of the piston 602, which provides the recited 'quick release connector at the distal end of the piston.'"	Claim 34 recites the quick release connector at the distal end of the piston securing a massaging head (where magnet 624 is located).

Ground 1C: “Quick Release Connector”

'482 Patent Claim 34

34. A percussive massager comprising:

a housing;

a piston in the housing having a proximal end and a distal end;

a motor at least partially within the housing and operatively connected to the proximal end of the piston, wherein the motor is configured to cause the piston to reciprocate at a first speed;

a drive mechanism between the motor and the piston that controls a predetermined stroke length of the piston; and

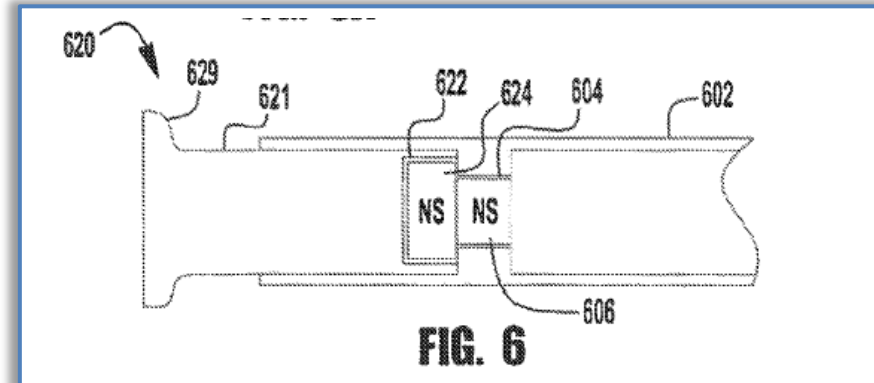
a quick release connector at the distal end of the piston, wherein the quick release connector is configured to secure a first massaging head while the piston reciprocates a predetermined stroke length at the first speed, wherein the first massaging head has a substantially cylindrical pocket to receive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

Petitioner Therabody Ex-1035, 0099

'482 Specification Lacks Description of the Quick Release Connector

- Claim 34 broadly claims *any* species of connector.
- Only a single working example disclosed.
- '482 Patent describes use of magnets as critical:

To remove massaging head 620, a user need only apply a sufficient amount of force to separate the two magnets 606, 624. The strength of the magnets 606, 624 are sized to prevent the massaging head 620 from separating from the piston 602 during normal use, and yet allow a user to quickly remove and replace the massaging head 620.



- Claims do not require the use of magnets.
- There are a wide range of connectors known in the art.

Petitioner Therabody Ex-1035, 0100

Board's Preliminary Finding Overlooks Patent Owner's Understanding of the Claims

Board's Preliminary Finding

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

We therefore agree with Patent Owner that, consistent with *Capon*, an ordinary artisan would have understood before the time of filing of the instant claims that a variety of equivalent “quick release connectors” were known.

Petitioner's Position

Dr. Pratt’s knowledge of various quick release connectors cannot be used to supply written description.

Moreover, many of Dr. Pratt’s examples require alignment, which would not satisfy Claim 34 as Patent Owner understands it (requiring no alignment).

Petitioner Therabody Ex-1035, 0101

Patent Owner's Arguments Are Incorrect

Patent Owner's Rebuttal	Petitioner's Position
"Disclosure of one example embodiment . . . is not <i>per se</i> deficient."	Patent Owner admits that the disclosure relates only to magnetic connections. '482 specification does not provide any disclosures defining the broader genus of "quick release connector." Patent Owner cannot disclose one embodiment yet claim a broader genus.
"Quick release connector" is further described and limited in the body of independent Claim 34.	Patent Owner concedes that the quick release connector does not require alignment. Thus, connectors requiring alignment are outside the claim scope.
"Quick release connector" is a well-understood term of art in the mechanical arts.	Patent Owner's reliance on dictionary definitions do not account for its assertion that the claimed quick release connector does not require alignment.

Therabody, Inc.
v.
Hyperice IP Subco, LLC

Petitioner's Presentation For PGR2024-00053 and PGR2025-00013

U.S. Patent Nos. 11,857,482 and 11,938,082

February 4, 2026

Petitioner Therabody Ex-1035, 0103