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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
18/809,073	08/19/2024	Jason WERSLAND	5015.039000J

CONFIRMATION NO. 6015

186370
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PUBLICATION NOTICE

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Date Mailed: 12/12/2024

Title:PERCUSSIVE THERAPY DEVICE WITH ELECTRICALLY CONNECTED ATTACHMENT

Publication No.US-2024-0407969-A1
Publication Date:12/12/2024

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	5015.039000J
	Application Number	18/809,073
Title of Invention	PERCUSSIVE THERAPY DEVICE WITH ELECTRONICALLY CONNECTED ATTACHMENT	

The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.
This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.
When referring to the current application, please leave the application number blank.

Application Number	Continuity Type	Prior Application Status	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
18/809,073	Continuation of	~~Pending~~ Patented	18/162,499	2023-01-31	12,064,387	2024-08-20
18/162,499	Continuation of	Patented	17/244,278	2021-04-29	11,564,860	2023-01-31
18/162,499	Continuation of	Patented	17/739,630	2022-05-09	11,890,253	2024-02-06
17/244,278	Continuation in part of	Patented	17/018,099	2020-09-11	11,357,697	2022-06-14
17/018,099	Continuation in part of	Patented	16/869,402	2020-05-07	10,857,064	2020-12-08
16/869,402	Continuation in part of	Patented	16/796,143	2020-02-20	10,940,081	2021-03-09
16/796,143	claims benefit of provisional	Expired	62/844,424	2019-05-07		
16/796,143	claims benefit of provisional	Expired	62/899,098	2019-09-11		
16/796,143	claims benefit of provisional	Expired	62/912,392	2019-10-08		
16/869,402	Continuation in part of	Patented	16/675,772	2019-11-06	10,702,448	2020-07-07

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	5015.039000J
	Application Number	18/809,073
Title of Invention	PERCUSSIVE THERAPY DEVICE WITH ELECTRONICALLY CONNECTED ATTACHMENT	

16/675,772	claims benefit of provisional	Expired	62/785,151	2018-12-26		
17/244,278	claims benefit of provisional	Expired	63/133,951			
17/244,278	claims benefit of provisional	Expired	63/017,472	2020-04-29		
17/739,630	Continuation in part of	Patented	17/244,239	2021-04-29	11,452,670	2022-09-27
17/244,239	Continuation in part of	Patented	17/018,099	2020-09-11	11,357,697	2022-06-14
17/244,239	claims benefit of provisional	Expired	63/133,951	~~2021-01-04~~ 2021-01-05		
17/244,239	claims benefit of provisional	Expired	63/017,472	2020-04-29		
17/739,630	Continuation in part of	Patented	17/705,300	2022-03-26	11,730,668	2023-08-22

Signature:

NOTE: This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). **However, if this Application Data Sheet is submitted with the INITIAL filing of the application and either box A or B is not checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c).**

This Application Data Sheet **must** be signed by a patent practitioner if one or more of the applicants is a **juristic entity** (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, **all** joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of **all** joint inventor-applicants.

See 37 CFR 1.4(d) for the manner of making signatures and certifications.

Signature	/Joseph K. Venier/			**Date (YYYY-MM-DD)**	2024-11-19
First Name	Joseph	**Last Name**	Venier	**Registration Number**	76,838

23534569.1

Hyper Ice, Inc. Ex. 1003-Page 578
Hyper Ice, Inc. v. Therabody, Inc.

Doc Code: TRAN.LET

Document Description: Transmittal Letter

PTO/SB/21 (07-09)
Approved for use through 11/30/2020. OMB 0651-0031
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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

Application Number	18/809,073
Filing Date	August 19, 2024
First Named Inventor	Jason WERSLAND
Art Unit	3785
Examiner Name	Colin W. STUART
Attorney Docket Number	5015.039000J

ENCLOSURES *(Check all that apply)*

- ☐ Fee Transmittal Form
  - ☐ Fee Attached
- ☐ Amendment/Reply
  - ☐ After Final
  - ☐ Affidavits/declaration(s)
- ☐ Extension of Time Request
- ☐ Express Abandonment Request
- ☐ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Reply to Missing Parts/ Incomplete Application
  - ☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☐ Petition
- ☐ Petition to Convert to a Provisional Application
- ☐ Power of Attorney, Revocation Change of Correspondence Address
- ☐ Terminal Disclaimer
- ☐ Request for Refund
- ☐ CD, Number of CD(s) _____
  - ☐ Landscape Table on CD
- ☐ After Allowance Communication to TC
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☐ Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**
- ☐ Proprietary Information
- ☐ Status Letter
- ☑ Other Enclosure(s) (please Identify below):
  Corrected Application Data Sheet

Remarks

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SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Sterne, Kessler, Goldstein & Fox P.L.L.C.		
Signature	/Joseph K. Venier/		
Printed name	Joseph K. Venier		
Date	November 19, 2024	Reg. No.	76,838

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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
18/809,073	**11/19/2024 06:49:35 PM Z ET**	**5015.039000J**

Title of Invention

PERCUSSIVE THERAPY DEVICE WITH ELECTRICALLY CONNECTED ATTACHMENT

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	6015	FILED BY	Kim Perry
PATENT CENTER #	68030262	FILING DATE	08/19/2024
CUSTOMER #	186370	FIRST NAMED INVENTOR	Jason WERSLAND
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	Joseph Venier

Documents

TOTAL DOCUMENTS: 2

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
2024-11-19-Transmittal-Form-5015-039000J.pdf	1	Transmittal Letter	268 KB
2024-11-19-ADS-Corrected-5015-039000J.pdf	2	Application Data Sheet	162 KB

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Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
2024-11-19-Transmittal-Form-5015-039000J.pdf	4A02F7C6BE48CD646139F3CC9403FC1575D0BDA4B6118D1B2C47474A36B7174C2986EA75DD304A991CBA72FDB2BF80172

E7B96B06F50E3148E311DD17811855C

2024-11-19-ADS-Corrected-5015-039000J.pdf

2A6C34A3CBBFB882723147BDED359DD8446BE85F8FD1127B
D100A5472478E6846E8FFC2B30186BA8A820ED2D03E7B74D5
BAB0909F33427B371CCD4B79CC55BE7

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

United States Patent and Trademark Office

Office of the Commissioner for Patents

Dear Applicant,

You recently received an Office action from your examiner. Review of your patent application is under way! You can continue to advertise or mark any products covered by your application for your invention as "Patent Pending" for as long as this application is pending. This letter provides information about how to continue through the patent application process and the help available to you on your journey.

Where are you in the patent application process? Your patent application is now in step 3, Application Prosecution (www.uspto.gov/UtilityPatentGuide.) Though the Office action includes a "rejection," that does not mean that you don't have a good idea you can patent. It means your examiner believes your application is not yet ready for allowance.

Ready to respond? Responding to the Office action is your opportunity to address the issues raised by your examiner. Responses must be timely, complete, and in writing. In your response, you may want to consider amending your application (www.uspto.gov/patents/maintain/responding-office-actions).

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Have questions about the Office action? Contact your examiner! A conversation with your examiner (called an "interview") may help clarify and resolve any issues and possibly identify what you can patent. While an interview does not stop the clock for your official response or substitute for a response, there is no fee for an interview. To schedule a call or video, you can:

1. use the USPTO's Automated Interview Request (AIR) form (www.uspto.gov/patents/uspto-automated-interview-request-air-form);
2. file the Applicant Initiated Interview Request form (PTOL-413A) (www.uspto.gov/sites/default/files/documents/PTOL413A.pdf); or
3. contact your examiner directly via telephone (contact information is provided at the end of your Office action).

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/809,073	08/19/2024	Jason WERSLAND	5015.039000J	6015

186370 7590 11/07/2024

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.
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1101 K Street, NW
10th Floor
WASHINGTON, DC 20005

EXAMINER	
STUART, COLIN W	

ART UNIT	PAPER NUMBER
3785	

NOTIFICATION DATE	DELIVERY MODE
11/07/2024	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

e-office@sternekessler.com

Office Action Summary	Application No. 18/809,073	Applicant(s) WERSLAND et al.	
	Examiner COLIN W STUART	Art Unit 3785	AIA (FITF) Status Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☑ Responsive to communication(s) filed on 10/7/24.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL.** 2b) ☑ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5) ☑ Claim(s) 1-20 is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☑ Claim(s) 1-20 is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

9) ☐ Claim(s) _____ are subject to restriction and/or election requirement

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to **PPHfeedback@uspto.gov.**

Application Papers

10)☑ The specification is objected to by the Examiner.

11)☑ The drawing(s) filed on 8/19/24 is/are: a)☑ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☑ Notice of References Cited (PTO-892)

2) ☑ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date attached.

3) ☑ Interview Summary (PTO-413) Paper No(s)/Mail Date attached.

4) ☐ Other: _____.

Notice of Pre-AIA or AIA Status

1. The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

This office action is in response to the preliminary amendment filed 10/7/24. As directed by the amendment: claim 1 has been amended, claim 3-20 have been added, and no claims have been added. As such, claims 1-20 are pending in the instant application.

Information Disclosure Statement

2. Due to a long list of IDS submitted, examiner refers Applicant to MPEP 2004 and in particular to point 13 which states: It is desirable to avoid the submission of long lists of documents if it can be avoided. Eliminate clearly irrelevant and marginally pertinent cumulative information. If a long list is submitted, highlight those documents which have been specifically brought to applicant's attention and/or are known to be of most significance. See *Penn Yan Boats, Inc. v. Sea Lark Boats, Inc.*, 359 F. Supp. 948, 175 USPQ 260 (S.D. Fla. 1972), *aff'd*, 479 F.2d 1338, 178 USPQ 577 (5th Cir. 1973), *cert. denied*, 414 U.S. 874 (1974). But cf. *Molins PLC v. Textron Inc.*, 48 F.3d 1172, 33 USPQ2d 1823 (Fed. Cir. 1995).

Note that consideration by the examiner of the information submitted in an IDS means nothing more than considering the documents in the same manner as other documents in Office search files are considered by the examiner while conducting a search of the prior art in a proper field of search. See MPEP 609.

Specification

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: "first extension" (claim 11 and 20) and "second extension" (claim 11 and 20).

Claim Interpretation

4. The claim limitation "an interior angle defined between the handle portion and the output shaft is obtuse" (claim 1) and "the handle portion axis extends at an oblique angle to the reciprocation axis ..." (claim 2) is being interpreted in view of the disclosure, in particular, the rotation housing 44 (Fig. 21-23) which would allow the angular position between handle portion/axis and output shaft/reciprocation axis to be adjusted and to assume an obtuse/oblique angle.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112(a):

> (a) IN GENERAL.—The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor or joint inventor of carrying out the invention.

The following is a quotation of the first paragraph of pre-AIA 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1, 3-11, 15-16, and 19 are rejected under 35 U.S.C. 112(a) or 35 U.S.C. 112 (pre-AIA), first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled

in the relevant art that the inventor or a joint inventor, or for applications subject to pre-AIA 35 U.S.C. 112, the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claim 1, the claim is sets forth a percussive therapy system/device whose proximal end of the push rod assembly is offset from the dividing plane in a first direction which is directed towards the embodiment shown in Fig. 18-23, in particular shown in Figs. 22A and 22B; however, the claim lacks adequate written description for the motor "extends away from the handle portion" (line 14-15). As shown in Fig. 22A, B, the motor extends away from a dividing plane, i.e. a plane running normal to the motor axis and having the reciprocation axis lying thereon (represented by a line running vertically through the output shaft 108 in these Figs.), towards the left in Figs. 22A, B; however, as can be seen from Figs. 18-19 and 21 for example, with respect to Figs. 22A, B, the handle portions extend in a directions into the page in Figs. 18-19 and 21. Thus, the distance between handle portions 143, 145, 147 and motor 406 does not change (increase nor decrease) as the motor extends towards the left in Figs. 22A, B.

Regarding claim 5, the newly added claim is directed towards the embodiment shown in Figs. 18-23 (see above discussion regarding claim 1), and the spatial arrangement of push rod 14 is best shown in Fig. 22A, B; however, while the disclosure supports the proximal end of the push rod being coupled to the bearing a first distance from the reciprocation axis (see above discussion regarding explanation of the reciprocation axis), and the distal end of push rod 14 is coupled to the output shaft 108, the disclosure does not support that the distal end is coupled "at a second distance from the reciprocation axis" as such a 'distance' would be zero as the distal end of push rod 14 is coupled to the output shaft 108 *at* the reciprocation axis and not "a second distance" therefrom. Thus the newly filed claim introduces new matter not found in the disclosure as originally filed.

Regarding claim 6, the newly added claim is directed towards the embodiment shown in Figs. 18-23 (see above discussion regarding claim 1), and the spatial arrangement of push rod 14 is best

shown in Fig. 22A, B; however, while the disclosure supports the proximal end of the push rod extending a first distance from the reciprocation axis (see above discussion regarding explanation of the reciprocation axis), and the distal end of push rod 14 is coupled to the output shaft 108, the disclosure does not support that the distal end that "extends a second distance from the reciprocation axis" as such a 'distance' would be zero as the distal end of push rod 14 is coupled to the output shaft 108 *at* the reciprocation axis and not "a second distance" therefrom. Thus the newly filed claim introduces new matter not found in the disclosure as originally filed.

Regarding claim 11, the newly added claim introduces new matter not found in the disclosure as originally filed. As noted above in the specification section, the disclosure lacks antecedent basis for the terms 'first extension' and 'second extension'. Additionally, after review of the disclosure as a whole, the examiner cannot determine what structural element in the disclosure represents "a first extension that extends away from the handle portion and encloses a portion of the push rod assembly" nor what structural element in the disclosure represents "a second extension that extends away from the handle portion and the first extension" as required by the claim. Thus the newly filed claim introduces new matter not found in the disclosure as originally filed.

Regarding claim 15, the newly added claim is directed towards the embodiment shown in Figs. 18-23 (see above discussion regarding claim 1), and the spatial arrangement of push rod 14 is best shown in Fig. 22A, B; however, while the disclosure supports the proximal end of the push rod extending a first distance from the reciprocation axis (see above discussion regarding explanation of the reciprocation axis), and the distal end of push rod 14 is coupled to the output shaft 108, the disclosure does not support that the distal end extends "a second distance from the reciprocation axis" as such a 'distance' would be zero as the distal end of push rod 14 is coupled to the output shaft 108 *at* the reciprocation axis and not "a second distance" therefrom. Thus the newly filed claim introduces new matter not found in the disclosure as originally filed.

Regarding claim 16, the newly added claim is directed towards the embodiment shown in Figs. 18-23 (see above discussion regarding claim 1), and the spatial arrangement of push rod 14 is best shown in Fig. 22A, B; however, while the disclosure supports the proximal end of the push rod being coupled to the eccentric shaft at a first distance from the reciprocation axis (see above discussion regarding explanation of the reciprocation axis), and the distal end of push rod 14 is coupled to the output shaft 108, the disclosure does not support that the distal end is connected to the output shaft "at a second distance from the reciprocation axis" as such a 'distance' would be zero as the distal end of push rod 14 is coupled to the output shaft 108 *at* the reciprocation axis and not "a second distance" therefrom. Thus the newly filed claim introduces new matter not found in the disclosure as originally filed.

Regarding claim 19, the newly added claim is directed towards the embodiment shown in Figs. 18-23 and the handle portion claim 2 can only refer to handle portion 147 (see Fig. 1 which shows a better view of handle portions of Figs. 18-23) has only handle portion 147 "intersects the reciprocation axis ***and the motor axis***" (claim 2 line 13-14, emphasis added). The disclosure provides that the battery 114 is housed in handle portion 145 (see Fig. 19) and thus, due to handle portion of claim 2 being required to be handle portion 147, the newly added claim introduces new matter not found in the disclosure as originally filed.

Regarding claim 20, the newly added claim introduces new matter not found in the disclosure as originally filed. As noted above in the specification section, the disclosure lacks antecedent basis for the terms 'first extension' and 'second extension'. Additionally, after review of the disclosure as a whole, the examiner cannot determine what structural element in the disclosure represents "a first extension that extends away from the handle portion and encloses a portion of the push rod assembly" nor what structural element in the disclosure represents "a second extension that extends away from the handle

portion and the first extension" as required by the claim. Thus the newly filed claim introduces new matter not found in the disclosure as originally filed.

Claims 3-4 and 7-11 are rejected based on dependency on a rejected claim.

Claim Rejections - 35 USC § 102

7. In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis (i.e., changing from AIA to pre-AIA) for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a)(2) the claimed invention was described in a patent issued under section 151, or in an application for patent published or deemed published under section 122(b), in which the patent or application, as the case may be, names another inventor and was effectively filed before the effective filing date of the claimed invention.

9. Claim(s) 2 and 14 is/are rejected under 35 U.S.C. 102(a)(2) as being anticipated by Hu (2021/0022951).

Regarding claim 2, Hu shows a percussive therapy device (see Fig. 1-9, abstract, para. 0010, 0038 for example) which includes a motor configured to output torque about a motor axis (see annotated Fig. 5 below, para. 0038, motor 110); a handle portion extending along a handle portion axis (see annotated Fig. 5 below, para. 0030); a housing (see Fig. 1-9, para. 0028, housing 10); and a push rod assembly including an output shaft configured to reciprocate along a reciprocation axis in response to activation of the motor and having a distal end that includes a connector for an attachment, wherein the output shaft is centered on the reciprocation axis and the reciprocation axis extends on a dividing plane (see

Fig. 7 showing push rod assembly alone; output shaft shown in annotated Fig. 7 below, annotated Fig. 5 below showing reciprocation axis, annotated Fig. 6 showing connector for attachment 20; shaft centered on reciprocation axis as shown below, dividing plane being the plane extending normal in annotated Fig. 5 along/including reciprocation axis lying thereon, see para. 0010, 0042-0043); a push rod having a proximal end operatively connected to the motor and a distal end connected to the output shaft (see Fig. 5-7 and annotated Figs. below, push rod 130, para. 0038); wherein the dividing plane is normal to the motor axis (see annotated Fig. 5, dividing plane being the plane extending normal in annotated Fig. 5 along/including reciprocation axis lying thereon and thus normal to the motor axis as shown), and wherein the handle portion axis extends at an oblique angle to the reciprocation axis and intersects the reciprocation axis and the motor axis (see annotated Fig. 5 below showing handle portion axis which intersects both the reciprocation and motor axes, and which forms an oblique angle with the reciprocation axis as can be seen).

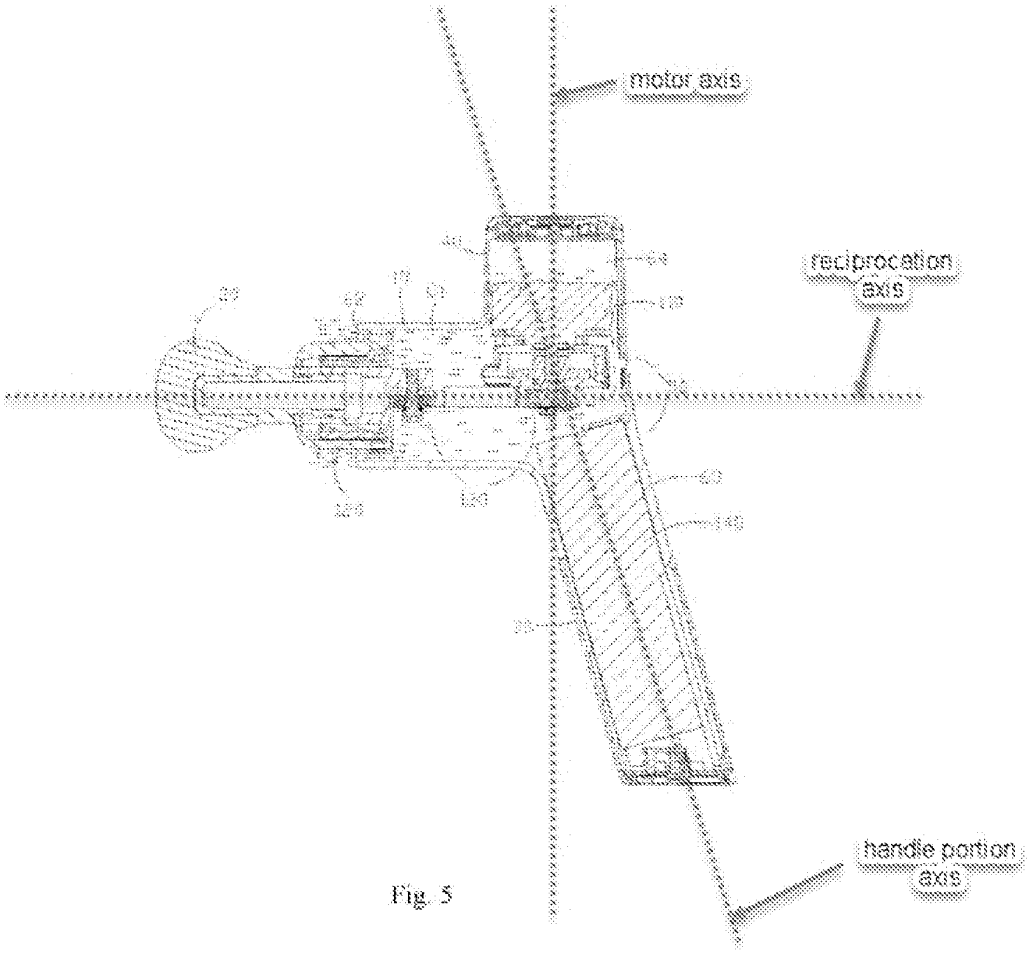


Fig. 5

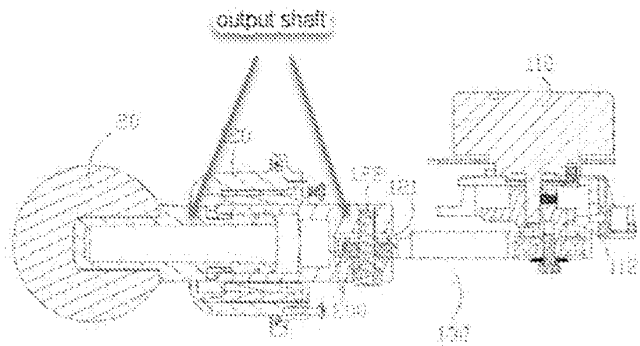


Fig. 7

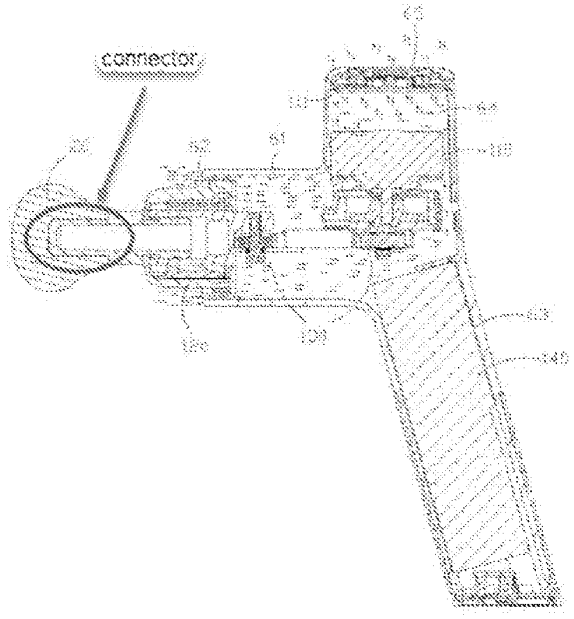


Fig. 6

Regarding claim 14, the Hu device's motor is located on a first side of the dividing plane (see annotated Fig. 5, first side being above the dividing plane as described above); the device includes an eccentric shaft that is configured to travel in a circle about the motor axis when the motor is active (see annotated Fig. 7 below); the proximal end of the push rod is operatively connected to the motor by the eccentric shaft (see Fig. 7), wherein the proximal end of the push rod is coupled to the eccentric shaft on a second side of the diving plane that is opposite from the first side of the dividing plane (see annotated

Fig. 7 below showing eccentric shaft/proximal end of push rod 130 being coupled on the second, opposite side of divi

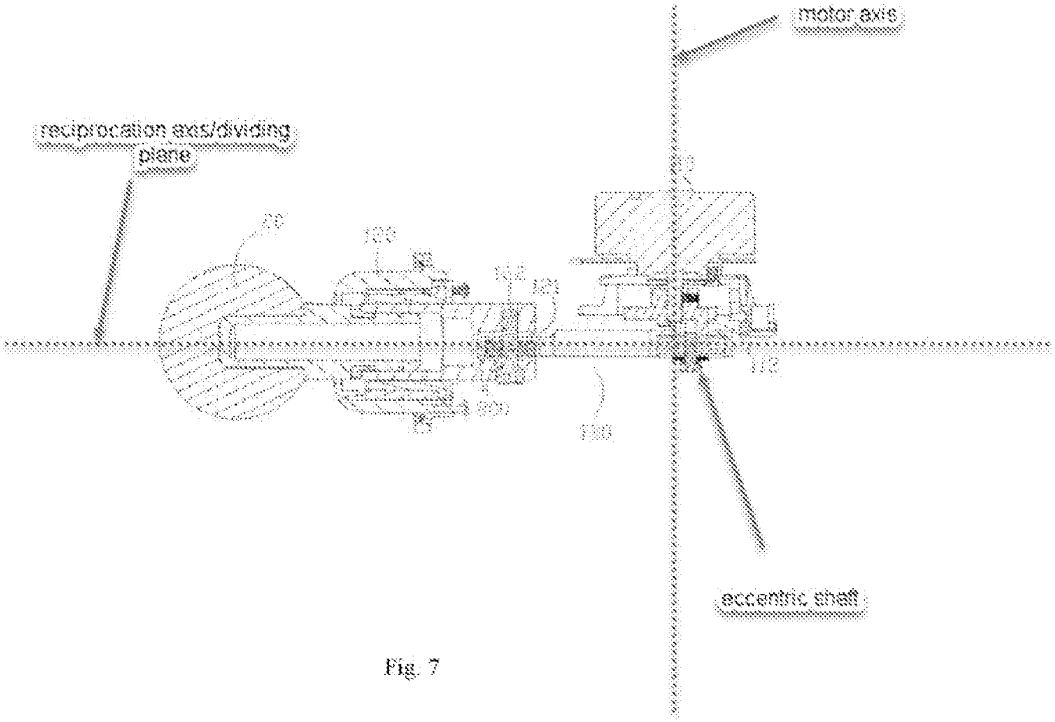


Fig. 7

10. Claim(s) 2, 13, and 17-20 is/are rejected under 35 U.S.C. 102(a)(2) as being anticipated by Lee et al. (10,959,908).

Regarding claim 2, Lee shows a percussive therapy device (see Fig. 1-10, title, abstract for example) which includes a motor configured to output torque about a motor axis (see annotated Fig. 6 below, col. 4 ln. 56, motor axis A2 in Fig. 8); a handle portion extending along a handle portion axis (see

Fig. 8, handle portion 12 with handle portion axis A1, see col. 4 ln. 20); a housing (see Fig. 1, housing 11, see col. 4 ln. 19); and a push rod assembly including an output shaft configured to reciprocate along a reciprocation axis in response to activation of the motor and having a distal end that includes a connector for an attachment, wherein the output shaft is centered on the reciprocation axis and the reciprocation axis extends on a dividing plane (see Fig. 6-7 showing push rod assembly in use; output shaft 22, connector 25 & 26, attachment 24, Fig. 8 showing a reciprocation axis A3''', see also annotated Fig. 6 showing reciprocation axis with output shaft 22 centered thereon, dividing plane being the plane normal to the line A3''' in Fig. 8); a push rod having a proximal end operatively connected to the motor and a distal end connected to the output shaft (see Fig. 6-7, push rod 47); wherein the dividing plane is normal to the motor axis (see Fig. 8, dividing plane being the plane normal to the line A3''' which is normal to motor axis housed in portion 14 in view of annotated Fig. 6), and wherein the handle portion axis extends at an oblique angle to the reciprocation axis and intersects the reciprocation axis and the motor axis (see annotated Fig. 6 below and Fig. 8, handle portion axis A1 intersects both reciprocation axis A3''' and motor axis A2 and forms an oblique angle to reciprocation axis A3''' as shown).

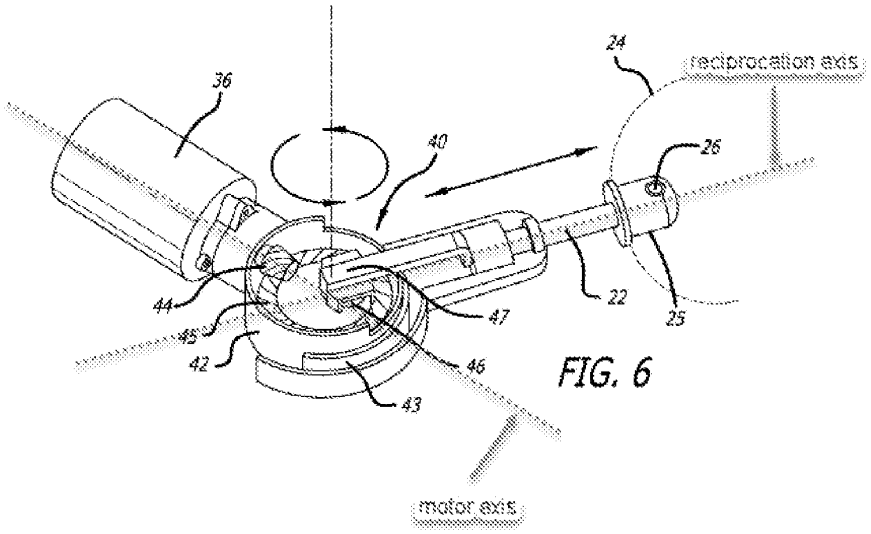


FIG. 6

Regarding claim 13, the Lee device includes a switch configured to activate the motor, the switch located on a portion of the housing that faces an opposite direction from the distal end of the output shaft (see Fig. 8, switch 38, see col. 4 ln. 55).

Regarding claim 17, the Lee device's handle portion extends longitudinally away from the reciprocation axis (see Fig. 8 which shows handle portion 12 extending longitudinally away from reciprocation axis A3''').

Regarding claim 18, the Lee device is such that an interior angle defined between the handle portion axis and the output shaft is obtuse (see Fig. 8 which shows adjustable output shaft angular position and such can form obtuse angle).

Regarding claim 19, the Lee device includes a battery housed in the handle portion (see Fig. 5, battery 30 located in handle portion 12, see col. 4 ln. 54).

Regarding claim 20, the Lee device's housing includes a first extension that extends away from the handle portion and encloses the push rod assembly, the housing includes a second extension that

extends away from the handle portion and the first extension (see Fig. 1, first extension 16, second extension 20).

Claim Rejections - 35 USC § 103

11. In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis (i.e., changing from AIA to pre-AIA) for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

12. The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:

> A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.

13. This application currently names joint inventors. In considering patentability of the claims the examiner presumes that the subject matter of the various claims was commonly owned as of the effective filing date of the claimed invention(s) absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and effective filing dates of each claim that was not commonly owned as of the effective filing date of the later invention in order for the examiner to consider the applicability of 35 U.S.C. 102(b)(2)(C) for any potential 35 U.S.C. 102(a)(2) prior art against the later invention.

14. Claim(s) 12 is/are rejected under 35 U.S.C. 103 as being unpatentable over Lee in view of Marton et al. (2019/0254922).

Regarding claim 12, the Lee device includes a backward facing switch configured to activate the motor (Fig. 8, switch 38, see col. 4 ln. 55), but is silent as to including a backward facing electronic display; however, Marton teaches a similar percussive massage device which includes a backward facing electronic display (see Marton Fig. 3 and 4A, B, para. 0043 and 0114 electronic display being the LEDs 168A-E which provide an indication of charge state of the battery, display being 'backward facing' as it faces the opposite direction as the output shaft as shown in Fig. 3). Thus it would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to modify the Lee device to further include a backward facing electronic display, as taught by Marton, in order to provide the ability to indicate to the user a charge state of the battery (see Marton para. 0043 and 0114).

Double Patenting

15. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on nonstatutory double patenting provided the reference application or patent either is shown to be commonly owned with the examined application,

or claims an invention made as a result of activities undertaken within the scope of a joint research agreement. See MPEP § 717.02 for applications subject to examination under the first inventor to file provisions of the AIA as explained in MPEP § 2159. See MPEP § 2146 *et seq.* for applications not subject to examination under the first inventor to file provisions of the AIA. A terminal disclaimer must be signed in compliance with 37 CFR 1.321(b).

The filing of a terminal disclaimer by itself is not a complete reply to a nonstatutory double patenting (NSDP) rejection. A complete reply requires that the terminal disclaimer be accompanied by a reply requesting reconsideration of the prior Office action. Even where the NSDP rejection is provisional the reply must be complete. See MPEP § 804, subsection I.B.1. For a reply to a non-final Office action, see 37 CFR 1.111(a). For a reply to final Office action, see 37 CFR 1.113(c). A request for reconsideration while not provided for in 37 CFR 1.113(c) may be filed after final for consideration. See MPEP §§ 706.07(e) and 714.13.

The USPTO Internet website contains terminal disclaimer forms which may be used. Please visit www.uspto.gov/patent/patents-forms. The actual filing date of the application in which the form is filed determines what form (e.g., PTO/SB/25, PTO/SB/26, PTO/AIA/25, or PTO/AIA/26) should be used. A web-based eTerminal Disclaimer may be filled out completely online using web-screens. An eTerminal Disclaimer that meets all requirements is auto-processed and approved immediately upon submission. For more information about eTerminal Disclaimers, refer to www.uspto.gov/patents/apply/applying-online/eterminal-disclaimer.

16. Claims 1-20 are rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1-3, 8-14, and 17 of U.S. Patent No. 12,064,387 in view of Lee.

Regarding instant claim 1, patent claim 1 includes each structural and functional limitation as claimed (see patent claim 1 which discloses the housing, handle portion, motor, motor axis, push rod assembly, attachment, the common plane being the dividing plane), but is silent as to the push rod

assembly explicitly including a push rod and an output shaft as claimed); however, Lee teaches a similar percussive massage system which includes such a push rod assembly as claimed (see Fig. 6-7 showing push rod assembly in use; output shaft 22, connector 25 & 26, attachment 24, Fig. 8 showing a reciprocation axis A3''', see also annotated Fig. 6 showing reciprocation axis with output shaft 22 centered thereon, dividing plane being the plane normal to the line A3''' in Fig. 8; see Fig. 6-7, push rod 47; see Fig. 8 which shows adjustable output shaft angular position and such can form obtuse angle). Thus it would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to modify the patent claim 1's push rod assembly to be the particular push rod assembly, as taught by Lee, as this would have been obvious substitution of one type of push rod assembly for another and one would expect the modified patent claim 1 to perform equally as well (i.e. provide conversion of rotational motion of the motor into reciprocation motion of the output shaft/attachment).

Instant claim 3 corresponds to patent claim 3. Instant claims 4-6 correspond to patent claim 2. Instant claim 7-10 correspond to patent claims 8-11, respectively.

Regarding instant claim 11, modified patent claim 1, in view of Lee, discloses a first extension that extends away from the handle portion and encloses the push rod assembly, the housing includes a second extension that extends away from the handle portion and the first extension (see Lee Fig. 1, first extension 16, second extension 20).

Regarding instant claim 2, patent claim 12 includes each structural and functional limitation as claimed (see patent claim 12 which discloses motor, motor axis, handle portion, handle portion axis, push rod assembly as claimed, the reciprocation plane being the dividing plane), but is silent as to the device explicitly including a housing and the oblique angle of the handle portion axis; however, Lee teaches a similar percussive device which includes these features (see Lee Fig. 1, housing 11, see col. 4 ln. 19; see Lee annotated Fig. 6 and Fig. 8, handle portion axis A1 intersects both reciprocation axis A3'''

and motor axis A2 and forms an oblique angle to reciprocation axis A3''' as shown). Thus it would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to modify the patent claim 12 device to include the housing and have the angular configuration, as taught by Lee in order to provide a covering to protect internal components (housing) and a desired shape (MPEP 2144.04 VI C).

Regarding instant claim 12-13 corresponds to patent claim 13. Instant claims 14-16 correspond to patent claim 14. Instant claim 17 corresponds to patent claim 17. Instant claims 18 corresponds to patent claim 12.

Regarding instant claim 19, the modified patent claim 12 is silent as to the handle portion housing a battery; however, Lee teaches a similar device which includes a battery provided to the handle portion (see Lee Fig. 5, battery 30 located in handle portion 12, see col. 4 ln. 54). Thus it would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to modify the patent claim 12 device to include a battery housed in the handle portion, as taught by Lee, in order to provide portable power supply for the device.

Regarding instant claim 20, modified patent claim 12, in view of Lee, discloses a first extension that extends away from the handle portion and encloses the push rod assembly, the housing includes a second extension that extends away from the handle portion and the first extension (see Lee Fig. 1, first extension 16, second extension 20).

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Rix (7,927,259), Kim (KR 200345192), Pivaroff (6,682,496), Pepe (2017/0304145), and Mabuchi (GB 2066081).

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to COLIN W STUART whose telephone number is (571)270-7490. The examiner can normally be reached M-F: 9-5.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Justine Yu can be reached on 571-272-4835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of published or unpublished applications may be obtained from Patent Center. Unpublished application information in Patent Center is available to registered users. To file and manage patent submissions in Patent Center, visit: https://patentcenter.uspto.gov. Visit https://www.uspto.gov/patents/apply/patent-center for more information about Patent Center and https://www.uspto.gov/patents/docx for information about filing in DOCX format. For additional questions, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/COLIN W STUART/
Primary Examiner, Art Unit 3785

Examiner-Initiated Interview Summary	**Application No.** 18/809,073	**Applicant(s)** WERSLAND et al.		
	Examiner COLIN W STUART	**Art Unit** 3785	**AIA (First Inventor to File) Status** Yes	**Page** 1 of 1

All Participants (applicant, applicants representative, PTO personnel)	**Title**	**Type**
COLIN W STUART	Primary Examiner	Telephonic
Joseph Venier 76,838	Attorney of Record	

Date of Interview: 02 October 2024

Issues Discussed:

Other

Examiner contacted Applicant's representative to inquire if Applicant intended to file a preliminary amendment (it being not 3-months from filing in which preliminary amendments are required to be entered) in order to ensure the proper claims are examined. Applicant's representative indicated that they intended to file a preliminary amendment within the week.

/COLIN W STUART/ Primary Examiner, Art Unit 3785	

Applicant is reminded that a complete written statement as to the substance of the interview must be made of record in the application file. It is the applicants responsibility to provide the written statement, unless the interview was initiated by the Examiner and the Examiner has indicated that a written summary will be provided. See MPEP 713.04
Please further see:
MPEP 713.04
Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews, paragraph (b)
37 CFR § 1.2 Business to be transacted in writing

Applicant recordation instructions: It is not necessary for applicant to provide a separate record of the substance of interview.

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

Notice of References Cited	Application/Control No. 18/809,073	Applicant(s)/Patent Under Reexamination WERSLAND et al.	
	Examiner COLIN W STUART	Art Unit 3785	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date YYYY-MM-DD	Name	CPC Classification	US Classification
*	A	US-12064387-B2	2024-08-20	Wersland; Jason	A61H15/0085	1/1
	B					
	C					
	D					
	E					
	F					
	G					
	H					
	I					
	J					
	K					
	L					
	M					

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date YYYY-MM-DD	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in YYYY-MM-DD format are publication dates. Classifications may be US or foreign.

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	18/809,073	WERSLAND et al.
	Examiner	**Art Unit**
	COLIN W STUART	3785

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS										
☐ Claims renumbered in the same order as presented by applicant						☐ CPA		☐ T.D.		☐ R.1.47
CLAIM		**DATE**								
Final	Original	11/01/2024								
	1	✓								
	2	✓								
	3	✓								
	4	✓								
	5	✓								
	6	✓								
	7	✓								
	8	✓								
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	16	✓								
	17	✓								
	18	✓								
	19	✓								
	20	✓								

Hyper Ice, Inc. Ex. 1003-Page 606
Hyper Ice, Inc. v. Therabody, Inc.

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	18/809,073	WERSLAND et al.
	Examiner	Art Unit
	COLIN W STUART	3785

CPC - Searched*		
Symbol	**Date**	**Examiner**
A61H: 1/00, 006, 008; 23/00, 004, 006, 02, 0218, 0245, 0254, 04, 06	11/01/2024	CWS
A61H: 2023/002, 0209; 2201/0107, 0153	11/01/2024	CWS
B23D: 51/16; 49/162, 165, 00, 007, 008, 10, 16, 167	11/01/2024	CWS
B26D: 7/2621, 2614; 5/14	11/01/2024	CWS
B27B: 11/06; 19/00, 002, 006, 09, 02	11/01/2024	CWS
A61B: 17/148, 142, 14, 144	11/01/2024	CWS

CPC Combination Sets - Searched*		
Symbol	**Date**	**Examiner**

US Classification - Searched*			
Class	**Subclass**	**Date**	**Examiner**

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	**Date**	**Examiner**
Inventor name search	11/01/2024	CWS
Assignee search	11/01/2024	CWS
see attached SEARCH history	11/01/2024	CWS

/COLIN W STUART/ Primary Examiner, Art Unit 3785	

Hyper Ice, Inc. Ex. 1003-Page 607
Hyper Ice, Inc. v. Therabody, Inc.

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	18/809,073	WERSLAND et al.
	Examiner	Art Unit
	COLIN W STUART	3785

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner

/COLIN W STUART/ Primary Examiner, Art Unit 3785	

Hyper Ice, Inc. Ex. 1003-Page 608
Hyper Ice, Inc. v. Therabody, Inc.

Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 38

Complete if Known	
Application Number	To Be Assigned
Filing Date	Herewith
First Named Inventor	WERSLAND; Jason
Art Unit	To Be Assigned
Examiner Name	To Be Assigned
Attorney Docket Number	5015.039000J

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	001	US-D91454-S	02-06-1934	A.G.DECKER	
	002	US-D93943-S	11-27-1934	HARRY; M. Rand	
	003	US-D118980-S	02-13-1940	GILBERT; B. Larson	
	004	US-D129045-S	08-19-1941	GLENN; C. Wilhide	
	005	US-D161484-S	01-02-1951	CURTIS; Y. Mcquown	
	006	US-D163324	05-15-1951	CHARLES; Rittenhouse	
	007	US-D180923-S	09-10-1957	NICHOLAS; Anton	
	008	US-D181742-S	12-17-1957	ALFRED; W. Madl Milwaukee	
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 2 of 38

Complete if Known	
Application Number	To Be Assigned
Filing Date	Herewith
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Examiner Name	To Be Assigned
Attorney Docket Number	5015.039000J

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Substitute for form 1449/PTO

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(Use as many sheets as necessary)

Sheet 3 of 38

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 4 of 38

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 5 of 38

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Art Unit	To Be Assigned
Examiner Name	To Be Assigned
Attorney Docket Number	5015.039000J

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 6 of 38

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 7 of 38

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Sheet 8 of 38

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 9 of 38

Complete if Known	
Application Number	To Be Assigned
Filing Date	Herewith
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Examiner Name	To Be Assigned
Attorney Docket Number	5015.039000J

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Sheet 10 of 38

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Sheet 11 of 38

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Sheet 12 of 38

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Sheet 13 of 38

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 15 of 38

Complete if Known	
Application Number	To Be Assigned
Filing Date	Herewith
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Art Unit	To Be Assigned
Examiner Name	To Be Assigned
Attorney Docket Number	5015.039000J

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Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 16 of 38

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Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 17 of 38

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Art Unit	To Be Assigned
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Attorney Docket Number	5015.039000J

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Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 18 of 38

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Application Number	To Be Assigned
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Art Unit	To Be Assigned
Examiner Name	To Be Assigned
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 19 of 38

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Sheet 20 of 38

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 21 of 38

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	003	CN-101888050-A	11-17-2010	HIGH TECH COMP CORP.		☒
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	010	CN-106859949-A	06-20-2017	NI JIE.		☒
	011	CN-108543126-A	09-18-2018	HUANG GUANGWEN.		☒
	012	CN-109009978-A	12-18-2018	ZHENGZHOU FEILONG MEDICAL EQUIPMENT CO LTD.		☒

Examiner Signature	/COLIN W STUART/	Date Considered	10/30/2024

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 22 of 38

Complete if Known	
Application Number	To Be Assigned
Filing Date	Herewith
First Named Inventor	WERSLAND; Jason
Art Unit	To Be Assigned
Examiner Name	To Be Assigned
Attorney Docket Number	5015.039000J

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3]–Number[4]–Kind Code[5] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T[6]
	013	CN-109259995-A	01-25-2019	XIAMEN COMFORT ELECTRONICS CO LTD., et al.		☒
	014	CN-109528473-A	03-29-2019	SUZHOU KAIYUN SPORTS TECH CO LTD.		☒
	015	CN-109907965-A	06-21-2019	HUIZHOU YINGYI MOTOR CO LTD.		☒
	016	CN-110812178-A	02-21-2020	ZIKKO CHINA CO LTD.		☒
	017	CN-110868983-A	03-06-2020	THERAGUN LLC.		☒
	018	CN-110996874-A	04-10-2020	THERAGUN LLC.		☒
	019	CN-111067786-A	04-28-2020	SHENZHEN FITTOP HEALTH TECH CO LTD.		☒
	020	CN-111616938-A	09-04-2020	NINGBO GUANGXING HEALTH TECH CO LTD.		☒
	021	CN-111973419-A	11-24-2020	SHANGHAI RONGTAI HEALTH TECH CORP LTD.		☒
	022	CN-113143721-A	07-23-2021	XIAMEN OGAWA INTELLIGENT HEALTH EQUIPMENT CO LTD.		☒
	023	CN-113509366-A	10-19-2021	XIAMEN OGAWA INTELLIGENT HEALTH EQUIPMENT CO LTD.		☒
	024	CN-1432452-A	07-30-2003	ILLINOIS TOOL WORKS [US]		☒

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Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 23 of 38

Complete if Known	
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Art Unit	To Be Assigned
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Attorney Docket Number	5015.039000J

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	025	CN-201239336-Y	05-20-2009	ZHUHAI WENYUANTANG MEDICAL TEC [CN]		☒
	026	CN-201333160-Y	10-28-2009	DONGHE WU [CN]		☒
	027	CN-201524220-U	07-14-2010	SHANDONG KANGTAI INDUSTRY CO LTD.		☒
	028	CN-201743890-U	02-16-2011	SHENZHEN BREO TECHNOLOGY CO.		☒
	029	CN-201847899-U	06-01-2011	SHUOYONG CO LTD.		☒
	030	CN-202161539-U	03-14-2012	WEIQING HUANG.		☒
	031	CN-202637439-U	01-02-2013	LIU XING.		☒
	032	CN-203598194-U	05-21-2014	LUO WEIHAO.		☒
	033	CN-205163583-U	04-20-2016	HEFEI HEZHENG MEDICAL SCIENCE & TECH CO LTD.		☒
	034	CN-205286890-U	06-08-2016	SHANGPIN YIJIA WUHAN CO LTD.		☒
	035	CN-205459750-U	08-17-2016	WU ZHENGFU.		☒
	036	CN-205494357-U	08-24-2016	YANG KAIBO.		☒

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Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 24 of 38

Complete if Known	
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Attorney Docket Number	5015.039000J

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	037	CN-205598186-U	09-28-2016	LI AN.		☒
	038	CN-206081000-U	04-12-2017	LIN LILIANG.		☒
	039	CN-206434556-U	08-25-2017	ANHUI RYZUR MEDICAL EQUIPMENT MFT CO LTD.		☒
	040	CN-207286298-U	05-01-2018	SHENZHEN BREO TECHNOLOGY CO.		☒
	041	CN-207855923-U	09-14-2018	SUZHOU WIN TECH TOOLS MFG CO LTD.		☒
	042	CN-208405314-U	01-22-2019	GUANGZHOU LONGEST SCIENCE & TECH CO LTD.		☒
	043	CN-208448086-U	02-01-2019	XIAMEN COMFORT ELECTRONICS CO LTD., et al.		☒
	044	CN-209154392-U	07-26-2019	ANJI XINXIN TECH CO LTD.		☒
	045	CN-2788807-Y	06-21-2006	YU KAILI [CN]		☒
	046	CN-301664182-S	09-07-2011	XU JINGZHUANG.		☒
	047	CN-303250924-S	06-17-2015	JINGMEI TECHNOLOGY CO., LTD.		☒
	048	CN-303250929-S	06-17-2015	JINGMEI TECHNOLOGY CO., LTD.		☒

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Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 25 of 38

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Art Unit	To Be Assigned
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Attorney Docket Number	5015.039000J

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	049	CN-304561844-S	03-30-2018	SHENZHEN HUAZENG TECHNOLOGY CO., LTD.		☒
	050	CN-86101310-A	09-03-1986	MAX J. RUDERIAN.		☒
	051	DE-102015102112-A1	08-20-2015	LIEBSCHER-BRACHT ROLAND [DE]		☒
	052	DE-19905199-A1	07-06-2000	MAXSTAR IND CO [KR]		☒
	053	DE-202015005257-U1	10-28-2016	STORZ MEDICAL AG [CH]		☒
	054	DE-3633888-A1	04-07-1988	LICENTIA GMBH [DE]		☒
	055	EP-0436719-B1	05-18-1994	NIHON KENKOZOSHIN KENKYUKAI KK [JP]		☐
	056	EP-1728494-A1	12-06-2006	OREAL [FR]		☒
	057	EP-1728494-B1	01-23-2013	OREAL [FR]		☒
	058	EP-1964537-A1	09-03-2008	TSUIN BADO KOGYO KK [JP]		☐
	059	EP-2080500-A1	07-22-2009	TSUIN BADO KOGYO KK [JP]		☐
	060	EP-2328255-A1	06-01-2011	GIERSIEPEN GIRA GMBH [DE]		☒

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 26 of 38

Complete if Known	
Application Number	To Be Assigned
Filing Date	Herewith
First Named Inventor	WERSLAND; Jason
Art Unit	To Be Assigned
Examiner Name	To Be Assigned
Attorney Docket Number	5015.039000J

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	061	GB-2066081-A	07-08-1981	MABUCHI MOTOR CO.		☐
	062	GB-2262236-A	06-16-1993	HAAS FRANZ [AT]		☐
	063	JP-2000189525-A	07-11-2000	MARUTAKA CO LTD.		☒
	064	JP-2002282322-A	10-02-2002	DAITO ELECTRIC MACHINE IND.		☒
	065	JP-2003077837-A	03-14-2003	TOSHIBA CORP.		☒
	066	JP-2003275265-A	09-30-2003	FAMILY KK.		☒
	067	JP-2005204777-A	08-04-2005	OMRON HEALTHCARE CO LTD.		☒
	068	JP-2006034941-A	02-09-2006	TSUIN BADO KOGYO KK.		☒
	069	JP-2006212228-A	08-17-2006	FAMILY CO LTD., et al.		☒
	070	JP-2008289616-A	12-04-2008	TSUIN BADO KOGYO KK.		☒
	071	JP-2008510588-A	04-10-2008	COLLOCA CHRISTOPHER J.		☒
	072	JP-2010534110-A	11-04-2010	ACTIVATOR METHODS INTERNATIONA.		☒

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 27 of 38

Complete if Known	
Application Number	To Be Assigned
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Art Unit	To Be Assigned
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	073	JP-2011502369-A	01-20-2011	JOHNSON DAVID C.		☒
	074	JP-2013119018-A	06-17-2013	AKOOZU KK.		☒
	075	JP-2014511240-A	05-15-2014	BRIDGET RAY SOUTHWELL, ,, et al.		☒
	076	JP-2015035844-A	02-19-2015	MAKITA CORP.		☒
	077	JP-2015104422-A	06-08-2015	MTG KK.		☒
	078	JP-2018518347-A	07-12-2018	THERAGAN, LIMITED DRYABILITY COMPANY.		☒
	079	JP-3077837-U	06-08-2001	TOSHIYUKI FURUNUMA.		☒
	080	JP-5129032-B2	01-23-2013	WATANABE HIDEAKI.		☒
	081	JP-H0219157-A	01-23-1990	SANDEN ENG KK.		☒
	082	JP-H03218763-A	09-26-1991	SHIN ATSU SHIN CLINIC INC.		☒
	083	JP-H0447440-A	02-17-1992	MITSUBISHI ELECTRIC CORP.		☒
	084	JP-H0447440-U	04-22-1992	MATOBA ELECTRIC MANUFACTURE CO, LTD.		☒

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Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 28 of 38

Complete if Known	
Application Number	To Be Assigned
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	085	JP-H048128-B2	02-14-1992	TAKAHASHI IZUO, et al.		☒
	086	JP-H0751393-A	02-28-1995	HITACHI METALS LTD., et al.		☒
	087	JP-S5230553-A	03-08-1977	MABUCHI MOTOR CO.		☒
	088	JP-S5428491-A	03-03-1979	NISHIDA YOSHINORI.		☒
	089	JP-S60135123-A	07-18-1985	MITSUBISHI ELECTRIC CORP.		☒
	090	KR-100752432-B1	08-24-2007	CHOI DONG HWAN [KR]		☒
	091	KR-101123926-B1	04-13-2012	AT SYSTEM CO LTD [KR]		☒
	092	KR-101162978-B1	07-09-2012	AT SYSTEM CO LTD [KR]		☒
	093	KR-101406275-B1	06-12-2014	LEE JUNG DONG., et al.		☒
	094	KR-200313149-Y1	05-16-2003	GETTINGWELL CO.,LTD.		☒
	095	KR-200345192-Y1	03-16-2004	KIM; Gu-Bong		☒
	096	KR-200435552-Y1	01-30-2007	CHUNG, IL GU.		☒

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Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 29 of 38

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	097	KR-20090119424-A	11-19-2009	JEON SEONG HEE [KR]		☒
	098	KR-20170108550-A	09-27-2017	LEE YONG SIK [KR]		☒
	099	KR-20180031683-A	03-28-2018	THERAGUN LLC [US]		☒
	100	KR-20200051098-A	05-13-2020	SYNERGY MIMOS CO LTD [KR]		☒
	101	RU-2170567-C1	07-20-2001	PEDDER VALERIJ VIKTOROVICH.		☒
	102	TW-201440753-A	11-01-2014	GAO FU-MAO [TW]		☒
	103	TW-I359657-B	03-11-2012	CAI, CHE.		☒
	104	WO-0119316-A2	03-22-2001	NIAGARA MFG LTD [GB], et al.		☐
	105	WO-2008113139-A1	09-25-2008	CYPRO SSAGE PTY LTD [AU], et al.		☐
	106	WO-2009014727-A1	01-29-2009	ACTIVATOR METHODS INTERNATIONA [US], et al.		☐
	107	WO-2009102279-A1	08-20-2009	TERNARY TECHNOLOGIES PTE LTD [SG], et al.		☐
	108	WO-2011159317-A1	12-22-2011	SHACHAR YEHOSHUA [US], et al.		☐

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Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 30 of 38

Complete if Known	
Application Number	To Be Assigned
Filing Date	Herewith
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Art Unit	To Be Assigned
Examiner Name	To Be Assigned
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	109	WO-2013114084-A1	08-08-2013	BARHAM ANDREW GARETH [GB]		☐
	110	WO-2013145346-A1	10-03-2013	DAITO ELECTRIC MACHINE IND [JP], et al.		☒
	111	WO-2014118596-A1	08-07-2014	TELEFIELD LTD [CN]		☐
	112	WO-2015038005-A2	03-19-2015	NEVROFLEX AS [NO]		☐
	113	WO-2018012105-A1	01-18-2018	OREAL [FR], et al.		☐
	114	WO-2018119106-A1	06-28-2018	ENSO CO [US]		☐
	115	WO-2019186225-A1	10-03-2019	GOLDEN GM HOLDINGS SDN BHD [MY]		☐
	116	WO-2021050861-A1	03-18-2021	THERAGUN INC [US]		☐
	117	WO-2021222571-A1	11-04-2021	THERAGUN INC [US]		☐
	118	WO-2022011251-A9	05-12-2022	HYPER ICE INC [US]		☐
	119	WO-2023172676-A2	09-14-2023	NEW HEIGHTS ENERGY LLC [US]		☐

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Sheet 31 of 38

Complete if Known	
Application Number	To Be Assigned
Filing Date	Herewith
First Named Inventor	WERSLAND; Jason
Art Unit	To Be Assigned
Examiner Name	To Be Assigned
Attorney Docket Number	5015.039000J

NON-PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.[1]	Include name of the author(in CAPITAL LETTERS),title of the article(when appropriate), title of the item (book,magazine,journal,serial,symposium,catalog,etc.),date,page(s),volume-issue number(s),publisher, city and/or country where published.	T[2]
	001	AMAZON: "OIVO Xbox One Controller Charger Dual Charging Station Updated Strap, Remote Charger Dock-2 Rechargeable Battery Packs Included," OIVO, 06 September 2018, Especially annotated figures, Retrieved from Entire Document, 11 Pages.	☐
	002	AMAZON: "PowerA Joy Con & Pro Controller Charging Dock Nintendo Switch," PowerA, 31 October 2017, Especially annotated figures, Retrieved from Entire Document, 10 Pages.	☐
	003	AMAZON: "Theragun G3PRO Percussive Therapy Device, White, Handheld Deep Muscle, Treatment Massager & Muscle Stimulator for Pain Relief, Recovery, Enhance Performance & Energize The Body," 13 February 2019, Shown on pp. 1, 2 Pages, Retrieved from URL: https://www.amazon.com/dp/B07MJ2MCT3/ref=nav_timeline_asin?_encoding=UTF8&psc=1.	☐
	004	Anthony Katz, "The RAPTOR: Helps Patients and Saves Your Most Valuable Tool .. .Your Hands," DC Aligned:MeyerDC, December 9, 2015, available at: http://news.meyerdc.com/community/vendor-spotlight/the-raptor-helps-patients-saves-your-most-valuable-tool-your-hands/ (last visited Feb. 15, 2023); 5 pages.	☐
	005	AUSTIN, Regan, "HYPERICE Introduces HYPERVOLT, a State-of-the Art Vibration, Massage Device for Muscle Relief," GlobeNewswire, retrieved from: https://www.globenewswire.com/en/news-release/2018/02/26/1387424/0/en/HYPERICE-Introduces-HYPERVOLT-a-State-of-the-Art-Vibration-Massage-Device-for-Muscle-Reliefhtml#:%7E:text=LOS%20ANGELES%2C%20Feb.,of%20its%20newest%20product%2C%20HYPERVOLT; February 26, 2018; 4 pages.	☐
	006	BARDWELL D., "Wahl's Massage Products - Meant for Life's Big Pains," DougBardwell.com, 06 April 2016, 7 Pages, [Retrieved On 2021-06-03] Retrieved from URL: https://dougbardwell.com/db/2016/04/06/wahls-massage-products-meant-for-lifes-big-pains/.	☐
	007	COLLINS D., "External Rotor Motor Basics: Design and Applications," 06 June 2018, 03 Pages.	☐
	008	COLLINS D., "FAQ: What are Hall Effect Sensors and What Is Theirs Role In Dc Motors?," 11 January 2017, 03 Pages.	☐
	009	Defendant's Initial Invalidity Contentions, Therabody, Inc. v. Tzumi Electronics LLC et al., Case No. SDNY-1-21-cv-07803 (PGG)(RWL), dated August 17, 2022; 16 pages.	☐

Examiner Signature	/COLIN W STUART/	Date Considered	10/30/2024

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	010	Description of Therabody GI Device, available at: https://www.therabody.com/us/en-us/faq/thearagun-devices/faq-devices-1.html?fdid=faq&csortb1=sortOrder&csortd1=1 (last visited Feb. 15, 2023).	☐
	011	DIGI-KEY'S NORTH AMERICAN EDITORS: "How to Power and Control Brushless DC Motors," 07 December 2016, 09 Pages.	☐
	012	eBay.com, "Hyperice Hypervolt Plus Percussion Massage Gun Black," retrieved on July 1, 2024, from: https://www.ebay.com/itm/235291399188?epid=17041170488&itmmeta=01HZMXKFMBFRQ17WC1Z4PBKRYW&hash=item36c875d414:g:HuYAAOSw4VpmRBpu&itmprp=enc%3AAQAJAAAA4PnnRQrN0tCFRmEKiVFeO9WAq5vc8s2wpw6PqVvLkiD16U00gyJ41f1ML0fqkmOuALhCh1PGg2wJZ5tZroWtEw7sJjhgVfmA%2Bocf6f9rzLlrf%2BhYv7hH8OOKRtsLeafsmF1%2B9%2BkiC14KW%2FbAMikAx7b07HQoWQb%2FyxBykIuypPQ%2FHa8V5mVpdq%2B60u5jw1bOIW7FkUfiTzfEU79GlwjtsGkZQa5n8mkhaBZH2trbs8t9atCL12aZFdhZFqN%2FyJ%2B9cdYMoUdmO10vzI2mxVnModndbqexR7ILLQWHeeWpqks%2B%7Ctkp%3ABFBMqPrNnflj; 6 pages.	☐
	013	Examination Report For Australian Patent Application No. 2016284030, dated 07 May 2018, 3 Pages.	☐
	014	Extended European Search Report for European Application No. 16815104.1, mailed 23 January 2019, 08 Pages.	☐
	015	Extended European Search Report for European Application No. 18832213.5, mailed 21 July 2021, 11 Pages.	☐
	016	Extended European Search Report for European Application No. 18832923.9, mailed 23 April 2021, 7 Pages.	☐
	017	Extended European Search Report for European Application No. 20720323.3, mailed 09 September 2021, 10 Pages.	☐
	018	Extended European Search Report for European Application No. 20802710.2, mailed 10 May 2022, 9 Pages.	☐

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Sheet 33 of 38

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	019	Extended European Search Report for European Application No. 20802804.3, mailed 28 April 2022, 8 Pages.	☐
	020	Extended European Search Report for European Application No. 21178300.6, mailed 19 October 2021, 9 Pages.	☐
	021	Extended European Search Report for European Application No. 21178311.3, mailed 23 September 2021, 5 Pages.	☐
	022	Holly Riddle, "Theragun vs. Hyperice vs, Hydragun: Massage Gun Showdown [Buyer's Guide]," ChatterSource: Health & Wellness, March 9, 2021, available at: https://www.chattersource.com/article/massage-gun/ (last visited Feb. 17, 2023); 14 pages.	☐
	023	International Preliminary Report on Patentability for International Application No. PCT/US2016/038326, mailed 04 January 2018, 8 Pages.	☐
	024	International Preliminary Report on Patentability for International Application No. PCT/US2018/022426, mailed 26 September 2019, 9 Pages.	☐
	025	International Preliminary Report on Patentability for International Application No. PCT/US2018/039599, mailed 23 January 2020, 8 Pages.	☐
	026	International Preliminary Report on Patentability for International Application No. PCT/US2018/040795, mailed 23 January 2020, 7 Pages.	☐
	027	International Preliminary Report on Patentability for International Application No. PCT/US2019/067624, mailed 08 July 2021, 11 Pages.	☐
	028	International Preliminary Report on Patentability for International Application No. PCT/US2020/017645, mailed 26 August 2021, 11 Pages.	☐
	029	International Preliminary Report on Patentability for International Application No. PCT/US2020/031339, mailed 18 November 2021,11 Pages.	☐

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	030	International Preliminary Report on Patentability for International Application No. PCT/US2020/031936, mailed 18 November 2021, 14 Pages.	☐
	031	International Preliminary Report on Patentability for International Application No. PCT/US2020/050385, mailed 24 March 2022, 12 Pages.	☐
	032	International Preliminary Report on Patentability for International Application No. PCT/US2020/050399, mailed 13 January 2022, 6 Pages.	☐
	033	International Preliminary Report on Patentability for International Application No. PCT/US2020/054773, mailed 21 April 2022, 8 Pages.	☐
	034	International Preliminary Report on Patentability for International Application No. PCT/US2020/054842, mailed 21 April 2022, 7 Pages.	☐
	035	International Preliminary Report on Patentability for International Application No. PCT/US2020/063426, mailed 16 June 2022, 06 Pages.	☐
	036	International Preliminary Report on Patentability for International Application No. PCT/US2021/022500, mailed 06 October 2022, 6 Pages.	☐
	037	International Preliminary Report on Patentability for International Application No. PCT/US2021/029900, mailed 10 November 2022, 9 Pages.	☐
	038	International Preliminary Report on Patentability for International Application No. PCT/US2021/029903, mailed 10 November 2022, 7 Pages.	☐
	039	International Search Report and Written Opinion for International Application No. PCT/US2016/038326, mailed 01 September 2016, 9 Pages.	☐
	040	International Search Report and Written Opinion for International Application No. PCT/US2018/022426, mailed 31 May 2018, 10 Pages.	☐
	041	International Search Report and Written Opinion for International Application No. PCT/US2018/039599, mailed 24 September 2018, 9 Pages.	☐

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	042	International Search Report and Written Opinion for International Application No. PCT/US2018/040795, mailed 24 September 2018, 8 Pages.	☐
	043	International Search Report and Written Opinion for International Application No. PCT/US2019/067624, mailed 03 February 2020, 13 Pages.	☐
	044	International Search Report and Written Opinion for International Application No. PCT/US2020/017645, mailed 20 May 2020, 13 Pages.	☐
	045	International Search Report and Written Opinion for International Application No. PCT/US2020/031339, mailed 10 June 2020, 12 Pages.	☐
	046	International Search Report and Written Opinion for International Application No. PCT/US2020/031347, mailed 03 August 2020, 9 Pages.	☐
	047	International Search Report and Written Opinion for International Application No. PCT/US2020/031936, mailed 11 September 2020, 17 Pages.	☐
	048	International Search Report and Written Opinion for International Application No. PCT/US2020/050385, mailed 03 December 2020, 13 Pages.	☐
	049	International Search Report and Written Opinion for International Application No. PCT/US2020/050399, mailed 04 February 2021, 11 Pages.	☐
	050	International Search Report and Written Opinion for International Application No. PCT/US2020/054773, mailed 12 January 2021, 9 Pages.	☐
	051	International Search Report and Written Opinion for International Application No. PCT/US2020/054842, mailed 11 January 2021, 8 Pages.	☐
	052	International Search Report and Written Opinion for International Application No. PCT/US2020/063426, mailed 26 February 2021, 09 Pages.	☐
	053	International Search Report and Written Opinion for International Application No. PCT/US2021/022500, mailed 20 April 2021, 7 Pages.	☐

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	054	International Search Report and Written Opinion for International Application No. PCT/US2021/029900, mailed 06 October 2021, 12 Pages.	☐
	055	International Search Report and Written Opinion for International Application No. PCT/US2021/029903, mailed 28 July 2021, 8 Pages.	☐
	056	International Search Report and Written Opinion for International Application No. PCT/US2022/028309, mailed 08 September 2022, 10 Pages.	☐
	057	International Search Report and Written Opinion for International Application No. PCT/US2022/076238, mailed 23 January 2023, 12 Pages.	☐
	058	Machine translation from Espacenet of written description and claims for CN106074129A, 9 pages (2016).	☐
	059	Machine translation from Espacenet of written description and claims for CN111616938A, 5 pages (2020).	☐
	060	Machine translation from Espacenet of written description and claims for CN111973419A, 7 pages (2020).	☐
	061	Machine Translation of Written Description and Claims for WO2013145346A1 (Year: 2013).	☐
	062	MASSAGE EXPERT: "Nursal Deep Percussion Massager Review - 6 Interchangeable Nodes," 04 January 2021, 6 Pages, [Retrieved on 2021-06-03] Retrieved from URL: https://www.massagexpert.net/nursal-deep-percussion-massager-review/.	☐
	063	MCFARLAND M., "Segway Was Supposed to Change the World, Two Decades Later, It Just Might," CNN Wire Service, 30 October 2018, 7 Pages.	☐
	064	Partial Supplementary European Search Report for European Application No. 18832213.5, mailed 20 April 2021, 12 Pages.	☐

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	065	RACHEL [no family name indicated], "Jigsaw Massager," Instructables, 18 April 2010, 6 Pages, Retrieved from URL: https://web.archive.org/web/20100418041422/ http://www.instructables.com/id/Jigsaw-Massager/.	☐
	066	ROCKWELL: "Trans4mer Operating Manual for Multi-purpose saw," Model RK2516/RK2516K, 2011, 32 Pages.	☒
	067	Supplementary European Search Report for European Application No. 19904459.5, mailed 15 April 2021, 04 Pages.	☐
	068	TESTBERICHTE.DE: "Naipo Handheld Percussion Massager with Heating (MGPC 5000)," amazon.de, 7 Pages, [Retrieved on 2021-06-03] Retrieved from URL: https://www.testberichte.de/p/naipo-tests/handheld-percussion-massager-with-heating-mgpc-5000-testbericht.html, See also a YouTube Review of this Device dated 21 May 2018 at https://www.youtube.com/watch?v=bi_QCJA3D9k.	☒
	069	Visual Description of Hyper Ice, Inc. Raptor Device, "Osteopatia Haidy Ortale - Raptor Massage," available at: https://www.youtube.com/watch?v=plyW8FBowVs (last visited Feb. 15, 2023); 1 page.	☐
	070	Visual Description of Hyper Ice, Inc. Raptor Device, "RAPTOR Solutions 1.3 Prone," available at: https://www.youtube.com/watch?v=6i1tRqdwPU8&t=156s (last visited Feb. 15, 2023); 1 page.	☐
	071	WORX Trans4mer "Safety and Operating Manual Original Instructions" for 12V Li-Ion Multipurpose saw, WX540, NX540.3, WX540.9, 16 pages (2013).	☐
	072	YOUTUBE: "Unboxing: Joy-Con & Pro Controller Charging Dock for Nintendo Switch," Crusherbad64, Especially demonstration 8:30 - 8:55, (This reference is Being Used to Show Greater Details of Product not Clearly Disclosed in 'PowerA'), 26 February 2018, Retrieved from entire document, 1 Page.	☐
	073	YouTube.com, "Introducing the Hyperbolt by Hyperice," posted February 25, 2018, retrieved from: https://www.youtube.com/watch?v=eI3QbjhGNK0; 4 pages.	☐

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Examiner Name	To Be Assigned
Attorney Docket Number	5015.039000J

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☐ See attached certification statement.

☒ A certification statement is not submitted herewith.

FEE

☐ Fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

COPIES

☐ An identification of an earlier application pursuant to 37 CFR 1.98 (d) (1) is attached.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Joseph K. Venier/	Date (YYYY-MM-DD)	2024-08-19
Name/Print	Joseph K. Venier	Registration Number	76,838

22940267.1

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PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L1	0	"17018099"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/01 05:03 PM
L2	428	(US-20140180331-$ or US-20130261516-$ or US-20130138023-$ or US-20120253245-$ or US-20080103419-$ or US-20070150004-$ or US-20060192527-$ or US-20060123941-$ or US-20060025710-$ or US-20030195443-$ or US-20030009116-$ or US-20010016697-$ or US-20160206502-$ or US-20160367425-$ or US-20170027798-$ or US-20030094356-$ or US-20170304145-$ or US-20140163442-$ or US-20130281897-$ or US-20120101517-$ or US-20100137907-$ or US-20100010399-$ or US-20090270915-$ or US-20090222024-$ or US-20020107459-$ or US-20170304144-$).did. or (US-20170156974-$ or US-20160346152-$ or US-20160271009-$ or US-20170156975-$ or US-20030149381-$ or US-20150202114-$ or US-20130012849-$ or US-20020072693-$ or US-20130123677-$ or US-20130072837-$ or US-20100331745-$ or US-20010027280-$ or US-20030028134-$ or US-20030065280-$ or US-20020183668-$ or US-20020082536-$ or US-20140323931-$ or US-20110137217-$ or US-20110041864-$ or US-20050113636-$ or US-20090038069-$ or US-20040064074-$ or US-20090086569-$ or US-	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/01 05:05 PM

		20120253246-$ or US-20170281457-$ or US-20170105896-$ or US-20070299378-$).did. or (US-20100125228-$ or US-20060074362-$ or US-20170281459-$ or US-20040176710-$ or US-20150148592-$ or US-20080262397-$ or US-20100145242-$ or US-20030144615-$ or US-20090177128-$ or US-20170241201-$ or US-20150198219-$ or US-20090165387-$ or US-20070175647-$ or US-20050217900-$ or US-20050015030-$ or US-20100024571-$ or US-20150305973-$ or US-20160015596-$ or US-20150182411-$ or US-20160131228-$ or US-20090032275-$ or US-20030019799-$ or US-20130245511-$ or US-20040039314-$ or US-20070144310-$ or US-20180263845-$ or US-20150005682-$).did. or (US-20180200141-$ or US-20040255475-$ or US-20040255474-$ or US-20040187324-$ or US-20040117993-$ or US-20150367494-$ or US-20150033564-$ or US-20130133210-$ or US-20090100690-$ or US-20060260141-$ or US-20050178012-$ or US-20080047150-$ or US-20120192440-$ or US-20120030955-$ or US-20030070307-$ or US-20090272617-$ or US-20180099339-$ or US-20110265335-$ or US-20110131820-$ or US-20060288594-$ or US-20080016705-$ or US-20070209217-$ or US-20190017528-$ or US-20190015294-$ or US-20130019483-$ or US-20150375315-$ or US-					

Hyper Ice, Inc. Ex. 1003-Page 648
Hyper Ice, Inc. v. Therabody, Inc.

		20110185582-$).did. or (US-20190224765-$ or US-20180236572-$ or US-20190209424-$ or US-20180370012-$ or US-20190254921-$ or US-20060047315-$ or US-20050131461-$ or US-20020082532-$ or US-20180031089-$ or US-20190175434-$ or US-20080004554-$ or US-20050159689-$ or US-20170079865-$ or US-20190083352-$ or US-20140283394-$ or US-20170361386-$ or US-20170173711-$ or US-20140182871-$ or US-20090188119-$ or US-20080189961-$ or US-20050126018-$ or US-20010011420-$ or US-20020138991-$ or US-20190351539-$ or US-20160199924-$ or US-20100162579-$ or US-20130014968-$).did. or (US-20080229591-$ or US-20050257385-$ or US-20050257384-$ or US-20110107608-$ or US-20140360335-$ or US-20130204255-$ or US-20090326540-$ or US-20050252011-$ or US-20150113815-$ or US-20140007436-$ or US-20070289149-$ or US-20050262710-$ or US-20200069510-$ or US-20190365598-$ or US-20200046602-$ or US-20200093682-$ or US-20180256432-$ or US-20200060918-$ or US-20200000678-$ or US-20130110017-$ or US-20150297437-$ or US-20110224580-$ or US-20190307631-$ or US-20120215141-$ or US-20120215280-$ or US-20150133832-$ or US-20150005672-$).did. or (US-20160278584-$ or US-20130237751-$ or						

		US-20050207609-$ or US-20150335520-$ or US-20150169124-$ or US-20160213558-$ or US-20150119771-$ or US-20190290076-$ or US-20170095398-$ or US-20160151238-$ or US-20160000642-$ or US-20050054958-$ or US-20150290076-$ or US-20160158097-$ or US-20190099327-$ or US-20200214934-$ or US-20200038530-$ or US-20180288160-$ or US-20180279843-$ or US-20170049278-$ or US-20180243158-$ or US-20160303668-$ or US-20180326568-$ or US-20140360029-$ or US-20140194790-$ or US-20090240177-$ or US-20190066833-$).did. or (US-20180008512-$ or US-20100274162-$ or US-20180196395-$ or US-20150310634-$ or US-20150040685-$ or US-20140194900-$ or US-20080177207-$ or US-20150126916-$ or US-20140207032-$ or US-20200261307-$ or US-20180296433-$ or US-20070270727-$ or US-20200289365-$ or US-20200261310-$ or US-20200000244-$ or US-20190247271-$ or US-20140236040-$ or US-20140194794-$ or US-20100030122-$ or US-20090270774-$ or US-20090036809-$ or US-20080243041-$ or US-20060258963-$ or US-20050113724-$ or US-20200261306-$ or US-20200253818-$ or US-20200330321-$).did. or (US-20130014988-$ or US-20140310900-$ or US-20180133101-$ or US-20200268594-$ or US-20200241683-$ or					

Hyper Ice, Inc. Ex. 1003-Page 650
Hyper Ice, Inc. v. Therabody, Inc.

		US-20200323733-$ or US-20200281805-$).did. or (US-6663657-$ or US-6228042-$ or US-5951501-$ or US-5569168-$ or US-4549535-$ or US-4173217-$ or US-5273479-$ or US-8715161-$ or US-7927259-$ or US-7041072-$ or US-6733414-$ or US-6723060-$ or US-6682496-$ or US-6599260-$ or US-6352518-$ or US-6027444-$ or US-5716332-$ or US-4827914-$ or US-4790296-$ or US-4513737-$ or US-3837335-$ or US-3626934-$ or US-9827159-$ or US-4716890-$ or US-5140979-$ or US-3754548-$).did. or (US-6786878-$ or US-7238162-$ or US-7128722-$ or US-8951216-$ or US-5460597-$ or US-5417644-$ or US-6730050-$ or US-6432072-$ or US-5695451-$ or US-5475883-$ or US-5085207-$ or US-4162675-$ or US-4088128-$ or US-4079733-$ or US-3724451-$ or US-8342187-$ or US-7590445-$ or US-4730605-$ or US-7951098-$ or US-4025809-$ or US-3580246-$ or US-6228103-$ or US-9161881-$ or US-4566442-$ or US-5983416-$ or US-4722327-$ or US-7367981-$).did. or (US-5676637-$ or US-8777881-$ or US-4834075-$ or US-					

		6500135-$ or US- 3806980-$ or US- 7503923-$ or US- 5300095-$ or US- 4841955-$ or US- 6730051-$ or US- 5843006-$ or US- 3747594-$ or US- 5214975-$ or US- 5203113-$ or US- 5640735-$ or US- 5374237-$ or US- 7996996-$ or US- 9724771-$ or US- 9606026-$ or US- 7059425-$ or US- 5655887-$ or US- 3854563-$ or US- 5573500-$ or US- 3736920-$ or US- 5088474-$ or US- 9265689-$ or US- 5803916-$ or US- 6805700-$).did. or (US- 6602211-$ or US- 6997889-$ or US- 4158246-$ or US- 9289348-$ or US- 5470303-$ or US- 5159922-$ or US- 9889066-$ or US- 10027201-$ or US- 8640347-$ or US- 5212887-$ or US- 5099705-$ or US- 5079844-$ or US- 3759020-$ or US- 7036401-$ or US- 3863342-$ or US- 7818887-$ or US- RE36269-$ or US- 5083376-$ or US- 7448137-$ or US- 6671969-$ or US- 7096589-$ or US- 5940977-$ or US- 7127973-$ or US- 8813377-$ or US- 4976164-$ or US- 8656598-$ or US- 5170564-$).did. or (US- 3971132-$ or US- 6772662-$ or US- 4272996-$ or US- 3942251-$ or US- 6212781-$ or US- 7191847-$ or US- 9192390-$ or US-					

		5832611-$ or US- 6264211-$ or US- 7251896-$ or US- 7370423-$ or US- 4150668-$ or US- 4817738-$ or US- 6557816-$ or US- 4563605-$ or US- 5129118-$ or US- 4420995-$ or US- 9333628-$ or US- 8475076-$ or US- 7954402-$ or US- 6971285-$ or US- 6964216-$ or US- 5660491-$ or US- 2964037-$ or US- 1882040-$ or US- 8322456-$ or US- 6938706-$).did. or (US- 8561717-$ or US- 10357425-$ or US- 10428850-$ or US- 10470970-$ or US- 4283855-$ or US- 10525541-$ or US- 3876015-$ or US- 3834019-$ or US- 3805383-$ or US- 6357124-$ or US- 4240204-$ or US- 7509744-$ or US- 5007172-$ or US- 3706474-$ or US- 4991298-$ or US- 8960323-$ or US- 8578615-$ or US- 6282797-$ or US- 6634107-$ or US- 6662455-$ or US- 6758119-$ or US- 3785053-$ or US- 9221112-$ or US- 7109613-$ or US- 5624000-$ or US- 10314762-$ or US- 9543871-$).did. or (US- 10702448-$ or US- 10517790-$ or US- 10420700-$ or US- 6648840-$ or US- 4697580-$ or US- 6568089-$ or US- 8702633-$ or US- 5113847-$ or US- 5501657-$ or US- 6562013-$ or US- 10492984-$ or US-					

		10561574-$ or US-6210349-$ or US-5611771-$ or US-10857064-$ or US-10842703-$ or US-8945104-$ or US-10912707-$ or US-10918565-$).did. or (US-2964037-$ or US-1882040-$ or US-2902067-$ or US-2868248-$ or US-2822005-$ or US-2808082-$ or US-2240755-$ or US-3309932-$ or US-3545301-$ or US-3172675-$ or US-2839101-$ or US-3050093-$ or US-3340612-$ or US-3623223-$).did. or (EP-1313116-$ or WO-2009014727-$).did. or (JP-07051393-$ or JP-02019157-$ or JP-2005204777-$).did. or (WO-2015038005-$ or WO-2014118596-$ or JP-2010534110-$ or CN-210728184-$ or DE-102015226084-$ or WO-2006122435-$ or WO-2013114084-$).did.					
L3	57	((("Wersland") near3 ("Jason"))).INV.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/01 05:06 PM
L4	109789	L23and ((mount$ frame framing case casing housing bracket) near3 motor).clm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/01 05:07 PM
L5	16	L3 and ((mount$ frame framing case casing housing bracket) near3 motor).clm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/01 05:07 PM
L6	2	L3 and ((heart-rate (heart adj rate) heartrate) thermometer temperature).clm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/01 05:08 PM
L7	51	((("Nazarian") near3 ("Benjamin"))).INV.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/01 05:08 PM
L8	5	L7 not L3	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/01 05:08 PM
L9	36	((("Solana") near3 ("Jaime") near3 ("Sanchez"))).INV.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/01 05:08 PM

L10	3	L9 not L3	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/01 05:08 PM
L11	15	((("Merino") near3 ("Eduardo"))).INV.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/01 05:09 PM
L12	0	L11 not L3	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/01 05:09 PM
L13	38	((("THERAGUN") near3 ("INC"))).AS,AANM.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/01 05:09 PM
L14	12	L13 and ((mount$ frame framing case casing housing bracket) near3 motor).clm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/01 05:09 PM
L15	2	L13 and ((heart-rate (heart adj rate) heartrate) thermometer temperature).clm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/01 05:10 PM
L16	401	A61H1/00,006,008.cpc. and ((mount$3 frame framing case casing housing bracket) near3 motor)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/01 05:11 PM
L17	230	A61H1/00,006,008.cpc. and ((mount$3) near3 motor)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/01 05:11 PM
L18	748	A61H1/00,006,008.cpc. and ((heart-rate (heart adj rate) heartrate) thermometer temperature)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/01 05:11 PM
L19	206	A61H1/00,006,008.cpc. and ((heart-rate (heart adj rate) heartrate))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/01 05:12 PM
L20	2	(("10314762") or ("20180133101")).PN.	(US-PGPUB; USPAT; USOCR)	OR	OFF	OFF	2021/03/01 05:14 PM
L21	9	A61H1/00,006,008.cpc. and (((heart-rate (heart adj rate) heartrate)) with (percussion percussive massage))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/01 05:38 PM
L22	12	A61H1/00,006,008.cpc. and (((heart-rate (heart adj rate) heartrate)) same (percussion percussive massage))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/01 05:39 PM
L23	101	A61H1/00,006,008.cpc. and ((temperature thermometer) same (percussion percussive massage))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/01 05:39 PM
L24	999	A61H23/00,004,006,02,0218,0254,0263,04,06.cpc. and ((mount$3) near3 motor)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/02 07:50 AM

L25	222	A61H23/00,004,006,02, 0218,0254,0263,04,06. cpc. and ((mount$3) adj motor)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/02 10:24 AM
L26	31	A61H23/00,004,006,02, 0218,0254,0263,04,06. cpc. and ((mount) adj motor)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/02 10:50 AM
L27	102	A61H23/00,004,006,02, 0218,0254,0263,04,06. cpc. and (motor adj mount)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/02 10:51 AM
L28	122	A61H23/00,004,006,02, 0218,0254,0263,04,06. cpc. and ((mount) near1 motor)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/02 10:56 AM
L29	452	A61H23/00,004,006,02, 0218,0254,0263,04,06. cpc. and ((heart-rate (heart adj rate) heartrate))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/02 11:18 AM
L30	191	A61H23/00,004,006,02, 0218,0254,0263,04,06. cpc. and (((heart-rate (heart adj rate) heartrate)) same (vibrat$ percussion percussive))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/02 11:21 AM
L31	1028	A61H23/00,004,006,02, 0218,0254,0263,04,06. cpc. and (((heart-rate pulse (heart adj rate) heartrate)) same (vibrat$ percussion percussive))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/02 11:56 AM
L32	277	A61H23/00,004,006,02, 0218,0254,0263,04,06. cpc. and (((heart-rate (pulse near3 (rate monitor$ sensor sensing)) (heart adj rate) heartrate)) same (vibrat$ percussion percussive))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/02 11:57 AM
L33	86	L32 not L30	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/02 11:59 AM
L34	10	(("20200179210") or ("20190231630") or ("20200245931") or ("20200222276") or ("20200219615") or ("20190282442") or ("20130331745") or ("20150305971") or ("20090112134") or	(US-PGPUB; USPAT; USOCR)	OR	OFF	OFF	2021/03/02 12:19 PM

		("20130035617")).PN.					
L35	8	L34 and (((heart-rate (pulse near3 (rate monitor$ sensor sensing)) (heart adj rate) heartrate)) same (vibrat$ percussion percussive))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/02 12:19 PM
L36	10	L34 and (((heart-rate (pulse near3 (rate monitor$ sensor sensing)) (heart adj rate) heartrate)))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/02 12:19 PM
L37	428	(US-20140180331-$ or US-20130261516-$ or US-20130138023-$ or US-20120253245-$ or US-20080103419-$ or US-20070150004-$ or US-20060192527-$ or US-20060123941-$ or US-20060025710-$ or US-20030195443-$ or US-20030009116-$ or US-20010016697-$ or US-20160206502-$ or US-20160367425-$ or US-20170027798-$ or US-20030094356-$ or US-20170304145-$ or US-20140163442-$ or US-20130281897-$ or US-20120101517-$ or US-20100137907-$ or US-20100010399-$ or US-20090270915-$ or US-20090222024-$ or US-20020107459-$ or US-20170304144-$).did. or (US-20170156974-$ or US-20160346152-$ or US-20160271009-$ or US-20170156975-$ or US-20030149381-$ or US-20150202114-$ or US-20130012849-$ or US-20020072693-$ or US-20130123677-$ or US-20130072837-$ or US-20100331745-$ or US-20010027280-$ or US-20030028134-$ or US-20030065280-$ or US-20020183668-$ or US-20020082536-$ or US-20140323931-$ or US-	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/02 12:22 PM

		20110137217-$ or US-20110041864-$ or US-20050113636-$ or US-20090038069-$ or US-20040064074-$ or US-20090086569-$ or US-20120253246-$ or US-20170281457-$ or US-20170105896-$ or US-20070299378-$).did. or (US-20100125228-$ or US-20060074362-$ or US-20170281459-$ or US-20040176710-$ or US-20150148592-$ or US-20080262397-$ or US-20100145242-$ or US-20030144615-$ or US-20090177128-$ or US-20170241201-$ or US-20150198219-$ or US-20090165387-$ or US-20070175647-$ or US-20050217900-$ or US-20050015030-$ or US-20100024571-$ or US-20150305973-$ or US-20160015596-$ or US-20150182411-$ or US-20160131228-$ or US-20090032275-$ or US-20030019799-$ or US-20130245511-$ or US-20040039314-$ or US-20070144310-$ or US-20180263845-$ or US-20150005682-$).did. or (US-20180200141-$ or US-20040255475-$ or US-20040255474-$ or US-20040187324-$ or US-20040117993-$ or US-20150367494-$ or US-20150033564-$ or US-20130133210-$ or US-20090100690-$ or US-20060260141-$ or US-20050178012-$ or US-20080047150-$ or US-20120192440-$ or US-20120030955-$ or US-20030070307-$ or US-20090272617-$ or US-20180099339-$ or US-20110265335-$ or US-20110131820-$ or US-20060288594-$ or US-					

		20080016705-$ or US-20070209217-$ or US-20190017528-$ or US-20190015294-$ or US-20130019483-$ or US-20150375315-$ or US-20110185582-$).did. or (US-20190224765-$ or US-20180236572-$ or US-20190209424-$ or US-20180370012-$ or US-20190254921-$ or US-20060047315-$ or US-20050131461-$ or US-20020082532-$ or US-20180031089-$ or US-20190175434-$ or US-20080004554-$ or US-20050159689-$ or US-20170079865-$ or US-20190083352-$ or US-20140283394-$ or US-20170361386-$ or US-20170173711-$ or US-20140182871-$ or US-20090188119-$ or US-20080189961-$ or US-20050126018-$ or US-20010011420-$ or US-20020138991-$ or US-20190351539-$ or US-20160199924-$ or US-20100162579-$ or US-20130014968-$).did. or (US-20080229591-$ or US-20050257385-$ or US-20050257384-$ or US-20110107608-$ or US-20140360335-$ or US-20130204255-$ or US-20090326540-$ or US-20050252011-$ or US-20150113815-$ or US-20140007436-$ or US-20070289149-$ or US-20050262710-$ or US-20200069510-$ or US-20190365598-$ or US-20200046602-$ or US-20200093682-$ or US-20180256432-$ or US-20200060918-$ or US-20200000678-$ or US-20130110017-$ or US-20150297437-$ or US-20110224580-$ or US-20190307631-$ or US-					

Hyper Ice, Inc. Ex. 1003-Page 659
Hyper Ice, Inc. v. Therabody, Inc.

		20120215141-$ or US-20120215280-$ or US-20150133832-$ or US-20150005672-$).did. or (US-20160278584-$ or US-20130237751-$ or US-20050207609-$ or US-20150335520-$ or US-20150169124-$ or US-20160213558-$ or US-20150119771-$ or US-20190290076-$ or US-20170095398-$ or US-20160151238-$ or US-20160000642-$ or US-20050054958-$ or US-20150290076-$ or US-20160158097-$ or US-20190099327-$ or US-20200214934-$ or US-20200038530-$ or US-20180288160-$ or US-20180279843-$ or US-20170049278-$ or US-20180243158-$ or US-20160303668-$ or US-20180326568-$ or US-20140360029-$ or US-20140194790-$ or US-20090240177-$ or US-20190066833-$).did. or (US-20180008512-$ or US-20100274162-$ or US-20180196395-$ or US-20150310634-$ or US-20150040685-$ or US-20140194900-$ or US-20080177207-$ or US-20150126916-$ or US-20140207032-$ or US-20200261307-$ or US-20180296433-$ or US-20070270727-$ or US-20200289365-$ or US-20200261310-$ or US-20200000244-$ or US-20190247271-$ or US-20140236040-$ or US-20140194794-$ or US-20100030122-$ or US-20090270774-$ or US-20090036809-$ or US-20080243041-$ or US-20060258963-$ or US-20050113724-$ or US-20200261306-$ or US-20200253818-$ or US-					

Hyper Ice, Inc. Ex. 1003-Page 660
Hyper Ice, Inc. v. Therabody, Inc.

		20200330321-$).did. or (US-20130014988-$ or US-20140310900-$ or US-20180133101-$ or US-20200268594-$ or US-20200241683-$ or US-20200323733-$ or US-20200281805-$).did. or (US-6663657-$ or US-6228042-$ or US-5951501-$ or US-5569168-$ or US-4549535-$ or US-4173217-$ or US-5273479-$ or US-8715161-$ or US-7927259-$ or US-7041072-$ or US-6733414-$ or US-6723060-$ or US-6682496-$ or US-6599260-$ or US-6352518-$ or US-6027444-$ or US-5716332-$ or US-4827914-$ or US-4790296-$ or US-4513737-$ or US-3837335-$ or US-3626934-$ or US-9827159-$ or US-4716890-$ or US-5140979-$ or US-3754548-$).did. or (US-6786878-$ or US-7238162-$ or US-7128722-$ or US-8951216-$ or US-5460597-$ or US-5417644-$ or US-6730050-$ or US-6432072-$ or US-5695451-$ or US-5475883-$ or US-5085207-$ or US-4162675-$ or US-4088128-$ or US-4079733-$ or US-3724451-$ or US-8342187-$ or US-7590445-$ or US-4730605-$ or US-7951098-$ or US-4025809-$ or US-3580246-$ or US-6228103-$ or US-9161881-$ or US-4566442-$ or US-					

		5983416-$ or US- 4722327-$ or US- 7367981-$).did. or (US- 5676637-$ or US- 8777881-$ or US- 4834075-$ or US- 6500135-$ or US- 3806980-$ or US- 7503923-$ or US- 5300095-$ or US- 4841955-$ or US- 6730051-$ or US- 5843006-$ or US- 3747594-$ or US- 5214975-$ or US- 5203113-$ or US- 5640735-$ or US- 5374237-$ or US- 7996996-$ or US- 9724771-$ or US- 9606026-$ or US- 7059425-$ or US- 5655887-$ or US- 3854563-$ or US- 5573500-$ or US- 3736920-$ or US- 5088474-$ or US- 9265689-$ or US- 5803916-$ or US- 6805700-$).did. or (US- 6602211-$ or US- 6997889-$ or US- 4158246-$ or US- 9289348-$ or US- 5470303-$ or US- 5159922-$ or US- 9889066-$ or US- 10027201-$ or US- 8640347-$ or US- 5212887-$ or US- 5099705-$ or US- 5079844-$ or US- 3759020-$ or US- 7036401-$ or US- 3863342-$ or US- 7818887-$ or US- RE36269-$ or US- 5083376-$ or US- 7448137-$ or US- 6671969-$ or US- 7096589-$ or US- 5940977-$ or US- 7127973-$ or US- 8813377-$ or US- 4976164-$ or US- 8656598-$ or US- 5170564-$).did. or (US- 3971132-$ or US-					

Hyper Ice, Inc. Ex. 1003-Page 662
Hyper Ice, Inc. v. Therabody, Inc.

		6772662-$ or US- 4272996-$ or US- 3942251-$ or US- 6212781-$ or US- 7191847-$ or US- 9192390-$ or US- 5832611-$ or US- 6264211-$ or US- 7251896-$ or US- 7370423-$ or US- 4150668-$ or US- 4817738-$ or US- 6557816-$ or US- 4563605-$ or US- 5129118-$ or US- 4420995-$ or US- 9333628-$ or US- 8475076-$ or US- 7954402-$ or US- 6971285-$ or US- 6964216-$ or US- 5660491-$ or US- 2964037-$ or US- 1882040-$ or US- 8322456-$ or US- 6938706-$).did. or (US- 8561717-$ or US- 10357425-$ or US- 10428850-$ or US- 10470970-$ or US- 4283855-$ or US- 10525541-$ or US- 3876015-$ or US- 3834019-$ or US- 3805383-$ or US- 6357124-$ or US- 4240204-$ or US- 7509744-$ or US- 5007172-$ or US- 3706474-$ or US- 4991298-$ or US- 8960323-$ or US- 8578615-$ or US- 6282797-$ or US- 6634107-$ or US- 6662455-$ or US- 6758119-$ or US- 3785053-$ or US- 9221112-$ or US- 7109613-$ or US- 5624000-$ or US- 10314762-$ or US- 9543871-$).did. or (US- 10702448-$ or US- 10517790-$ or US- 10420700-$ or US- 6648840-$ or US- 4697580-$ or US-					

		6568089-$ or US-8702633-$ or US-5113847-$ or US-5501657-$ or US-6562013-$ or US-10492984-$ or US-10561574-$ or US-6210349-$ or US-5611771-$ or US-10857064-$ or US-10842703-$ or US-8945104-$ or US-10912707-$ or US-10918565-$).did. or (US-2964037-$ or US-1882040-$ or US-2902067-$ or US-2868248-$ or US-2822005-$ or US-2808082-$ or US-2240755-$ or US-3309932-$ or US-3545301-$ or US-3172675-$ or US-2839101-$ or US-3050093-$ or US-3340612-$ or US-3623223-$).did. or (EP-1313116-$ or WO-2009014727-$).did. or (JP-07051393-$ or JP-02019157-$ or JP-2005204777-$).did. or (WO-2015038005-$ or WO-2014118596-$ or JP-2010534110-$ or CN-210728184-$ or DE-102015226084-$ or WO-2006122435-$ or WO-2013114084-$).did.					
L38	33	L37 and (((heart-rate (pulse near3 (rate monitor$ sensor sensing)) (heart adj rate) heartrate)))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/02 12:22 PM
L39	108	(US-20200069510-$ or US-20200330321-$ or US-20200323733-$ or US-20200261307-$ or US-20200289365-$ or US-20200281805-$ or US-20200268594-$ or US-20200261310-$ or US-20200261306-$ or US-20190254921-$ or US-20200241683-$ or US-20200000678-$ or	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/02 12:22 PM

		US-20190365598-$ or US-20180133101-$ or US-20200253818-$ or US-20190247271-$ or US-20190175434-$ or US-20190083352-$ or US-20190017528-$ or US-20180200141-$ or US-20190015294-$ or US-20150005682-$ or US-20180296433-$ or US-20180263845-$ or US-20180256432-$ or US-20180243158-$).did. or (US-20180008512-$ or US-20170361386-$ or US-20170304145-$ or US-20170304144-$ or US-20170156974-$ or US-20170079865-$ or US-20160367425-$ or US-20170027798-$ or US-20150119771-$ or US-20130261516-$ or US-20130133210-$ or US-20120253245-$ or US-20110041864-$ or US-20100331745-$ or US-20100145242-$ or US-20100125228-$ or US-20080177207-$ or US-20070144310-$ or US-20060123941-$ or US-20050252011-$ or US-20050159689-$ or US-20050131461-$ or US-20040039314-$ or US-20030094356-$ or US-20200107988-$ or US-20200085673-$ or US-20200009005-$).did. or (US-20120310120-$ or US-20020068887-$ or US-20200179210-$ or US-20190231630-$ or US-20210022955-$ or US-20200405574-$ or US-20200352821-$ or US-20200352820-$ or US-20190015295-$ or US-20200245931-$ or US-20200219615-$ or US-20200222276-$ or US-20190282442-$ or US-20130331745-$ or US-20150305971-$ or US-20120296244-$ or					

		US-20090112134-$ or US-20200390644-$ or US-20130079689-$ or US-20050131273-$ or US-20130035617-$).did. or (US-10702448-$ or US-10918565-$ or US-10857064-$ or US-10314762-$ or US-10492984-$ or US-10561574-$ or US-10428850-$ or US-10470970-$ or US-9889066-$ or US-9265689-$ or US-8342187-$ or US-8322456-$ or US-8561717-$ or US-7927259-$ or US-7503923-$ or US-7041072-$ or US-6938706-$ or US-6682496-$ or US-6228103-$ or US-5951501-$ or US-5501657-$ or US-5212887-$ or US-5088474-$ or US-5085207-$ or US-4991298-$ or US-4513737-$).did. or (US-4420995-$ or US-4272996-$ or US-4158246-$ or US-3545301-$ or US-3172675-$ or US-10292896-$).did. or (US-3545301-$ or US-3172675-$).did.					
L40	27	L39 and (((heart-rate (pulse near3 (rate monitor$ sensor sensing)) (heart adj rate) heartrate)))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/02 12:22 PM
L41	110	A61H23/00,004,006,02,0218,0254,0263,04,06.cpc. and (((heart-rate (pulse near3 (rate monitor$ sensor sensing)) (heart adj rate) heartrate)) same (massag$))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/02 12:33 PM
L42	7695	("482".clas. or A63B.cpcl.) and ((heart-rate (pulse near3 (rate monitor$ sensor	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/02 01:02 PM

		sensing)) (heart adj rate) heartrate))					
L43	923	("482".clas. or A63B.cpcl.) and (((heart-rate (pulse near3 (rate monitor$ sensor sensing)) (heart adj rate) heartrate)) with (grip$5 handle hand palm))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/02 01:05 PM
L44	471	("482".clas. or A63B.cpcl.) and (((heart-rate (pulse near3 (rate monitor$ sensor sensing)) (heart adj rate) heartrate)) with (grip$5 handle))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/02 01:08 PM
L45	121	("482".clas. or A63B.cpcl.) and (((heart-rate (pulse near3 (rate monitor$ sensor sensing)) (heart adj rate) heartrate)) with (grip$5 handle) with (hand palm))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/02 01:08 PM
L46	1104	A61H23/00,004,006,02,0218,0254,0263,04,06.cpc. and ((temperature thermometer thermal$) same (percussion percussive massag$ vibrat$))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/02 01:29 PM
L47	786	A61H23/00,004,006,02,0218,0254,0263,04,06.cpc. and ((temperature thermometer thermal$) with (percussion percussive massag$ vibrat$))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/02 01:31 PM
L48	16	A61H23/00,004,006,02,0218,0254,0263,04,06.cpc. and ((temperature thermometer thermal$) with (percussion percussive))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/02 01:31 PM
L49	176	A61H23/00,004,006,02,0218,0254,0263,04,06.cpc. and ((temperature thermometer thermal$) with (percussion percussive massag$ vibrat$) with (sensor sensing monitor$))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/02 01:32 PM
L50	4202	(A61B.cpcl. or "601".clas. or	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/02 01:47 PM

		A61H.cpcl.) and ((infrared near3 (thermometer sensor sensing monitor$)) with (temperature))					
L51	8	(A61B.cpcl. or "601".clas. or A61H.cpcl.) and ((infrared near3 (thermometer sensor sensing monitor$)) with (temperature) with beam with opening)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/02 01:48 PM
L52	114	(US-20200069510-$ or US-20200330321-$ or US-20200323733-$ or US-20200261307-$ or US-20200289365-$ or US-20200281805-$ or US-20200268594-$ or US-20200261310-$ or US-20200261306-$ or US-20190254921-$ or US-20200241683-$ or US-20200000678-$ or US-20190365598-$ or US-20180133101-$ or US-20200253818-$ or US-20190247271-$ or US-20190175434-$ or US-20190083352-$ or US-20190017528-$ or US-20180200141-$ or US-20190015294-$ or US-20150005682-$ or US-20180296433-$ or US-20180263845-$ or US-20180256432-$ or US-20180243158-$).did. or (US-20180008512-$ or US-20170361386-$ or US-20170304145-$ or US-20170304144-$ or US-20170156974-$ or US-20170079865-$ or US-20160367425-$ or US-20170027798-$ or US-20150119771-$ or US-20130261516-$ or US-20130133210-$ or US-20120253245-$ or US-20110041864-$ or US-20100331745-$ or US-20100145242-$ or US-20100125228-$ or US-20080177207-$ or US-	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/02 01:54 PM

		20070144310-$ or US-20060123941-$ or US-20050252011-$ or US-20050159689-$ or US-20050131461-$ or US-20040039314-$ or US-20030094356-$ or US-20200107988-$ or US-20200085673-$ or US-20200009005-$).did. or (US-20120310120-$ or US-20020068887-$ or US-20200179210-$ or US-20190231630-$ or US-20210022955-$ or US-20200405574-$ or US-20200352821-$ or US-20200352820-$ or US-20190015295-$ or US-20200245931-$ or US-20200219615-$ or US-20200222276-$ or US-20190282442-$ or US-20130331745-$ or US-20150305971-$ or US-20120296244-$ or US-20090112134-$ or US-20200390644-$ or US-20130079689-$ or US-20050131273-$ or US-20130035617-$ or US-20170274242-$ or US-20070129220-$ or US-20190307395-$ or US-20170095398-$ or US-20120078071-$).did. or (US-10702448-$ or US-10918565-$ or US-10857064-$ or US-10314762-$ or US-10492984-$ or US-10561574-$ or US-10428850-$ or US-10470970-$ or US-9889066-$ or US-9265689-$ or US-8342187-$ or US-8322456-$ or US-8561717-$ or US-7927259-$ or US-7503923-$ or US-7041072-$ or US-6938706-$ or US-6682496-$ or US-6228103-$ or US-5951501-$ or US-5501657-$ or US-					

		5212887-$ or US-5088474-$ or US-5085207-$ or US-4991298-$ or US-4513737-$).did. or (US-4420995-$ or US-4272996-$ or US-4158246-$ or US-3545301-$ or US-3172675-$ or US-10292896-$ or US-7354383-$).did. or (US-3545301-$ or US-3172675-$).did.					
L53	12	(L37 or L52) and ((screen monitor display) with (temperature))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/02 01:54 PM
L54	943	A61H23/00,004,006,02,0218,0254,0263,04,06.cpc. and ((thermometer temperature) with (user patient person body))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/04 01:26 PM
L55	88	A61H23/00,004,006,02,0218,0254,0263,04,06.cpc. and ((thermometer temperature) with (user patient person body) with (target predetermined desired))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/04 01:27 PM
L56	58	((("Wersland") near3 ("Jason"))).INV.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/04 03:39 PM
L57	4	L56 and (routine).clm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/04 03:39 PM
L58	117	(US-20200069510-$ or US-20200330321-$ or US-20200323733-$ or US-20200261307-$ or US-20200289365-$ or US-20200281805-$ or US-20200268594-$ or US-20200261310-$ or US-20200261306-$ or US-20190254921-$ or US-20200241683-$ or US-20200000678-$ or US-20190365598-$ or US-20180133101-$ or US-20200253818-$ or US-20190247271-$ or US-20190175434-$ or US-20190083352-$ or US-20190017528-$ or US-20180200141-$ or US-20190015294-$ or US-20150005682-$ or	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/04 04:12 PM

		US-20180296433-$ or US-20180263845-$ or US-20180256432-$ or US-20180243158-$).did. or (US-20180008512-$ or US-20170361386-$ or US-20170304145-$ or US-20170304144-$ or US-20170156974-$ or US-20170079865-$ or US-20160367425-$ or US-20170027798-$ or US-20150119771-$ or US-20130261516-$ or US-20130133210-$ or US-20120253245-$ or US-20110041864-$ or US-20100331745-$ or US-20100145242-$ or US-20100125228-$ or US-20080177207-$ or US-20070144310-$ or US-20060123941-$ or US-20050252011-$ or US-20050159689-$ or US-20050131461-$ or US-20040039314-$ or US-20030094356-$ or US-20200107988-$ or US-20200085673-$ or US-20200009005-$).did. or (US-20120310120-$ or US-20020068887-$ or US-20200179210-$ or US-20190231630-$ or US-20210022955-$ or US-20200405574-$ or US-20200352821-$ or US-20200352820-$ or US-20190015295-$ or US-20200245931-$ or US-20200219615-$ or US-20200222276-$ or US-20190282442-$ or US-20130331745-$ or US-20150305971-$ or US-20120296244-$ or US-20090112134-$ or US-20200390644-$ or US-20130079689-$ or US-20050131273-$ or US-20130035617-$ or US-20170274242-$ or US-20070129220-$ or US-20190307395-$ or US-20170095398-$ or US-20120078071-$ or						

		US-20200069936-$).did. or (US-20150005750-$ or US-20210059898-$).did. or (US-10702448-$ or US-10918565-$ or US-10857064-$ or US-10314762-$ or US-10492984-$ or US-10561574-$ or US-10428850-$ or US-10470970-$ or US-9889066-$ or US-9265689-$ or US-8342187-$ or US-8322456-$ or US-8561717-$ or US-7927259-$ or US-7503923-$ or US-7041072-$ or US-6938706-$ or US-6682496-$ or US-6228103-$ or US-5951501-$ or US-5501657-$ or US-5212887-$ or US-5088474-$ or US-5085207-$ or US-4991298-$ or US-4513737-$).did. or (US-4420995-$ or US-4272996-$ or US-4158246-$ or US-3545301-$ or US-3172675-$ or US-10292896-$ or US-7354383-$).did. or (US-3545301-$ or US-3172675-$).did.					
L59	428	(US-20140180331-$ or US-20130261516-$ or US-20130138023-$ or US-20120253245-$ or US-20080103419-$ or US-20070150004-$ or US-20060192527-$ or US-20060123941-$ or US-20060025710-$ or US-20030195443-$ or US-20030009116-$ or US-20010016697-$ or US-20160206502-$ or US-20160367425-$ or US-20170027798-$ or US-20030094356-$ or US-20170304145-$ or US-20140163442-$ or	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/04 04:13 PM

		US-20130281897-$ or US-20120101517-$ or US-20100137907-$ or US-20100010399-$ or US-20090270915-$ or US-20090222024-$ or US-20020107459-$ or US-20170304144-$).did. or (US-20170156974-$ or US-20160346152-$ or US-20160271009-$ or US-20170156975-$ or US-20030149381-$ or US-20150202114-$ or US-20130012849-$ or US-20020072693-$ or US-20130123677-$ or US-20130072837-$ or US-20100331745-$ or US-20010027280-$ or US-20030028134-$ or US-20030065280-$ or US-20020183668-$ or US-20020082536-$ or US-20140323931-$ or US-20110137217-$ or US-20110041864-$ or US-20050113636-$ or US-20090038069-$ or US-20040064074-$ or US-20090086569-$ or US-20120253246-$ or US-20170281457-$ or US-20170105896-$ or US-20070299378-$).did. or (US-20100125228-$ or US-20060074362-$ or US-20170281459-$ or US-20040176710-$ or US-20150148592-$ or US-20080262397-$ or US-20100145242-$ or US-20030144615-$ or US-20090177128-$ or US-20170241201-$ or US-20150198219-$ or US-20090165387-$ or US-20070175647-$ or US-20050217900-$ or US-20050015030-$ or US-20100024571-$ or US-20150305973-$ or US-20160015596-$ or US-20150182411-$ or US-20160131228-$ or US-20090032275-$ or US-20030019799-$ or					

Hyper Ice, Inc. Ex. 1003-Page 673
Hyper Ice, Inc. v. Therabody, Inc.

		US-20130245511-$ or US-20040039314-$ or US-20070144310-$ or US-20180263845-$ or US-20150005682-$).did. or (US-20180200141-$ or US-20040255475-$ or US-20040255474-$ or US-20040187324-$ or US-20040117993-$ or US-20150367494-$ or US-20150033564-$ or US-20130133210-$ or US-20090100690-$ or US-20060260141-$ or US-20050178012-$ or US-20080047150-$ or US-20120192440-$ or US-20120030955-$ or US-20030070307-$ or US-20090272617-$ or US-20180099339-$ or US-20110265335-$ or US-20110131820-$ or US-20060288594-$ or US-20080016705-$ or US-20070209217-$ or US-20190017528-$ or US-20190015294-$ or US-20130019483-$ or US-20150375315-$ or US-20110185582-$).did. or (US-20190224765-$ or US-20180236572-$ or US-20190209424-$ or US-20180370012-$ or US-20190254921-$ or US-20060047315-$ or US-20050131461-$ or US-20020082532-$ or US-20180031089-$ or US-20190175434-$ or US-20080004554-$ or US-20050159689-$ or US-20170079865-$ or US-20190083352-$ or US-20140283394-$ or US-20170361386-$ or US-20170173711-$ or US-20140182871-$ or US-20090188119-$ or US-20080189961-$ or US-20050126018-$ or US-20010011420-$ or US-20020138991-$ or US-20190351539-$ or US-20160199924-$ or						

		US-20100162579-$ or US-20130014968-$).did. or (US-20080229591-$ or US-20050257385-$ or US-20050257384-$ or US-20110107608-$ or US-20140360335-$ or US-20130204255-$ or US-20090326540-$ or US-20050252011-$ or US-20150113815-$ or US-20140007436-$ or US-20070289149-$ or US-20050262710-$ or US-20200069510-$ or US-20190365598-$ or US-20200046602-$ or US-20200093682-$ or US-20180256432-$ or US-20200060918-$ or US-20200000678-$ or US-20130110017-$ or US-20150297437-$ or US-20110224580-$ or US-20190307631-$ or US-20120215141-$ or US-20120215280-$ or US-20150133832-$ or US-20150005672-$).did. or (US-20160278584-$ or US-20130237751-$ or US-20050207609-$ or US-20150335520-$ or US-20150169124-$ or US-20160213558-$ or US-20150119771-$ or US-20190290076-$ or US-20170095398-$ or US-20160151238-$ or US-20160000642-$ or US-20050054958-$ or US-20150290076-$ or US-20160158097-$ or US-20190099327-$ or US-20200214934-$ or US-20200038530-$ or US-20180288160-$ or US-20180279843-$ or US-20170049278-$ or US-20180243158-$ or US-20160303668-$ or US-20180326568-$ or US-20140360029-$ or US-20140194790-$ or US-20090240177-$ or US-20190066833-$).did. or (US-					

		20180008512-$ or US-20100274162-$ or US-20180196395-$ or US-20150310634-$ or US-20150040685-$ or US-20140194900-$ or US-20080177207-$ or US-20150126916-$ or US-20140207032-$ or US-20200261307-$ or US-20180296433-$ or US-20070270727-$ or US-20200289365-$ or US-20200261310-$ or US-20200000244-$ or US-20190247271-$ or US-20140236040-$ or US-20140194794-$ or US-20100030122-$ or US-20090270774-$ or US-20090036809-$ or US-20080243041-$ or US-20060258963-$ or US-20050113724-$ or US-20200261306-$ or US-20200253818-$ or US-20200330321-$).did. or (US-20130014988-$ or US-20140310900-$ or US-20180133101-$ or US-20200268594-$ or US-20200241683-$ or US-20200323733-$ or US-20200281805-$).did. or (US-6663657-$ or US-6228042-$ or US-5951501-$ or US-5569168-$ or US-4549535-$ or US-4173217-$ or US-5273479-$ or US-8715161-$ or US-7927259-$ or US-7041072-$ or US-6733414-$ or US-6723060-$ or US-6682496-$ or US-6599260-$ or US-6352518-$ or US-6027444-$ or US-5716332-$ or US-4827914-$ or US-4790296-$ or US-4513737-$ or US-3837335-$ or US-3626934-$ or US-9827159-$ or US-4716890-$ or US-					

		5140979-$ or US- 3754548-$).did. or (US- 6786878-$ or US- 7238162-$ or US- 7128722-$ or US- 8951216-$ or US- 5460597-$ or US- 5417644-$ or US- 6730050-$ or US- 6432072-$ or US- 5695451-$ or US- 5475883-$ or US- 5085207-$ or US- 4162675-$ or US- 4088128-$ or US- 4079733-$ or US- 3724451-$ or US- 8342187-$ or US- 7590445-$ or US- 4730605-$ or US- 7951098-$ or US- 4025809-$ or US- 3580246-$ or US- 6228103-$ or US- 9161881-$ or US- 4566442-$ or US- 5983416-$ or US- 4722327-$ or US- 7367981-$).did. or (US- 5676637-$ or US- 8777881-$ or US- 4834075-$ or US- 6500135-$ or US- 3806980-$ or US- 7503923-$ or US- 5300095-$ or US- 4841955-$ or US- 6730051-$ or US- 5843006-$ or US- 3747594-$ or US- 5214975-$ or US- 5203113-$ or US- 5640735-$ or US- 5374237-$ or US- 7996996-$ or US- 9724771-$ or US- 9606026-$ or US- 7059425-$ or US- 5655887-$ or US- 3854563-$ or US- 5573500-$ or US- 3736920-$ or US- 5088474-$ or US- 9265689-$ or US- 5803916-$ or US- 6805700-$).did. or (US- 6602211-$ or US- 6997889-$ or US-					

		4158246-$ or US- 9289348-$ or US- 5470303-$ or US- 5159922-$ or US- 9889066-$ or US- 10027201-$ or US- 8640347-$ or US- 5212887-$ or US- 5099705-$ or US- 5079844-$ or US- 3759020-$ or US- 7036401-$ or US- 3863342-$ or US- 7818887-$ or US- RE36269-$ or US- 5083376-$ or US- 7448137-$ or US- 6671969-$ or US- 7096589-$ or US- 5940977-$ or US- 7127973-$ or US- 8813377-$ or US- 4976164-$ or US- 8656598-$ or US- 5170564-$).did. or (US- 3971132-$ or US- 6772662-$ or US- 4272996-$ or US- 3942251-$ or US- 6212781-$ or US- 7191847-$ or US- 9192390-$ or US- 5832611-$ or US- 6264211-$ or US- 7251896-$ or US- 7370423-$ or US- 4150668-$ or US- 4817738-$ or US- 6557816-$ or US- 4563605-$ or US- 5129118-$ or US- 4420995-$ or US- 9333628-$ or US- 8475076-$ or US- 7954402-$ or US- 6971285-$ or US- 6964216-$ or US- 5660491-$ or US- 2964037-$ or US- 1882040-$ or US- 8322456-$ or US- 6938706-$).did. or (US- 8561717-$ or US- 10357425-$ or US- 10428850-$ or US- 10470970-$ or US- 4283855-$ or US- 10525541-$ or US-					

Hyper Ice, Inc. Ex. 1003-Page 678
Hyper Ice, Inc. v. Therabody, Inc.

		3876015-$ or US-3834019-$ or US-3805383-$ or US-6357124-$ or US-4240204-$ or US-7509744-$ or US-5007172-$ or US-3706474-$ or US-4991298-$ or US-8960323-$ or US-8578615-$ or US-6282797-$ or US-6634107-$ or US-6662455-$ or US-6758119-$ or US-3785053-$ or US-9221112-$ or US-7109613-$ or US-5624000-$ or US-10314762-$ or US-9543871-$).did. or (US-10702448-$ or US-10517790-$ or US-10420700-$ or US-6648840-$ or US-4697580-$ or US-6568089-$ or US-8702633-$ or US-5113847-$ or US-5501657-$ or US-6562013-$ or US-10492984-$ or US-10561574-$ or US-6210349-$ or US-5611771-$ or US-10857064-$ or US-10842703-$ or US-8945104-$ or US-10912707-$ or US-10918565-$).did. or (US-2964037-$ or US-1882040-$ or US-2902067-$ or US-2868248-$ or US-2822005-$ or US-2808082-$ or US-2240755-$ or US-3309932-$ or US-3545301-$ or US-3172675-$ or US-2839101-$ or US-3050093-$ or US-3340612-$ or US-3623223-$).did. or (EP-1313116-$ or WO-2009014727-$).did. or (JP-07051393-$ or JP-02019157-$ or JP-					

		2005204777-$).did. or (WO-2015038005-$ or WO-2014118596-$ or JP-2010534110-$ or CN-210728184-$ or DE-102015226084-$ or WO-2006122435-$ or WO-2013114084-$).did.					
L60	5	(L59 or L58) and ((thermometer temperature) with (user patient person body) with (target predetermined desired))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/04 04:13 PM
L61	564	(a61h.cpcl. or "601".clas.) and ((thermometer temperature) with (user patient person body) with (target predetermined desired))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/04 04:49 PM
L62	112	(a61h.cpcl. or "601".clas.) and (((thermometer temperature) with (user patient person body) with (target predetermined desired)) same (percussion percussive massag$ vibrat$))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/04 04:57 PM
L63	1	("20130199537").PN.	(US-PGPUB; USPAT; USOCR)	OR	OFF	OFF	2021/03/04 05:07 PM
L64	1	("20150209541").PN.	(US-PGPUB; USPAT; USOCR)	OR	OFF	OFF	2021/03/04 05:09 PM
L65	7	A61H2201/0165,12,1207,1215,1223,123,02,0207,10,0221,1238,14,1409,1418,1481,149,1664.cpc. and (((heart-rate (pulse near3 (rate monitor$ sensor sensing)) (heart adj rate) heartrate)) with (grip$5 handle) with (hand palm))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/04 06:29 PM
L66	243	A61H2201/0165,12,1207,1215,1223,123,02,0207,10,0221,1238,14,1409,1418,1481,149,1664.cpc. and ((thermometer temperature) with (user patient person body) with (target predetermined desired))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/04 06:30 PM

L67	59	A61H2201/0165,12,1207,1215,1223,123,02,0207,10,0221,1238,14,1409,1418,1481,149,1664.cpc. and (((thermometer temperature) with (user patient person body) with (target predetermined desired)) same (percussion percussive massag$ vibrat$))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/04 06:31 PM
L68	51	B23D51/16.cpc. and (motor adj mount$3)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/04 06:36 PM
L69	96	B23D49/162,165,00,007,008,10,16,167.cpc. and (motor adj mount$3)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/04 06:49 PM
L70	14	B26D5/14.cpc. and (motor adj mount$3)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/04 06:59 PM
L71	38	B26D7/2621,2614.cpc. and (motor adj mount$3)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/04 07:00 PM
L72	18	A61B17/148,142,14,144.cpc. and (motor adj mount$3)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/04 07:06 PM
L73	31	B27B19/00,002,006,09,02.cpc. and (motor adj mount$3)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/04 07:09 PM
L74	0	B27B11/06.cpc. and (motor adj mount$3)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/04 07:12 PM
L75	50	(motor near3 mount$3) same (flang$3) same (boss) same (screw thread$3) same (damp$)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/04 07:16 PM
L76	13	(motor near3 mount$3) with (flange) with (orthogonal$ perpendicular$ normal$3) with (boss protrusion projection)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/05 09:17 AM
L77	1263	(motor near3 mount$3) same (flange) same (orthogonal$ perpendicular$ normal$3) same (boss protrusion projection)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/05 09:20 AM
L78	195	(motor near3 mount$3) same ((flange) with (orthogonal$ perpendicular$ normal$3)) same (boss	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/05 09:21 AM

		protrusion projection)					
L79	123	(US-20200069510-$ or US-20200330321-$ or US-20200323733-$ or US-20200261307-$ or US-20200289365-$ or US-20200281805-$ or US-20200268594-$ or US-20200261310-$ or US-20200261306-$ or US-20190254921-$ or US-20200241683-$ or US-20200000678-$ or US-20190365598-$ or US-20180133101-$ or US-20200253818-$ or US-20190247271-$ or US-20190175434-$ or US-20190083352-$ or US-20190017528-$ or US-20180200141-$ or US-20190015294-$ or US-20150005682-$ or US-20180296433-$ or US-20180263845-$ or US-20180256432-$ or US-20180243158-$).did. or (US-20180008512-$ or US-20170361386-$ or US-20170304145-$ or US-20170304144-$ or US-20170156974-$ or US-20170079865-$ or US-20160367425-$ or US-20170027798-$ or US-20150119771-$ or US-20130261516-$ or US-20130133210-$ or US-20120253245-$ or US-20110041864-$ or US-20100331745-$ or US-20100145242-$ or US-20100125228-$ or US-20080177207-$ or US-20070144310-$ or US-20060123941-$ or US-20050252011-$ or US-20050159689-$ or US-20050131461-$ or US-20040039314-$ or US-20030094356-$ or US-20200107988-$ or US-20200085673-$ or US-20200009005-$).did. or (US-20120310120-$ or US-20020068887-$ or	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/05 09:32 AM

		US-20200179210-$ or US-20190231630-$ or US-20210022955-$ or US-20200405574-$ or US-20200352821-$ or US-20200352820-$ or US-20190015295-$ or US-20200245931-$ or US-20200219615-$ or US-20200222276-$ or US-20190282442-$ or US-20130331745-$ or US-20150305971-$ or US-20120296244-$ or US-20090112134-$ or US-20200390644-$ or US-20130079689-$ or US-20050131273-$ or US-20130035617-$ or US-20170274242-$ or US-20070129220-$ or US-20190307395-$ or US-20170095398-$ or US-20120078071-$ or US-20200069936-$).did. or (US-20150005750-$ or US-20210059898-$ or US-20150216719-$ or US-20190290531-$ or US-20150305969-$ or US-20100081971-$ or US-20130014968-$).did. or (US-10702448-$ or US-10918565-$ or US-10857064-$ or US-10314762-$ or US-10492984-$ or US-10561574-$ or US-10428850-$ or US-10470970-$ or US-9889066-$ or US-9265689-$ or US-8342187-$ or US-8322456-$ or US-8561717-$ or US-7927259-$ or US-7503923-$ or US-7041072-$ or US-6938706-$ or US-6682496-$ or US-6228103-$ or US-5951501-$ or US-5501657-$ or US-5212887-$ or US-5088474-$ or US-5085207-$ or US-4991298-$ or US-					

		4513737-$).did. or (US-4420995-$ or US-4272996-$ or US-4158246-$ or US-3545301-$ or US-3172675-$ or US-10292896-$ or US-7354383-$).did. or (US-3545301-$ or US-3172675-$ or US-3058651-$).did.					
L80	428	(US-20140180331-$ or US-20130261516-$ or US-20130138023-$ or US-20120253245-$ or US-20080103419-$ or US-20070150004-$ or US-20060192527-$ or US-20060123941-$ or US-20060025710-$ or US-20030195443-$ or US-20030009116-$ or US-20010016697-$ or US-20160206502-$ or US-20160367425-$ or US-20170027798-$ or US-20030094356-$ or US-20170304145-$ or US-20140163442-$ or US-20130281897-$ or US-20120101517-$ or US-20100137907-$ or US-20100010399-$ or US-20090270915-$ or US-20090222024-$ or US-20020107459-$ or US-20170304144-$).did. or (US-20170156974-$ or US-20160346152-$ or US-20160271009-$ or US-20170156975-$ or US-20030149381-$ or US-20150202114-$ or US-20130012849-$ or US-20020072693-$ or US-20130123677-$ or US-20130072837-$ or US-20100331745-$ or US-20010027280-$ or US-20030028134-$ or US-20030065280-$ or US-20020183668-$ or US-20020082536-$ or US-20140323931-$ or US-20110137217-$ or US-20110041864-$ or US-	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/05 09:33 AM

		20050113636-$ or US-20090038069-$ or US-20040064074-$ or US-20090086569-$ or US-20120253246-$ or US-20170281457-$ or US-20170105896-$ or US-20070299378-$).did. or (US-20100125228-$ or US-20060074362-$ or US-20170281459-$ or US-20040176710-$ or US-20150148592-$ or US-20080262397-$ or US-20100145242-$ or US-20030144615-$ or US-20090177128-$ or US-20170241201-$ or US-20150198219-$ or US-20090165387-$ or US-20070175647-$ or US-20050217900-$ or US-20050015030-$ or US-20100024571-$ or US-20150305973-$ or US-20160015596-$ or US-20150182411-$ or US-20160131228-$ or US-20090032275-$ or US-20030019799-$ or US-20130245511-$ or US-20040039314-$ or US-20070144310-$ or US-20180263845-$ or US-20150005682-$).did. or (US-20180200141-$ or US-20040255475-$ or US-20040255474-$ or US-20040187324-$ or US-20040117993-$ or US-20150367494-$ or US-20150033564-$ or US-20130133210-$ or US-20090100690-$ or US-20060260141-$ or US-20050178012-$ or US-20080047150-$ or US-20120192440-$ or US-20120030955-$ or US-20030070307-$ or US-20090272617-$ or US-20180099339-$ or US-20110265335-$ or US-20110131820-$ or US-20060288594-$ or US-20080016705-$ or US-20070209217-$ or US-					

Hyper Ice, Inc. Ex. 1003-Page 685
Hyper Ice, Inc. v. Therabody, Inc.

		20190017528-$ or US-20190015294-$ or US-20130019483-$ or US-20150375315-$ or US-20110185582-$).did. or (US-20190224765-$ or US-20180236572-$ or US-20190209424-$ or US-20180370012-$ or US-20190254921-$ or US-20060047315-$ or US-20050131461-$ or US-20020082532-$ or US-20180031089-$ or US-20190175434-$ or US-20080004554-$ or US-20050159689-$ or US-20170079865-$ or US-20190083352-$ or US-20140283394-$ or US-20170361386-$ or US-20170173711-$ or US-20140182871-$ or US-20090188119-$ or US-20080189961-$ or US-20050126018-$ or US-20010011420-$ or US-20020138991-$ or US-20190351539-$ or US-20160199924-$ or US-20100162579-$ or US-20130014968-$).did. or (US-20080229591-$ or US-20050257385-$ or US-20050257384-$ or US-20110107608-$ or US-20140360335-$ or US-20130204255-$ or US-20090326540-$ or US-20050252011-$ or US-20150113815-$ or US-20140007436-$ or US-20070289149-$ or US-20050262710-$ or US-20200069510-$ or US-20190365598-$ or US-20200046602-$ or US-20200093682-$ or US-20180256432-$ or US-20200060918-$ or US-20200000678-$ or US-20130110017-$ or US-20150297437-$ or US-20110224580-$ or US-20190307631-$ or US-20120215141-$ or US-20120215280-$ or US-					

		20150133832-$ or US-20150005672-$).did. or (US-20160278584-$ or US-20130237751-$ or US-20050207609-$ or US-20150335520-$ or US-20150169124-$ or US-20160213558-$ or US-20150119771-$ or US-20190290076-$ or US-20170095398-$ or US-20160151238-$ or US-20160000642-$ or US-20050054958-$ or US-20150290076-$ or US-20160158097-$ or US-20190099327-$ or US-20200214934-$ or US-20200038530-$ or US-20180288160-$ or US-20180279843-$ or US-20170049278-$ or US-20180243158-$ or US-20160303668-$ or US-20180326568-$ or US-20140360029-$ or US-20140194790-$ or US-20090240177-$ or US-20190066833-$).did. or (US-20180008512-$ or US-20100274162-$ or US-20180196395-$ or US-20150310634-$ or US-20150040685-$ or US-20140194900-$ or US-20080177207-$ or US-20150126916-$ or US-20140207032-$ or US-20200261307-$ or US-20180296433-$ or US-20070270727-$ or US-20200289365-$ or US-20200261310-$ or US-20200000244-$ or US-20190247271-$ or US-20140236040-$ or US-20140194794-$ or US-20100030122-$ or US-20090270774-$ or US-20090036809-$ or US-20080243041-$ or US-20060258963-$ or US-20050113724-$ or US-20200261306-$ or US-20200253818-$ or US-20200330321-$).did. or (US-20130014988-$ or					

		US-20140310900-$ or US-20180133101-$ or US-20200268594-$ or US-20200241683-$ or US-20200323733-$ or US-20200281805-$).did. or (US-6663657-$ or US-6228042-$ or US-5951501-$ or US-5569168-$ or US-4549535-$ or US-4173217-$ or US-5273479-$ or US-8715161-$ or US-7927259-$ or US-7041072-$ or US-6733414-$ or US-6723060-$ or US-6682496-$ or US-6599260-$ or US-6352518-$ or US-6027444-$ or US-5716332-$ or US-4827914-$ or US-4790296-$ or US-4513737-$ or US-3837335-$ or US-3626934-$ or US-9827159-$ or US-4716890-$ or US-5140979-$ or US-3754548-$).did. or (US-6786878-$ or US-7238162-$ or US-7128722-$ or US-8951216-$ or US-5460597-$ or US-5417644-$ or US-6730050-$ or US-6432072-$ or US-5695451-$ or US-5475883-$ or US-5085207-$ or US-4162675-$ or US-4088128-$ or US-4079733-$ or US-3724451-$ or US-8342187-$ or US-7590445-$ or US-4730605-$ or US-7951098-$ or US-4025809-$ or US-3580246-$ or US-6228103-$ or US-9161881-$ or US-4566442-$ or US-5983416-$ or US-4722327-$ or US-					

		7367981-$).did. or (US- 5676637-$ or US- 8777881-$ or US- 4834075-$ or US- 6500135-$ or US- 3806980-$ or US- 7503923-$ or US- 5300095-$ or US- 4841955-$ or US- 6730051-$ or US- 5843006-$ or US- 3747594-$ or US- 5214975-$ or US- 5203113-$ or US- 5640735-$ or US- 5374237-$ or US- 7996996-$ or US- 9724771-$ or US- 9606026-$ or US- 7059425-$ or US- 5655887-$ or US- 3854563-$ or US- 5573500-$ or US- 3736920-$ or US- 5088474-$ or US- 9265689-$ or US- 5803916-$ or US- 6805700-$).did. or (US- 6602211-$ or US- 6997889-$ or US- 4158246-$ or US- 9289348-$ or US- 5470303-$ or US- 5159922-$ or US- 9889066-$ or US- 10027201-$ or US- 8640347-$ or US- 5212887-$ or US- 5099705-$ or US- 5079844-$ or US- 3759020-$ or US- 7036401-$ or US- 3863342-$ or US- 7818887-$ or US- RE36269-$ or US- 5083376-$ or US- 7448137-$ or US- 6671969-$ or US- 7096589-$ or US- 5940977-$ or US- 7127973-$ or US- 8813377-$ or US- 4976164-$ or US- 8656598-$ or US- 5170564-$).did. or (US- 3971132-$ or US- 6772662-$ or US- 4272996-$ or US-					

		3942251-$ or US- 6212781-$ or US- 7191847-$ or US- 9192390-$ or US- 5832611-$ or US- 6264211-$ or US- 7251896-$ or US- 7370423-$ or US- 4150668-$ or US- 4817738-$ or US- 6557816-$ or US- 4563605-$ or US- 5129118-$ or US- 4420995-$ or US- 9333628-$ or US- 8475076-$ or US- 7954402-$ or US- 6971285-$ or US- 6964216-$ or US- 5660491-$ or US- 2964037-$ or US- 1882040-$ or US- 8322456-$ or US- 6938706-$).did. or (US- 8561717-$ or US- 10357425-$ or US- 10428850-$ or US- 10470970-$ or US- 4283855-$ or US- 10525541-$ or US- 3876015-$ or US- 3834019-$ or US- 3805383-$ or US- 6357124-$ or US- 4240204-$ or US- 7509744-$ or US- 5007172-$ or US- 3706474-$ or US- 4991298-$ or US- 8960323-$ or US- 8578615-$ or US- 6282797-$ or US- 6634107-$ or US- 6662455-$ or US- 6758119-$ or US- 3785053-$ or US- 9221112-$ or US- 7109613-$ or US- 5624000-$ or US- 10314762-$ or US- 9543871-$).did. or (US- 10702448-$ or US- 10517790-$ or US- 10420700-$ or US- 6648840-$ or US- 4697580-$ or US- 6568089-$ or US- 8702633-$ or US-					

		5113847-$ or US-5501657-$ or US-6562013-$ or US-10492984-$ or US-10561574-$ or US-6210349-$ or US-5611771-$ or US-10857064-$ or US-10842703-$ or US-8945104-$ or US-10912707-$ or US-10918565-$).did. or (US-2964037-$ or US-1882040-$ or US-2902067-$ or US-2868248-$ or US-2822005-$ or US-2808082-$ or US-2240755-$ or US-3309932-$ or US-3545301-$ or US-3172675-$ or US-2839101-$ or US-3050093-$ or US-3340612-$ or US-3623223-$).did. or (EP-1313116-$ or WO-2009014727-$).did. or (JP-07051393-$ or JP-02019157-$ or JP-2005204777-$).did. or (WO-2015038005-$ or WO-2014118596-$ or JP-2010534110-$ or CN-210728184-$ or DE-102015226084-$ or WO-2006122435-$ or WO-2013114084-$).did.					
L81	125	(L79 or L80) and (motor near3 mount$3)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/05 09:33 AM
L82	3	(("20120253245") or ("20130014968") or ("20100162579")).PN.	(US-PGPUB; USPAT; USOCR)	OR	OFF	OFF	2021/03/05 10:12 AM
L83	161	(L79 or L80) and (heat$3 thermal$4)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/05 11:03 AM
L84	1	("20190015295").PN.	(US-PGPUB; USPAT; USOCR)	OR	OFF	OFF	2021/03/05 11:05 AM
L85	127	(US-20200069510-$ or US-20200330321-$ or US-20200323733-$ or US-20200261307-$ or US-20200289365-$ or US-20200281805-$ or US-20200268594-$ or US-20200261310-$ or US-20200261306-$ or	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/05 01:53 PM

		US-20190254921-$ or US-20200241683-$ or US-20200000678-$ or US-20190365598-$ or US-20180133101-$ or US-20200253818-$ or US-20190247271-$ or US-20190175434-$ or US-20190083352-$ or US-20190017528-$ or US-20180200141-$ or US-20190015294-$ or US-20150005682-$ or US-20180296433-$ or US-20180263845-$ or US-20180256432-$ or US-20180243158-$).did. or (US-20180008512-$ or US-20170361386-$ or US-20170304145-$ or US-20170304144-$ or US-20170156974-$ or US-20170079865-$ or US-20160367425-$ or US-20170027798-$ or US-20150119771-$ or US-20130261516-$ or US-20130133210-$ or US-20120253245-$ or US-20110041864-$ or US-20100331745-$ or US-20100145242-$ or US-20100125228-$ or US-20080177207-$ or US-20070144310-$ or US-20060123941-$ or US-20050252011-$ or US-20050159689-$ or US-20050131461-$ or US-20040039314-$ or US-20030094356-$ or US-20200107988-$ or US-20200085673-$ or US-20200009005-$).did. or (US-20120310120-$ or US-20020068887-$ or US-20200179210-$ or US-20190231630-$ or US-20210022955-$ or US-20200405574-$ or US-20200352821-$ or US-20200352820-$ or US-20190015295-$ or US-20200245931-$ or US-20200219615-$ or US-20200222276-$ or US-20190282442-$ or						

		US-20130331745-$ or US-20150305971-$ or US-20120296244-$ or US-20090112134-$ or US-20200390644-$ or US-20130079689-$ or US-20050131273-$ or US-20130035617-$ or US-20170274242-$ or US-20070129220-$ or US-20190307395-$ or US-20170095398-$ or US-20120078071-$ or US-20200069936-$).did. or (US-20150005750-$ or US-20210059898-$ or US-20150216719-$ or US-20190290531-$ or US-20150305969-$ or US-20100081971-$ or US-20130014968-$ or US-20100162579-$ or US-20170156975-$).did. or (US-10702448-$ or US-10918565-$ or US-10857064-$ or US-10314762-$ or US-10492984-$ or US-10561574-$ or US-10428850-$ or US-10470970-$ or US-9889066-$ or US-9265689-$ or US-8342187-$ or US-8322456-$ or US-8561717-$ or US-7927259-$ or US-7503923-$ or US-7041072-$ or US-6938706-$ or US-6682496-$ or US-6228103-$ or US-5951501-$ or US-5501657-$ or US-5212887-$ or US-5088474-$ or US-5085207-$ or US-4991298-$ or US-4513737-$).did. or (US-4420995-$ or US-4272996-$ or US-4158246-$ or US-3545301-$ or US-3172675-$ or US-10292896-$ or US-7354383-$ or US-7109613-$ or US-					

		5676637-$).did. or (US-3545301-$ or US-3172675-$ or US-3058651-$).did.					
L86	428	(US-20140180331-$ or US-20130261516-$ or US-20130138023-$ or US-20120253245-$ or US-20080103419-$ or US-20070150004-$ or US-20060192527-$ or US-20060123941-$ or US-20060025710-$ or US-20030195443-$ or US-20030009116-$ or US-20010016697-$ or US-20160206502-$ or US-20160367425-$ or US-20170027798-$ or US-20030094356-$ or US-20170304145-$ or US-20140163442-$ or US-20130281897-$ or US-20120101517-$ or US-20100137907-$ or US-20100010399-$ or US-20090270915-$ or US-20090222024-$ or US-20020107459-$ or US-20170304144-$).did. or (US-20170156974-$ or US-20160346152-$ or US-20160271009-$ or US-20170156975-$ or US-20030149381-$ or US-20150202114-$ or US-20130012849-$ or US-20020072693-$ or US-20130123677-$ or US-20130072837-$ or US-20100331745-$ or US-20010027280-$ or US-20030028134-$ or US-20030065280-$ or US-20020183668-$ or US-20020082536-$ or US-20140323931-$ or US-20110137217-$ or US-20110041864-$ or US-20050113636-$ or US-20090038069-$ or US-20040064074-$ or US-20090086569-$ or US-20120253246-$ or US-20170281457-$ or US-20170105896-$ or US-	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/05 01:54 PM

		20070299378-$).did. or (US-20100125228-$ or US-20060074362-$ or US-20170281459-$ or US-20040176710-$ or US-20150148592-$ or US-20080262397-$ or US-20100145242-$ or US-20030144615-$ or US-20090177128-$ or US-20170241201-$ or US-20150198219-$ or US-20090165387-$ or US-20070175647-$ or US-20050217900-$ or US-20050015030-$ or US-20100024571-$ or US-20150305973-$ or US-20160015596-$ or US-20150182411-$ or US-20160131228-$ or US-20090032275-$ or US-20030019799-$ or US-20130245511-$ or US-20040039314-$ or US-20070144310-$ or US-20180263845-$ or US-20150005682-$).did. or (US-20180200141-$ or US-20040255475-$ or US-20040255474-$ or US-20040187324-$ or US-20040117993-$ or US-20150367494-$ or US-20150033564-$ or US-20130133210-$ or US-20090100690-$ or US-20060260141-$ or US-20050178012-$ or US-20080047150-$ or US-20120192440-$ or US-20120030955-$ or US-20030070307-$ or US-20090272617-$ or US-20180099339-$ or US-20110265335-$ or US-20110131820-$ or US-20060288594-$ or US-20080016705-$ or US-20070209217-$ or US-20190017528-$ or US-20190015294-$ or US-20130019483-$ or US-20150375315-$ or US-20110185582-$).did. or (US-20190224765-$ or US-20180236572-$ or					

		US-20190209424-$ or US-20180370012-$ or US-20190254921-$ or US-20060047315-$ or US-20050131461-$ or US-20020082532-$ or US-20180031089-$ or US-20190175434-$ or US-20080004554-$ or US-20050159689-$ or US-20170079865-$ or US-20190083352-$ or US-20140283394-$ or US-20170361386-$ or US-20170173711-$ or US-20140182871-$ or US-20090188119-$ or US-20080189961-$ or US-20050126018-$ or US-20010011420-$ or US-20020138991-$ or US-20190351539-$ or US-20160199924-$ or US-20100162579-$ or US-20130014968-$).did. or (US-20080229591-$ or US-20050257385-$ or US-20050257384-$ or US-20110107608-$ or US-20140360335-$ or US-20130204255-$ or US-20090326540-$ or US-20050252011-$ or US-20150113815-$ or US-20140007436-$ or US-20070289149-$ or US-20050262710-$ or US-20200069510-$ or US-20190365598-$ or US-20200046602-$ or US-20200093682-$ or US-20180256432-$ or US-20200060918-$ or US-20200000678-$ or US-20130110017-$ or US-20150297437-$ or US-20110224580-$ or US-20190307631-$ or US-20120215141-$ or US-20120215280-$ or US-20150133832-$ or US-20150005672-$).did. or (US-20160278584-$ or US-20130237751-$ or US-20050207609-$ or US-20150335520-$ or US-20150169124-$ or						

		US-20160213558-$ or US-20150119771-$ or US-20190290076-$ or US-20170095398-$ or US-20160151238-$ or US-20160000642-$ or US-20050054958-$ or US-20150290076-$ or US-20160158097-$ or US-20190099327-$ or US-20200214934-$ or US-20200038530-$ or US-20180288160-$ or US-20180279843-$ or US-20170049278-$ or US-20180243158-$ or US-20160303668-$ or US-20180326568-$ or US-20140360029-$ or US-20140194790-$ or US-20090240177-$ or US-20190066833-$).did. or (US-20180008512-$ or US-20100274162-$ or US-20180196395-$ or US-20150310634-$ or US-20150040685-$ or US-20140194900-$ or US-20080177207-$ or US-20150126916-$ or US-20140207032-$ or US-20200261307-$ or US-20180296433-$ or US-20070270727-$ or US-20200289365-$ or US-20200261310-$ or US-20200000244-$ or US-20190247271-$ or US-20140236040-$ or US-20140194794-$ or US-20100030122-$ or US-20090270774-$ or US-20090036809-$ or US-20080243041-$ or US-20060258963-$ or US-20050113724-$ or US-20200261306-$ or US-20200253818-$ or US-20200330321-$).did. or (US-20130014988-$ or US-20140310900-$ or US-20180133101-$ or US-20200268594-$ or US-20200241683-$ or US-20200323733-$ or US-20200281805-$).did. or (US-6663657-					

		$ or US-6228042-$ or US-5951501-$ or US-5569168-$ or US-4549535-$ or US-4173217-$ or US-5273479-$ or US-8715161-$ or US-7927259-$ or US-7041072-$ or US-6733414-$ or US-6723060-$ or US-6682496-$ or US-6599260-$ or US-6352518-$ or US-6027444-$ or US-5716332-$ or US-4827914-$ or US-4790296-$ or US-4513737-$ or US-3837335-$ or US-3626934-$ or US-9827159-$ or US-4716890-$ or US-5140979-$ or US-3754548-$).did. or (US-6786878-$ or US-7238162-$ or US-7128722-$ or US-8951216-$ or US-5460597-$ or US-5417644-$ or US-6730050-$ or US-6432072-$ or US-5695451-$ or US-5475883-$ or US-5085207-$ or US-4162675-$ or US-4088128-$ or US-4079733-$ or US-3724451-$ or US-8342187-$ or US-7590445-$ or US-4730605-$ or US-7951098-$ or US-4025809-$ or US-3580246-$ or US-6228103-$ or US-9161881-$ or US-4566442-$ or US-5983416-$ or US-4722327-$ or US-7367981-$).did. or (US-5676637-$ or US-8777881-$ or US-4834075-$ or US-6500135-$ or US-3806980-$ or US-7503923-$ or US-					

		5300095-$ or US- 4841955-$ or US- 6730051-$ or US- 5843006-$ or US- 3747594-$ or US- 5214975-$ or US- 5203113-$ or US- 5640735-$ or US- 5374237-$ or US- 7996996-$ or US- 9724771-$ or US- 9606026-$ or US- 7059425-$ or US- 5655887-$ or US- 3854563-$ or US- 5573500-$ or US- 3736920-$ or US- 5088474-$ or US- 9265689-$ or US- 5803916-$ or US- 6805700-$).did. or (US- 6602211-$ or US- 6997889-$ or US- 4158246-$ or US- 9289348-$ or US- 5470303-$ or US- 5159922-$ or US- 9889066-$ or US- 10027201-$ or US- 8640347-$ or US- 5212887-$ or US- 5099705-$ or US- 5079844-$ or US- 3759020-$ or US- 7036401-$ or US- 3863342-$ or US- 7818887-$ or US- RE36269-$ or US- 5083376-$ or US- 7448137-$ or US- 6671969-$ or US- 7096589-$ or US- 5940977-$ or US- 7127973-$ or US- 8813377-$ or US- 4976164-$ or US- 8656598-$ or US- 5170564-$).did. or (US- 3971132-$ or US- 6772662-$ or US- 4272996-$ or US- 3942251-$ or US- 6212781-$ or US- 7191847-$ or US- 9192390-$ or US- 5832611-$ or US- 6264211-$ or US- 7251896-$ or US-				

		7370423-$ or US- 4150668-$ or US- 4817738-$ or US- 6557816-$ or US- 4563605-$ or US- 5129118-$ or US- 4420995-$ or US- 9333628-$ or US- 8475076-$ or US- 7954402-$ or US- 6971285-$ or US- 6964216-$ or US- 5660491-$ or US- 2964037-$ or US- 1882040-$ or US- 8322456-$ or US- 6938706-$).did. or (US- 8561717-$ or US- 10357425-$ or US- 10428850-$ or US- 10470970-$ or US- 4283855-$ or US- 10525541-$ or US- 3876015-$ or US- 3834019-$ or US- 3805383-$ or US- 6357124-$ or US- 4240204-$ or US- 7509744-$ or US- 5007172-$ or US- 3706474-$ or US- 4991298-$ or US- 8960323-$ or US- 8578615-$ or US- 6282797-$ or US- 6634107-$ or US- 6662455-$ or US- 6758119-$ or US- 3785053-$ or US- 9221112-$ or US- 7109613-$ or US- 5624000-$ or US- 10314762-$ or US- 9543871-$).did. or (US- 10702448-$ or US- 10517790-$ or US- 10420700-$ or US- 6648840-$ or US- 4697580-$ or US- 6568089-$ or US- 8702633-$ or US- 5113847-$ or US- 5501657-$ or US- 6562013-$ or US- 10492984-$ or US- 10561574-$ or US- 6210349-$ or US- 5611771-$ or US-					

		10857064-$ or US-10842703-$ or US-8945104-$ or US-10912707-$ or US-10918565-$).did. or (US-2964037-$ or US-1882040-$ or US-2902067-$ or US-2868248-$ or US-2822005-$ or US-2808082-$ or US-2240755-$ or US-3309932-$ or US-3545301-$ or US-3172675-$ or US-2839101-$ or US-3050093-$ or US-3340612-$ or US-3623223-$).did. or (EP-1313116-$ or WO-2009014727-$).did. or (JP-07051393-$ or JP-02019157-$ or JP-2005204777-$).did. or (WO-2015038005-$ or WO-2014118596-$ or JP-2010534110-$ or CN-210728184-$ or DE-102015226084-$ or WO-2006122435-$ or WO-2013114084-$).did.					
L87	90	(L86 or L85) and ((electrical$3 electric) near3 (contact connection coupler coupling connector plug))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/05 01:59 PM
L88	10	(L86 or L85) and (((electrical$3 electric) near3 (contact connection coupler coupling connector plug)) same (heat$3 thermal$))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/05 02:13 PM
L89	923	("601".clas. or a61h.cpcl.) and (((electrical$3 electric) near3 (contact connection coupler coupling connector plug)) same (heat$3 thermal$))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/05 02:16 PM
L90	121	("601".clas. or a61h.cpcl.) and (((electrical$3 electric) near3 (contact	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/05 02:16 PM

		connection coupler coupling connector plug)) same (heat$3 thermal$) same (vibrat$ percussive percussion))					
L91	35192	((electrical$3 electric) near3 (contact connection coupler coupling connector plug) with (male female))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/05 02:42 PM
L92	22127	((electrical$3 electric) near3 (contact connection coupler coupling connector plug) with male with female)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/05 02:42 PM
L93	1595	((electrical$3 electric) near3 (contact connection coupler coupling connector plug) with male with female) same (percussion percussive massag$ vibrat$ heat$3 thermal$)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/05 02:43 PM
L94	150	(L86 or L85) and (detent (ball sphere))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/05 02:58 PM
L95	56	(L86 or L85) and (detent ((ball sphere) near3 (spring bias$)))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/05 02:59 PM
L96	5590	(detent ((ball sphere) near3 (spring bias$))) with (electric electrical$3) with (contact connection coupler coupling connector plug)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/05 04:01 PM
L97	1202	(((ball sphere) near3 (spring bias$))) with (electric electrical$3) with (contact connection coupler coupling connector plug)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/05 04:03 PM
L98	40	(((ball sphere) near3 (spring bias$))) with (electric electrical$3) with (contact connection coupler coupling connector plug) with (male female)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/05 04:04 PM
L99	9	(L86 or L85) and ((QR bar) adj code)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/05 04:10 PM
L100	34	(a61h.cpcl. or	(US-PGPUB; USPAT;	OR	ON	ON	2021/03/05

		"601".clas.) and (((QR bar) adj code) with (routine protocol parameters data) with (scan$5))	USOCR)				04:48 PM
L101	1	("20180353812").PN.	(US-PGPUB; USPAT; USOCR)	OR	OFF	OFF	2021/03/05 04:53 PM
L102	60	(US-10314762-$ | US-1150668-$ | US-1173217-$ | US-1549535-$ | US-1566442-$ | US-17018099-$ | US-1730605-$ | US-20010016697-$ | US-20030009116-$ | US-20030094356-$ | US-20030144615-$ | US-20030195443-$ | US-20060025710-$ | US-20060123941-$ | US-20060192527-$ | US-20070144310-$ | US-20070150004-$ | US-20070270727-$ | US-20080103419-$ | US-20120253245-$ | US-20130133210-$ | US-20130138023-$ | US-20130261516-$ | US-20130281897-$ | US-20140180331-$ | US-20150005682-$ | US-20150119771-$ | US-20150148592-$ | US-20150375315-$ | US-20170156974-$ | US-20180200141-$ | US-20180236572-$ | US-20180243158-$ | US-20180279843-$ | US-20180296433-$ | US-2990178-$ | US-3085207-$ | US-3172675-$ | US-3342187-$ | US-3417644-$ | US-3545301-$ | US-3569168-$ | US-3626934-$ | US-3942251-$ | US-3951216-$ | US-5212887-$ | US-5228042-$ | US-5573500-$ | US-5663657-$ | US-5682496-$ | US-	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/03/05 05:33 PM

		5951501-$).DID.					
L103	51	("10314762"|"20010016697"|"20030009116"|"20030094356"|"20030144615"|"20030195443"|"20060025710"|"20060123941"|"20060192527"|"20070144310"|"20070150004"|"20070270727"|"20080103419"|"20120253245"|"20130133210"|"20130138023"|"20130261516"|"20130281897"|"20140180331"|"20150005682"|"20150119771"|"20150148592"|"20150375315"|"20170156974"|"20180200141"|"20180236572"|"20180243158"|"20180279843"|"20180296433"|"3172675"|"3545301"|"3626934"|"3942251"|"4150668"|"4173217"|"4549535"|"4566442"|"4730605"|"5085207"|"5212887"|"5417644"|"5569168"|"5573500"|"5951501"|"6228042"|"6663657"|"6682496"|"7927259"|"7996996"|"8342187"|"8951216").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/03/05 05:34 PM
L104	51	("10314762"|"20010016697"|"20030009116"|"20030094356"|"20030144615"|"20030195443"|"20060025710"|"20060123941"|"20060192527"|"20070144310"|"20070150004"|"20070270727"|"20080103419"|"20120253245"|"20130133210"|"20130138023"|"20130261516"|"20130281897"|"20140180331"|"20150005682"|"20150119771"|"20150148592"|"20150375315"|"20170156974"|"20180200141"|"20180236572"|"20180243158"|"20180279843"|"20180296433"|"3172675"|"3545301"|"3626934"|"3942251"|"4150668"|"4173217"|"4549535"|"4566442"|"4730605"|"5085207"|"5212887"|"54	(US-PGPUB; USPAT)	OR	ON	ON	2021/03/06 11:54 AM

		17644"|"5569168"|"5573500"|"5951501"|"6228042"|"6663657"|"6682496"|"7927259"|"7996996"|"8342187"|"8951216").PN.					
L105	4	(("20170304145") or ("10314762") or ("20180008512") or ("20150216719")).PN.	(US-PGPUB; USPAT; USOCR)	OR	OFF	OFF	2021/07/08 11:37 AM
L106	1132	A61H1/00,006,008.cpc.	(USPAT; USOCR)	OR	ON	ON	2021/07/14 10:58 AM
L107	3533	A61H23/00,004,006,02,0218,0254,0263,04,06.cpc.	(USPAT; USOCR)	OR	ON	ON	2021/07/14 11:03 AM
L108	274	A61H2023/002,0209,0272,0281,029.cpc.	(USPAT; USOCR)	OR	ON	ON	2021/07/14 11:05 AM
L109	737	A61H39/00,002,007,04.cpc.	(USPAT; USOCR)	OR	ON	ON	2021/07/14 11:06 AM
L110	3739	A61H2201/0165,12,1207,1215,1223,123,02,0207,10,0221,1238,14,1409,1418,1481,149,1664.cpc.	(USPAT; USOCR)	OR	ON	ON	2021/07/14 11:07 AM
L111	622	B23D51/16.cpc.	(USPAT; USOCR)	OR	ON	ON	2021/07/14 11:10 AM
L112	1719	B23D49/162,165,00,007,008,10,16,167.cpc.	(USPAT; USOCR)	OR	ON	ON	2021/07/14 11:22 AM
L113	1376	B26D7/2621,2614.cpc.	(USPAT; USOCR)	OR	ON	ON	2021/07/14 11:24 AM
L114	206	B26D5/14.cpc.	(USPAT; USOCR)	OR	ON	ON	2021/07/14 11:26 AM
L115	502	A61B17/148,142,14,144.cpc.	(USPAT; USOCR)	OR	ON	ON	2021/07/14 11:27 AM
L116	0	B27B11/06.cpc.	(USPAT; USOCR)	OR	ON	ON	2021/07/14 11:28 AM
L117	297	B27B19/00,002,006,09,02.cpc.	(USPAT; USOCR)	OR	ON	ON	2021/07/14 11:28 AM
L118	76	((("Wersland") near3 ("Jason"))).INV.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/07/14 12:28 PM
L119	3	L118 and (infrared temperature heat$3 cool$ hot cold thermal$).clm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/07/14 12:47 PM
L120	70	((("Nazarian") near3 ("Benjamin"))).INV.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/07/14 12:48 PM
L121	5	L120 not L118	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/07/14 12:53 PM
L122	0	L121 and (infrared temperature heat$3 cool$ hot cold thermal$).clm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/07/14 12:53 PM

L123	55	((("Solana") near3 ("Jaime") near3 ("Sanchez"))).INV.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/07/14 12:54 PM
L124	3	L123 not L118	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/07/14 12:54 PM
L125	0	L124 and (infrared temperature heat$3 cool$ hot cold thermal$).clm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/07/14 12:54 PM
L126	30	((("Merino") near3 ("Eduardo"))).INV.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/07/14 12:54 PM
L127	0	L126 not L118	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/07/14 12:56 PM
L128	39	((("THERAGUN") near3 ("INC"))).AS,AANM.	(USPAT)	OR	ON	ON	2021/07/14 12:56 PM
L129	8	L128 not L118	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/07/14 12:56 PM
L130	0	L129 and (infrared temperature heat$3 cool$ hot cold thermal$).clm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/07/14 12:56 PM
L131	76	((("Wersland") near3 ("Jason"))).INV.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/07/14 06:08 PM
L132	6	L131 and (mount$).clm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/07/14 06:08 PM
L133	1	"17244278"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/08/16 10:36 AM
L134	138	(US-20200069510-$ or US-20200330321-$ or US-20200323733-$ or US-20200261307-$ or US-20200289365-$ or US-20200281805-$ or US-20200268594-$ or US-20200261310-$ or US-20200261306-$ or US-20190254921-$ or US-20200241683-$ or US-20200000678-$ or US-20190365598-$ or US-20180133101-$ or US-20200253818-$ or US-20190247271-$ or US-20190175434-$ or US-20190083352-$ or US-20190017528-$ or US-20180200141-$ or US-20190015294-$ or US-20150005682-$ or US-20180296433-$ or US-20180263845-$ or US-20180256432-$ or US-20180243158-$).did. or (US-	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/08/30 02:04 PM

		20180008512-$ or US-20170361386-$ or US-20170304145-$ or US-20170304144-$ or US-20170156974-$ or US-20170079865-$ or US-20160367425-$ or US-20170027798-$ or US-20150119771-$ or US-20130261516-$ or US-20130133210-$ or US-20120253245-$ or US-20110041864-$ or US-20100331745-$ or US-20100145242-$ or US-20100125228-$ or US-20080177207-$ or US-20070144310-$ or US-20060123941-$ or US-20050252011-$ or US-20050159689-$ or US-20050131461-$ or US-20040039314-$ or US-20030094356-$ or US-20200107988-$ or US-20200085673-$ or US-20200009005-$).did. or (US-20120310120-$ or US-20020068887-$ or US-20200179210-$ or US-20190231630-$ or US-20210022955-$ or US-20200405574-$ or US-20200352821-$ or US-20200352820-$ or US-20190015295-$ or US-20200245931-$ or US-20200219615-$ or US-20200222276-$ or US-20190282442-$ or US-20130331745-$ or US-20150305971-$ or US-20120296244-$ or US-20090112134-$ or US-20200390644-$ or US-20130079689-$ or US-20050131273-$ or US-20130035617-$ or US-20170274242-$ or US-20070129220-$ or US-20190307395-$ or US-20170095398-$ or US-20120078071-$ or US-20200069936-$).did. or (US-20150005750-$ or US-20210059898-$ or US-20150216719-$ or US-					

Hyper Ice, Inc. Ex. 1003-Page 707
Hyper Ice, Inc. v. Therabody, Inc.

		20190290531-$ or US-20150305969-$ or US-20100081971-$ or US-20130014968-$ or US-20100162579-$ or US-20170156975-$ or US-20040260211-$ or US-20090326540-$ or US-20200354091-$ or US-20140207032-$ or US-20180353812-$ or US-20210020069-$ or US-20160346163-$ or US-20210244611-$).did. or (US-10702448-$ or US-10918565-$ or US-10857064-$ or US-10314762-$ or US-10492984-$ or US-10561574-$ or US-10428850-$ or US-10470970-$ or US-9889066-$ or US-9265689-$ or US-8342187-$ or US-8322456-$ or US-8561717-$ or US-7927259-$ or US-7503923-$ or US-7041072-$ or US-6938706-$ or US-6682496-$ or US-6228103-$ or US-5951501-$ or US-5501657-$ or US-5212887-$ or US-5088474-$ or US-5085207-$ or US-4991298-$ or US-4513737-$).did. or (US-4420995-$ or US-4272996-$ or US-4158246-$ or US-3545301-$ or US-3172675-$ or US-10292896-$ or US-7354383-$ or US-7109613-$ or US-5676637-$ or US-10993874-$ or US-10959911-$ or US-10940081-$).did. or (US-3545301-$ or US-3172675-$ or US-3058651-$).did.					
L135	64	L134 and (thermal$ heat$3 cool$3 cold hot	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/08/30 02:11 PM

		exfoliat$)					
L136	3	("20140194900"|"20170304145"|"20200390644").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/08/30 03:21 PM
L137	1	("20200390644").PN.	(US-PGPUB; USPAT; USOCR)	OR	OFF	OFF	2021/08/30 03:23 PM
L138	1	("10314762").PN.	(US-PGPUB; USPAT; USOCR)	OR	OFF	OFF	2021/08/30 03:23 PM
L139	69	("10314762"|"10357425"|"20010016697"|"20030009116"|"20030094356"|"20030144615"|"20030195443"|"20050126018"|"20060025710"|"20060123941"|"20060192527"|"20070129220"|"20070144310"|"20070150004"|"20070270727"|"20080103419"|"20090112134"|"20090326540"|"20100274162"|"20120078071"|"20120253245"|"20130133210"|"20130138023"|"20130261516"|"20130281897"|"20140180331"|"20140207032"|"20140310900"|"20150005682"|"20150119771"|"20150148592"|"20150216719"|"20150305969"|"20150375315"|"20160346163"|"20170156974"|"20170304145"|"20180008512"|"20180200141"|"20180236572"|"20180243158"|"20180279843"|"20180296433"|"20200179210"|"20200261306"|"20200268594"|"3172675"|"3545301"|"3626934"|"3942251"|"4150668"|"4173217"|"4549535"|"4566442"|"4730605"|"5085207"|"5212887"|"5417644"|"5569168"|"5573500"|"5951501"|"6228042"|"6663657"|"6682496"|"7925259"|"7996996"|"8342187"|"8945104"|"8951216").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/08/30 03:29 PM
L140	4	(("3545301") or ("3172675")).PN.	(US-PGPUB; USPAT; USOCR)	OR	OFF	OFF	2021/08/30 03:32 PM
L141	428	(US-20140180331-$ or US-20130261516-$ or US-20130138023-$ or	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/08/30 03:40 PM

		US-20120253245-$ or US-20080103419-$ or US-20070150004-$ or US-20060192527-$ or US-20060123941-$ or US-20060025710-$ or US-20030195443-$ or US-20030009116-$ or US-20010016697-$ or US-20160206502-$ or US-20160367425-$ or US-20170027798-$ or US-20030094356-$ or US-20170304145-$ or US-20140163442-$ or US-20130281897-$ or US-20120101517-$ or US-20100137907-$ or US-20100010399-$ or US-20090270915-$ or US-20090222024-$ or US-20020107459-$ or US-20170304144-$).did. or (US-20170156974-$ or US-20160346152-$ or US-20160271009-$ or US-20170156975-$ or US-20030149381-$ or US-20150202114-$ or US-20130012849-$ or US-20020072693-$ or US-20130123677-$ or US-20130072837-$ or US-20100331745-$ or US-20010027280-$ or US-20030028134-$ or US-20030065280-$ or US-20020183668-$ or US-20020082536-$ or US-20140323931-$ or US-20110137217-$ or US-20110041864-$ or US-20050113636-$ or US-20090038069-$ or US-20040064074-$ or US-20090086569-$ or US-20120253246-$ or US-20170281457-$ or US-20170105896-$ or US-20070299378-$).did. or (US-20100125228-$ or US-20060074362-$ or US-20170281459-$ or US-20040176710-$ or US-20150148592-$ or US-20080262397-$ or US-20100145242-$ or					

		US-20030144615-$ or US-20090177128-$ or US-20170241201-$ or US-20150198219-$ or US-20090165387-$ or US-20070175647-$ or US-20050217900-$ or US-20050015030-$ or US-20100024571-$ or US-20150305973-$ or US-20160015596-$ or US-20150182411-$ or US-20160131228-$ or US-20090032275-$ or US-20030019799-$ or US-20130245511-$ or US-20040039314-$ or US-20070144310-$ or US-20180263845-$ or US-20150005682-$).did. or (US-20180200141-$ or US-20040255475-$ or US-20040255474-$ or US-20040187324-$ or US-20040117993-$ or US-20150367494-$ or US-20150033564-$ or US-20130133210-$ or US-20090100690-$ or US-20060260141-$ or US-20050178012-$ or US-20080047150-$ or US-20120192440-$ or US-20120030955-$ or US-20030070307-$ or US-20090272617-$ or US-20180099339-$ or US-20110265335-$ or US-20110131820-$ or US-20060288594-$ or US-20080016705-$ or US-20070209217-$ or US-20190017528-$ or US-20190015294-$ or US-20130019483-$ or US-20150375315-$ or US-20110185582-$).did. or (US-20190224765-$ or US-20180236572-$ or US-20190209424-$ or US-20180370012-$ or US-20190254921-$ or US-20060047315-$ or US-20050131461-$ or US-20020082532-$ or US-20180031089-$ or US-20190175434-$ or					

		US-20080004554-$ or US-20050159689-$ or US-20170079865-$ or US-20190083352-$ or US-20140283394-$ or US-20170361386-$ or US-20170173711-$ or US-20140182871-$ or US-20090188119-$ or US-20080189961-$ or US-20050126018-$ or US-20010011420-$ or US-20020138991-$ or US-20190351539-$ or US-20160199924-$ or US-20100162579-$ or US-20130014968-$).did. or (US-20080229591-$ or US-20050257385-$ or US-20050257384-$ or US-20110107608-$ or US-20140360335-$ or US-20130204255-$ or US-20090326540-$ or US-20050252011-$ or US-20150113815-$ or US-20140007436-$ or US-20070289149-$ or US-20050262710-$ or US-20200069510-$ or US-20190365598-$ or US-20200046602-$ or US-20200093682-$ or US-20180256432-$ or US-20200060918-$ or US-20200000678-$ or US-20130110017-$ or US-20150297437-$ or US-20110224580-$ or US-20190307631-$ or US-20120215141-$ or US-20120215280-$ or US-20150133832-$ or US-20150005672-$).did. or (US-20160278584-$ or US-20130237751-$ or US-20050207609-$ or US-20150335520-$ or US-20150169124-$ or US-20160213558-$ or US-20150119771-$ or US-20190290076-$ or US-20170095398-$ or US-20160151238-$ or US-20160000642-$ or US-20050054958-$ or US-20150290076-$ or					

		US-20160158097-$ or US-20190099327-$ or US-20200214934-$ or US-20200038530-$ or US-20180288160-$ or US-20180279843-$ or US-20170049278-$ or US-20180243158-$ or US-20160303668-$ or US-20180326568-$ or US-20140360029-$ or US-20140194790-$ or US-20090240177-$ or US-20190066833-$).did. or (US-20180008512-$ or US-20100274162-$ or US-20180196395-$ or US-20150310634-$ or US-20150040685-$ or US-20140194900-$ or US-20080177207-$ or US-20150126916-$ or US-20140207032-$ or US-20200261307-$ or US-20180296433-$ or US-20070270727-$ or US-20200289365-$ or US-20200261310-$ or US-20200000244-$ or US-20190247271-$ or US-20140236040-$ or US-20140194794-$ or US-20100030122-$ or US-20090270774-$ or US-20090036809-$ or US-20080243041-$ or US-20060258963-$ or US-20050113724-$ or US-20200261306-$ or US-20200253818-$ or US-20200330321-$).did. or (US-20130014988-$ or US-20140310900-$ or US-20180133101-$ or US-20200268594-$ or US-20200241683-$ or US-20200323733-$ or US-20200281805-$).did. or (US-6663657-$ or US-6228042-$ or US-5951501-$ or US-5569168-$ or US-4549535-$ or US-4173217-$ or US-5273479-$ or US-8715161-$ or US-7927259-$ or US-					

		7041072-$ or US- 6733414-$ or US- 6723060-$ or US- 6682496-$ or US- 6599260-$ or US- 6352518-$ or US- 6027444-$ or US- 5716332-$ or US- 4827914-$ or US- 4790296-$ or US- 4513737-$ or US- 3837335-$ or US- 3626934-$ or US- 9827159-$ or US- 4716890-$ or US- 5140979-$ or US- 3754548-$).did. or (US- 6786878-$ or US- 7238162-$ or US- 7128722-$ or US- 8951216-$ or US- 5460597-$ or US- 5417644-$ or US- 6730050-$ or US- 6432072-$ or US- 5695451-$ or US- 5475883-$ or US- 5085207-$ or US- 4162675-$ or US- 4088128-$ or US- 4079733-$ or US- 3724451-$ or US- 8342187-$ or US- 7590445-$ or US- 4730605-$ or US- 7951098-$ or US- 4025809-$ or US- 3580246-$ or US- 6228103-$ or US- 9161881-$ or US- 4566442-$ or US- 5983416-$ or US- 4722327-$ or US- 7367981-$).did. or (US- 5676637-$ or US- 8777881-$ or US- 4834075-$ or US- 6500135-$ or US- 3806980-$ or US- 7503923-$ or US- 5300095-$ or US- 4841955-$ or US- 6730051-$ or US- 5843006-$ or US- 3747594-$ or US- 5214975-$ or US- 5203113-$ or US- 5640735-$ or US-					

		5374237-$ or US- 7996996-$ or US- 9724771-$ or US- 9606026-$ or US- 7059425-$ or US- 5655887-$ or US- 3854563-$ or US- 5573500-$ or US- 3736920-$ or US- 5088474-$ or US- 9265689-$ or US- 5803916-$ or US- 6805700-$).did. or (US- 6602211-$ or US- 6997889-$ or US- 4158246-$ or US- 9289348-$ or US- 5470303-$ or US- 5159922-$ or US- 9889066-$ or US- 10027201-$ or US- 8640347-$ or US- 5212887-$ or US- 5099705-$ or US- 5079844-$ or US- 3759020-$ or US- 7036401-$ or US- 3863342-$ or US- 7818887-$ or US- RE36269-$ or US- 5083376-$ or US- 7448137-$ or US- 6671969-$ or US- 7096589-$ or US- 5940977-$ or US- 7127973-$ or US- 8813377-$ or US- 4976164-$ or US- 8656598-$ or US- 5170564-$).did. or (US- 3971132-$ or US- 6772662-$ or US- 4272996-$ or US- 3942251-$ or US- 6212781-$ or US- 7191847-$ or US- 9192390-$ or US- 5832611-$ or US- 6264211-$ or US- 7251896-$ or US- 7370423-$ or US- 4150668-$ or US- 4817738-$ or US- 6557816-$ or US- 4563605-$ or US- 5129118-$ or US- 4420995-$ or US- 9333628-$ or US-					

		8475076-$ or US- 7954402-$ or US- 6971285-$ or US- 6964216-$ or US- 5660491-$ or US- 2964037-$ or US- 1882040-$ or US- 8322456-$ or US- 6938706-$).did. or (US- 8561717-$ or US- 10357425-$ or US- 10428850-$ or US- 10470970-$ or US- 4283855-$ or US- 10525541-$ or US- 3876015-$ or US- 3834019-$ or US- 3805383-$ or US- 6357124-$ or US- 4240204-$ or US- 7509744-$ or US- 5007172-$ or US- 3706474-$ or US- 4991298-$ or US- 8960323-$ or US- 8578615-$ or US- 6282797-$ or US- 6634107-$ or US- 6662455-$ or US- 6758119-$ or US- 3785053-$ or US- 9221112-$ or US- 7109613-$ or US- 5624000-$ or US- 10314762-$ or US- 9543871-$).did. or (US- 10702448-$ or US- 10517790-$ or US- 10420700-$ or US- 6648840-$ or US- 4697580-$ or US- 6568089-$ or US- 8702633-$ or US- 5113847-$ or US- 5501657-$ or US- 6562013-$ or US- 10492984-$ or US- 10561574-$ or US- 6210349-$ or US- 5611771-$ or US- 10857064-$ or US- 10842703-$ or US- 8945104-$ or US- 10912707-$ or US- 10918565-$).did. or (US-2964037-$ or US- 1882040-$ or US- 2902067-$ or US-					

		2868248-$ or US-2822005-$ or US-2808082-$ or US-2240755-$ or US-3309932-$ or US-3545301-$ or US-3172675-$ or US-2839101-$ or US-3050093-$ or US-3340612-$ or US-3623223-$).did. or (EP-1313116-$ or WO-2009014727-$).did. or (JP-07051393-$ or JP-02019157-$ or JP-2005204777-$).did. or (WO-2015038005-$ or WO-2014118596-$ or JP-2010534110-$ or CN-210728184-$ or DE-102015226084-$ or WO-2006122435-$ or WO-2013114084-$).did.					
L142	0	WO-2014118596-$.did.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/08/30 04:21 PM
L143	1	WO-2014118596-$.did.	(EPO; JPO; DERWENT)	OR	ON	ON	2021/08/30 04:25 PM
L144	1	2014-P46661.NRAN.	(DERWENT)	OR	ON	ON	2021/08/30 04:27 PM
L145	1	WO-2015038005-$.did.	(EPO; JPO; DERWENT)	OR	ON	ON	2021/08/30 04:29 PM
L146	1	2015-19392L.NRAN.	(DERWENT)	OR	ON	ON	2021/08/30 04:29 PM
L147	2	WO-2009014727-$.did.	(EPO; JPO; DERWENT)	OR	ON	ON	2021/08/30 04:29 PM
L148	1	JP-2010534110-$.did.	(EPO; JPO; DERWENT)	OR	ON	ON	2021/08/30 04:30 PM
L149	1	2009-E41378.NRAN.	(DERWENT)	OR	ON	ON	2021/08/30 04:30 PM
L150	0	JP-1195051393-$.did.	(EPO; JPO; DERWENT)	OR	ON	ON	2021/08/30 04:31 PM
L151	0	JP-1995051393-$.did.	(EPO; JPO; DERWENT)	OR	ON	ON	2021/08/30 04:32 PM
L152	1	JP-95051393-$.did.	(EPO; JPO; DERWENT)	OR	ON	ON	2021/08/30 04:32 PM
L153	0	JP-3077837-$.did.	(EPO; JPO; DERWENT)	OR	ON	ON	2021/08/30 04:32 PM
L154	2	JP-03077837-$.did.	(EPO; JPO; DERWENT)	OR	ON	ON	2021/08/30 04:32 PM
L155	0	JP-1990019157-$.did.	(EPO; JPO; DERWENT)	OR	ON	ON	2021/08/30 04:33 PM
L156	0	JP-199019157-$.did.	(EPO; JPO; DERWENT)	OR	ON	ON	2021/08/30 04:33 PM

L157	0	JP-9019157-$.did.	(EPO; JPO; DERWENT)	OR	ON	ON	2021/08/30 04:33 PM
L158	2	JP-2005204777-$.did.	(EPO; JPO; DERWENT)	OR	ON	ON	2021/08/30 04:33 PM
L159	1	2005-517473.NRAN.	(DERWENT)	OR	ON	ON	2021/08/30 04:33 PM
L160	0	KR-101123926-$.did.	(EPO; JPO; DERWENT)	OR	ON	ON	2021/08/30 04:34 PM
L161	1	WO-2013114084-$.did.	(EPO; JPO; DERWENT)	OR	ON	ON	2021/08/30 04:34 PM
L162	1	2013-M01163.NRAN.	(DERWENT)	OR	ON	ON	2021/08/30 04:34 PM
L163	1	JP-02019157-$.did.	(EPO; JPO; DERWENT)	OR	ON	ON	2021/08/30 04:38 PM
L164	1	JP-07051393-$.did.	(EPO; JPO; DERWENT)	OR	ON	ON	2021/08/30 04:40 PM
L165	3	(("20160206502") or ("20090270915") or ("6228042")).PN.	(US-PGPUB; USPAT; USOCR)	OR	OFF	OFF	2021/08/30 04:48 PM
L166	6	(("10357425") or ("20130014968") or ("8945104") or ("20140310900") or ("20100274162") or ("10314762")).PN.	(US-PGPUB; USPAT; USOCR)	OR	OFF	OFF	2021/08/30 04:59 PM
L167	8	(("6228042") or ("20140180331") or ("4173217") or ("20080103419") or ("20030195443") or ("5569168") or ("6663657") or ("4549535")).PN.	(US-PGPUB; USPAT; USOCR)	OR	OFF	OFF	2021/08/30 05:00 PM
L168	7	(("5951501") or ("8951216") or ("4730605") or ("5417644") or ("5085207") or ("4150668") or ("4566442")).PN.	(US-PGPUB; USPAT; USOCR)	OR	OFF	OFF	2021/08/30 05:01 PM
L169	7	(("20180296433") or ("20180279843") or ("20180200141") or ("20180243158") or ("20070270727") or ("20150119771") or ("20170156974")).PN.	(US-PGPUB; USPAT; USOCR)	OR	OFF	OFF	2021/08/30 05:02 PM
L170	68	L134 and (sensor sensing transducer monitor thermometer gyroscope accelerometer)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/08/30 05:23 PM
L171	113	L141 and (sensor	(US-PGPUB; USPAT;	OR	ON	ON	2021/08/30

		sensing transducer monitor thermometer gyroscope accelerometer)	USOCR)				06:01 PM
L172	84	L171 not L170	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/08/30 06:04 PM
L173	1	("10335637").PN.	(US-PGPUB; USPAT; USOCR)	OR	OFF	OFF	2021/08/31 02:27 PM
L175	138	(US-20200069510-$ or US-20200330321-$ or US-20200323733-$ or US-20200261307-$ or US-20200289365-$ or US-20200281805-$ or US-20200268594-$ or US-20200261310-$ or US-20200261306-$ or US-20190254921-$ or US-20200241683-$ or US-20200000678-$ or US-20190365598-$ or US-20180133101-$ or US-20200253818-$ or US-20190247271-$ or US-20190175434-$ or US-20190083352-$ or US-20190017528-$ or US-20180200141-$ or US-20190015294-$ or US-20150005682-$ or US-20180296433-$ or US-20180263845-$ or US-20180256432-$ or US-20180243158-$).did. or (US-20180008512-$ or US-20170361386-$ or US-20170304145-$ or US-20170304144-$ or US-20170156974-$ or US-20170079865-$ or US-20160367425-$ or US-20170027798-$ or US-20150119771-$ or US-20130261516-$ or US-20130133210-$ or US-20120253245-$ or US-20110041864-$ or US-20100331745-$ or US-20100145242-$ or US-20100125228-$ or US-20080177207-$ or US-20070144310-$ or US-20060123941-$ or US-20050252011-$ or US-20050159689-$ or US-20050131461-$ or US-	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/08/31 04:29 PM

		20040039314-$ or US-20030094356-$ or US-20200107988-$ or US-20200085673-$ or US-20200009005-$).did. or (US-20120310120-$ or US-20020068887-$ or US-20200179210-$ or US-20190231630-$ or US-20210022955-$ or US-20200405574-$ or US-20200352821-$ or US-20200352820-$ or US-20190015295-$ or US-20200245931-$ or US-20200219615-$ or US-20200222276-$ or US-20190282442-$ or US-20130331745-$ or US-20150305971-$ or US-20120296244-$ or US-20090112134-$ or US-20200390644-$ or US-20130079689-$ or US-20050131273-$ or US-20130035617-$ or US-20170274242-$ or US-20070129220-$ or US-20190307395-$ or US-20170095398-$ or US-20120078071-$ or US-20200069936-$).did. or (US-20150005750-$ or US-20210059898-$ or US-20150216719-$ or US-20190290531-$ or US-20150305969-$ or US-20100081971-$ or US-20130014968-$ or US-20100162579-$ or US-20170156975-$ or US-20040260211-$ or US-20090326540-$ or US-20200354091-$ or US-20140207032-$ or US-20180353812-$ or US-20210020069-$ or US-20160346163-$ or US-20210244611-$).did. or (US-10702448-$ or US-10918565-$ or US-10857064-$ or US-10314762-$ or US-10492984-$ or US-10561574-$ or US-10428850-$ or US-10470970-$ or US-					

		9889066-$ or US-9265689-$ or US-8342187-$ or US-8322456-$ or US-8561717-$ or US-7927259-$ or US-7503923-$ or US-7041072-$ or US-6938706-$ or US-6682496-$ or US-6228103-$ or US-5951501-$ or US-5501657-$ or US-5212887-$ or US-5088474-$ or US-5085207-$ or US-4991298-$ or US-4513737-$).did. or (US-4420995-$ or US-4272996-$ or US-4158246-$ or US-3545301-$ or US-3172675-$ or US-10292896-$ or US-7354383-$ or US-7109613-$ or US-5676637-$ or US-10993874-$ or US-10959911-$ or US-10940081-$).did. or (US-3545301-$ or US-3172675-$ or US-3058651-$).did.					
L176	428	(US-20140180331-$ or US-20130261516-$ or US-20130138023-$ or US-20120253245-$ or US-20080103419-$ or US-20070150004-$ or US-20060192527-$ or US-20060123941-$ or US-20060025710-$ or US-20030195443-$ or US-20030009116-$ or US-20010016697-$ or US-20160206502-$ or US-20160367425-$ or US-20170027798-$ or US-20030094356-$ or US-20170304145-$ or US-20140163442-$ or US-20130281897-$ or US-20120101517-$ or US-20100137907-$ or US-20100010399-$ or US-20090270915-$ or US-20090222024-$ or	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/08/31 04:29 PM

		US-20020107459-$ or US-20170304144-$).did. or (US-20170156974-$ or US-20160346152-$ or US-20160271009-$ or US-20170156975-$ or US-20030149381-$ or US-20150202114-$ or US-20130012849-$ or US-20020072693-$ or US-20130123677-$ or US-20130072837-$ or US-20100331745-$ or US-20010027280-$ or US-20030028134-$ or US-20030065280-$ or US-20020183668-$ or US-20020082536-$ or US-20140323931-$ or US-20110137217-$ or US-20110041864-$ or US-20050113636-$ or US-20090038069-$ or US-20040064074-$ or US-20090086569-$ or US-20120253246-$ or US-20170281457-$ or US-20170105896-$ or US-20070299378-$).did. or (US-20100125228-$ or US-20060074362-$ or US-20170281459-$ or US-20040176710-$ or US-20150148592-$ or US-20080262397-$ or US-20100145242-$ or US-20030144615-$ or US-20090177128-$ or US-20170241201-$ or US-20150198219-$ or US-20090165387-$ or US-20070175647-$ or US-20050217900-$ or US-20050015030-$ or US-20100024571-$ or US-20150305973-$ or US-20160015596-$ or US-20150182411-$ or US-20160131228-$ or US-20090032275-$ or US-20030019799-$ or US-20130245511-$ or US-20040039314-$ or US-20070144310-$ or US-20180263845-$ or US-20150005682-$).did. or (US-					

Hyper Ice, Inc. Ex. 1003-Page 722
Hyper Ice, Inc. v. Therabody, Inc.

		20180200141-$ or US-20040255475-$ or US-20040255474-$ or US-20040187324-$ or US-20040117993-$ or US-20150367494-$ or US-20150033564-$ or US-20130133210-$ or US-20090100690-$ or US-20060260141-$ or US-20050178012-$ or US-20080047150-$ or US-20120192440-$ or US-20120030955-$ or US-20030070307-$ or US-20090272617-$ or US-20180099339-$ or US-20110265335-$ or US-20110131820-$ or US-20060288594-$ or US-20080016705-$ or US-20070209217-$ or US-20190017528-$ or US-20190015294-$ or US-20130019483-$ or US-20150375315-$ or US-20110185582-$).did. or (US-20190224765-$ or US-20180236572-$ or US-20190209424-$ or US-20180370012-$ or US-20190254921-$ or US-20060047315-$ or US-20050131461-$ or US-20020082532-$ or US-20180031089-$ or US-20190175434-$ or US-20080004554-$ or US-20050159689-$ or US-20170079865-$ or US-20190083352-$ or US-20140283394-$ or US-20170361386-$ or US-20170173711-$ or US-20140182871-$ or US-20090188119-$ or US-20080189961-$ or US-20050126018-$ or US-20010011420-$ or US-20020138991-$ or US-20190351539-$ or US-20160199924-$ or US-20100162579-$ or US-20130014968-$).did. or (US-20080229591-$ or US-20050257385-$ or US-20050257384-$ or US-					

		20110107608-$ or US-20140360335-$ or US-20130204255-$ or US-20090326540-$ or US-20050252011-$ or US-20150113815-$ or US-20140007436-$ or US-20070289149-$ or US-20050262710-$ or US-20200069510-$ or US-20190365598-$ or US-20200046602-$ or US-20200093682-$ or US-20180256432-$ or US-20200060918-$ or US-20200000678-$ or US-20130110017-$ or US-20150297437-$ or US-20110224580-$ or US-20190307631-$ or US-20120215141-$ or US-20120215280-$ or US-20150133832-$ or US-20150005672-$).did. or (US-20160278584-$ or US-20130237751-$ or US-20050207609-$ or US-20150335520-$ or US-20150169124-$ or US-20160213558-$ or US-20150119771-$ or US-20190290076-$ or US-20170095398-$ or US-20160151238-$ or US-20160000642-$ or US-20050054958-$ or US-20150290076-$ or US-20160158097-$ or US-20190099327-$ or US-20200214934-$ or US-20200038530-$ or US-20180288160-$ or US-20180279843-$ or US-20170049278-$ or US-20180243158-$ or US-20160303668-$ or US-20180326568-$ or US-20140360029-$ or US-20140194790-$ or US-20090240177-$ or US-20190066833-$).did. or (US-20180008512-$ or US-20100274162-$ or US-20180196395-$ or US-20150310634-$ or US-20150040685-$ or US-20140194900-$ or US-					

		20080177207-$ or US-20150126916-$ or US-20140207032-$ or US-20200261307-$ or US-20180296433-$ or US-20070270727-$ or US-20200289365-$ or US-20200261310-$ or US-20200000244-$ or US-20190247271-$ or US-20140236040-$ or US-20140194794-$ or US-20100030122-$ or US-20090270774-$ or US-20090036809-$ or US-20080243041-$ or US-20060258963-$ or US-20050113724-$ or US-20200261306-$ or US-20200253818-$ or US-20200330321-$).did. or (US-20130014988-$ or US-20140310900-$ or US-20180133101-$ or US-20200268594-$ or US-20200241683-$ or US-20200323733-$ or US-20200281805-$).did. or (US-6663657-$ or US-6228042-$ or US-5951501-$ or US-5569168-$ or US-4549535-$ or US-4173217-$ or US-5273479-$ or US-8715161-$ or US-7927259-$ or US-7041072-$ or US-6733414-$ or US-6723060-$ or US-6682496-$ or US-6599260-$ or US-6352518-$ or US-6027444-$ or US-5716332-$ or US-4827914-$ or US-4790296-$ or US-4513737-$ or US-3837335-$ or US-3626934-$ or US-9827159-$ or US-4716890-$ or US-5140979-$ or US-3754548-$).did. or (US-6786878-$ or US-7238162-$ or US-7128722-$ or US-8951216-$ or US-					

		5460597-$ or US- 5417644-$ or US- 6730050-$ or US- 6432072-$ or US- 5695451-$ or US- 5475883-$ or US- 5085207-$ or US- 4162675-$ or US- 4088128-$ or US- 4079733-$ or US- 3724451-$ or US- 8342187-$ or US- 7590445-$ or US- 4730605-$ or US- 7951098-$ or US- 4025809-$ or US- 3580246-$ or US- 6228103-$ or US- 9161881-$ or US- 4566442-$ or US- 5983416-$ or US- 4722327-$ or US- 7367981-$).did. or (US- 5676637-$ or US- 8777881-$ or US- 4834075-$ or US- 6500135-$ or US- 3806980-$ or US- 7503923-$ or US- 5300095-$ or US- 4841955-$ or US- 6730051-$ or US- 5843006-$ or US- 3747594-$ or US- 5214975-$ or US- 5203113-$ or US- 5640735-$ or US- 5374237-$ or US- 7996996-$ or US- 9724771-$ or US- 9606026-$ or US- 7059425-$ or US- 5655887-$ or US- 3854563-$ or US- 5573500-$ or US- 3736920-$ or US- 5088474-$ or US- 9265689-$ or US- 5803916-$ or US- 6805700-$).did. or (US- 6602211-$ or US- 6997889-$ or US- 4158246-$ or US- 9289348-$ or US- 5470303-$ or US- 5159922-$ or US- 9889066-$ or US- 10027201-$ or US-					

		8640347-$ or US- 5212887-$ or US- 5099705-$ or US- 5079844-$ or US- 3759020-$ or US- 7036401-$ or US- 3863342-$ or US- 7818887-$ or US- RE36269-$ or US- 5083376-$ or US- 7448137-$ or US- 6671969-$ or US- 7096589-$ or US- 5940977-$ or US- 7127973-$ or US- 8813377-$ or US- 4976164-$ or US- 8656598-$ or US- 5170564-$).did. or (US- 3971132-$ or US- 6772662-$ or US- 4272996-$ or US- 3942251-$ or US- 6212781-$ or US- 7191847-$ or US- 9192390-$ or US- 5832611-$ or US- 6264211-$ or US- 7251896-$ or US- 7370423-$ or US- 4150668-$ or US- 4817738-$ or US- 6557816-$ or US- 4563605-$ or US- 5129118-$ or US- 4420995-$ or US- 9333628-$ or US- 8475076-$ or US- 7954402-$ or US- 6971285-$ or US- 6964216-$ or US- 5660491-$ or US- 2964037-$ or US- 1882040-$ or US- 8322456-$ or US- 6938706-$).did. or (US- 8561717-$ or US- 10357425-$ or US- 10428850-$ or US- 10470970-$ or US- 4283855-$ or US- 10525541-$ or US- 3876015-$ or US- 3834019-$ or US- 3805383-$ or US- 6357124-$ or US- 4240204-$ or US- 7509744-$ or US-					

Hyper Ice, Inc. Ex. 1003-Page 727
Hyper Ice, Inc. v. Therabody, Inc.

		5007172-$ or US-3706474-$ or US-4991298-$ or US-8960323-$ or US-8578615-$ or US-6282797-$ or US-6634107-$ or US-6662455-$ or US-6758119-$ or US-3785053-$ or US-9221112-$ or US-7109613-$ or US-5624000-$ or US-10314762-$ or US-9543871-$).did. or (US-10702448-$ or US-10517790-$ or US-10420700-$ or US-6648840-$ or US-4697580-$ or US-6568089-$ or US-8702633-$ or US-5113847-$ or US-5501657-$ or US-6562013-$ or US-10492984-$ or US-10561574-$ or US-6210349-$ or US-5611771-$ or US-10857064-$ or US-10842703-$ or US-8945104-$ or US-10912707-$ or US-10918565-$).did. or (US-2964037-$ or US-1882040-$ or US-2902067-$ or US-2868248-$ or US-2822005-$ or US-2808082-$ or US-2240755-$ or US-3309932-$ or US-3545301-$ or US-3172675-$ or US-2839101-$ or US-3050093-$ or US-3340612-$ or US-3623223-$).did. or (EP-1313116-$ or WO-2009014727-$).did. or (JP-07051393-$ or JP-02019157-$ or JP-2005204777-$).did. or (WO-2015038005-$ or WO-2014118596-$ or JP-2010534110-$ or CN-210728184-$ or DE-102015226084-$ or					

		WO-2006122435-$ or WO-2013114084-$).did.					
L177	195	(L175 or L176) and (thermal$ heat$3 cool$3 cold hot exfoliat$)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/08/31 04:29 PM
L178	8	(L175 or L176) and (exfoliat$)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/08/31 04:36 PM
L179	105	(L175 or L176) and (cold$ cool$3)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/08/31 04:40 PM
L180	307	(L175 or L176) and (vibrat$)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/08/31 04:41 PM
L181	2940	A61H1/00,006,008.cpc.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/08/31 04:57 PM
L182	11	L181 and ((percussion percussive) same (thermal$ heat$3 cool$3 cold hot exfoliat$))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/08/31 05:46 PM
L183	7263	A61H23/00,004,006,02,0218,0245,0254,0263,04,06.cpc.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/08/31 05:48 PM
L184	87	L183 and ((percussion percussive) same (thermal$ heat$3 cool$3 cold hot exfoliat$))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/08/31 05:48 PM
L185	492	A61H2023/002,0209,0272,0281,029.cpc.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/08/31 05:58 PM
L186	2	L185 and ((percussion percussive) same (thermal$ heat$3 cool$3 cold hot exfoliat$))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/08/31 05:58 PM
L187	11790	A61H2201/0107,02,0207,0214,10,50,5007,501,5012,5023,5025,5035,5043,5053,5058,5061,5064,5066,5069,5071,5082,5084,5089,5092,5094,5097.cpc.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/09/01 08:56 AM
L188	68	L187 and ((percussion percussive) same (thermal$ heat$3 cool$3 cold hot exfoliat$))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/09/01 09:08 AM
L189	1183	A61H2230/20,201,25,255,30,305,50,505.cpc.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/09/01 09:37 AM
L190	10	L189 and ((percussion percussive) same (thermal$ heat$3 cool$3 cold hot exfoliat$))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/09/01 09:37 AM

L191	80	((("Wersland") near3 ("Jason"))).INV.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/09/01 09:45 AM
L192	50	(US-20060278433-$ or US-20070095576-$ or US-20080071203-$ or US-20130133952-$ or US-20190291254-$ or US-20200261307-$ or US-20200261310-$ or US-20200289365-$ or US-20210059898-$ or US-20210244610-$).did. or (US-5302053-$ or US-4441190-$ or US-4446930-$ or US-4907928-$ or US-5553979-$ or US-6318228-$ or US-6402432-$ or US-7389833-$ or US-7419017-$ or US-9045945-$ or US-10857064-$ or US-10959911-$ or US-4776407-$ or US-3629481-$ or US-4079395-$ or US-4126075-$ or US-4277234-$ or US-4332420-$ or US-4428438-$ or US-4446898-$ or US-4448339-$ or US-4606275-$ or US-4858700-$ or US-4921056-$ or US-5011515-$ or US-5366032-$).did. or (US-5439339-$ or US-5647447-$ or US-5662720-$ or US-5682957-$ or US-5699867-$ or US-5715627-$ or US-5787999-$ or US-5803044-$ or US-5839519-$ or US-5882195-$ or US-5883323-$ or US-5921332-$ or US-5969281-$ or US-6057499-$).did.	(US-PGPUB; USPAT)	OR	ON	ON	2021/09/01 09:45 AM
L193	2	L191 and (therapeutic and (actuator sensor)).clm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/09/01 09:59 AM
L194	74	((("Nazarian") near3 ("Benjamin"))).INV.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/09/01 10:00 AM

L195	5	L194 not L191	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/09/01 10:00 AM
L196	0	L195 and (therapeutic and (actuator sensor)).clm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/09/01 10:00 AM
L197	59	((("Solana") near3 ("Jaime") near3 ("Sanchez"))).INV.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/09/01 10:02 AM
L198	3	L197 not L191	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/09/01 10:10 AM
L199	0	L198 and (therapeutic and (actuator sensor)).clm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/09/01 10:10 AM
L200	34	((("Merino") near3 ("Eduardo"))).INV.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/09/01 10:15 AM
L201	0	L200 not L191	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/09/01 10:17 AM
L202	17	((("Tang") near3 ("Richard"))).INV.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/09/01 10:17 AM
L203	11	L202 not L191	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/09/01 10:17 AM
L204	0	L203 and (therapeutic and (actuator sensor)).clm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/09/01 10:17 AM
L205	41	((("THERAGUN") near3 ("INC"))).AS,AANM.	(USPAT)	OR	ON	ON	2021/09/01 10:17 AM
L206	0	L205 and (therapeutic and (actuator sensor)).clm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/09/01 10:18 AM
L207	1188	A61H1/00,006,008.cpc.	(USPAT; USOCR)	OR	ON	ON	2022/01/11 05:57 PM
L208	3850	A61H23/00,004,006,02,0218,0245,0254,0263,04,06.cpc.	(USPAT; USOCR)	OR	ON	ON	2022/01/12 10:01 AM
L209	281	A61H2023/002,0209,0272,0281,029.cpc.	(USPAT; USOCR)	OR	ON	ON	2022/01/12 10:36 AM
L210	4871	A61H2201/0107,02,0207,0214,10,50,5007,501,5012,5023,5025,5035,5043,5053,5058,5061,5064,5066,5069,5071,5082,5084,5089,5092,5094,5097.cpc.	(USPAT; USOCR)	OR	ON	ON	2022/01/12 10:41 AM
L211	446	A61H2230/20,201,25,255,30,305,50,505.cpc.	(USPAT; USOCR)	OR	ON	ON	2022/01/12 10:45 AM
L212	104	("10201470"|"10276844"|"1545027"|"1657765"|"20080314610"|"20140024982"|"20160367425"|"2931632"|"3452226"|"4815224"|"6599260"|"6723060"|"8646348"|"D09	(US-PGPUB; USPAT)	OR	ON	ON	2022/01/12 11:39 AM

		1454"|"D093943"|"D118980"|"D129045"|"D161484"|"D163324"|"D180923"|"D181742"|"D195145"|"D197142"|"D207505"|"D237454"|"D237455"|"D265985"|"D287814"|"D292368"|"D300132"|"D303373"|"D310005"|"D314320"|"D320379"|"D321338"|"D329166"|"D329291"|"D334012"|"D338802"|"D345077"|"D345727"|"D345888"|"D349029"|"D363352"|"D367712"|"D374934"|"D383366"|"D383435"|"D384639"|"D387728"|"D388175"|"D397991"|"D400161"|"D400758"|"D412485"|"D417648"|"D425014"|"D430774"|"D432077"|"D433300"|"D440136"|"D474445"|"D475595"|"D475679"|"D476746"|"D478385"|"D481279"|"D504111"|"D510317"|"D530270"|"D531733"|"D544102"|"D544436"|"D547264"|"D553562"|"D575224"|"D579868"|"D580353"|"D587977"|"D593204"|"D597482"|"D604235"|"D605586"|"D622660"|"D631315"|"D666303"|"D682195"|"D703480"|"D722016"|"D726495"|"D740222"|"D776612"|"D817869"|"D826418"|"D842489"|"D855822"|"D858432"|"D862382"|"D866790"|"D867279"|"D877351"|"D884205"|"D893738"|"D919560").PN.					
L213	8	(("1657765") or ("1545027") or ("3452226") or ("2931632")).PN.	(US-PGPUB; USPAT; USOCR)	OR	OFF	OFF	2022/01/12 11:51 AM
L214	1	KR-101406275-$.did.	(FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/01/12 12:05 PM
L215	1	CN-2788807-$.did.	(FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/01/12 12:06 PM
L216	3	CN-104352341-$.did.	(FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/01/12 12:06 PM

L217	2	CN-201743890-$.did.	(FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/01/12 12:06 PM
L218	2	CN-201524220-$.did.	(FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/01/12 12:07 PM
L219	2	CN-201847899-$.did.	(FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/01/12 12:07 PM
L220	2	CN-203598194-$.did.	(FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/01/12 12:08 PM
L221	0	CN-200313149-$.did.	(FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/01/12 12:08 PM
L222	1	KR-200313149-$.did.	(FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/01/12 12:09 PM
L223	1	TW-201440753-$.did.	(FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/01/12 12:09 PM
L224	0	JP-1992047440-$.did.	(FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/01/12 12:09 PM
L225	1	"17244278"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/01/12 12:21 PM
L226	306	(US-20200069510-$ or US-20200330321-$ or US-20200323733-$ or US-20200261307-$ or US-20200289365-$ or US-20200281805-$ or US-20200268594-$ or US-20200261310-$ or US-20200261306-$ or US-20190254921-$ or US-20200241683-$ or US-20200000678-$ or US-20190365598-$ or US-20180133101-$ or US-20200253818-$ or US-20190247271-$ or US-20190175434-$ or US-20190083352-$ or US-20190017528-$ or US-20180200141-$ or US-20190015294-$ or US-20150005682-$ or US-20180296433-$ or US-20180263845-$ or US-20180256432-$ or US-20180243158-$).did. or (US-20180008512-$ or US-20170361386-$ or US-20170304145-$ or US-20170304144-$ or US-20170156974-$ or US-20170079865-$ or US-20160367425-$ or US-20170027798-$ or US-20150119771-$ or US-20130261516-$ or US-	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2022/01/12 02:03 PM

		20130133210-$ or US-20120253245-$ or US-20110041864-$ or US-20100331745-$ or US-20100145242-$ or US-20100125228-$ or US-20080177207-$ or US-20070144310-$ or US-20060123941-$ or US-20050252011-$ or US-20050159689-$ or US-20050131461-$ or US-20040039314-$ or US-20030094356-$ or US-20200107988-$ or US-20200085673-$ or US-20200009005-$).did. or (US-20120310120-$ or US-20020068887-$ or US-20200179210-$ or US-20190231630-$ or US-20210022955-$ or US-20200405574-$ or US-20200352821-$ or US-20200352820-$ or US-20190015295-$ or US-20200245931-$ or US-20200219615-$ or US-20200222276-$ or US-20190282442-$ or US-20130331745-$ or US-20150305971-$ or US-20120296244-$ or US-20090112134-$ or US-20200390644-$ or US-20130079689-$ or US-20050131273-$ or US-20130035617-$ or US-20170274242-$ or US-20070129220-$ or US-20190307395-$ or US-20170095398-$ or US-20120078071-$ or US-20200069936-$).did. or (US-20150005750-$ or US-20210059898-$ or US-20150216719-$ or US-20190290531-$ or US-20150305969-$ or US-20100081971-$ or US-20130014968-$ or US-20100162579-$ or US-20170156975-$ or US-20040260211-$ or US-20090326540-$ or US-20200354091-$ or US-20140207032-$ or US-					

		20180353812-$ or US-20210020069-$ or US-20160346163-$ or US-20210244611-$ or US-20140194900-$ or US-20010016697-$ or US-20030009116-$ or US-20030195443-$ or US-20060025710-$ or US-20060192527-$ or US-20070150004-$ or US-20080103419-$ or US-20140180331-$ or US-20150148592-$).did. or (US-20130138023-$ or US-20030144615-$ or US-20130281897-$ or US-20180236572-$ or US-20150375315-$ or US-20180279843-$ or US-20070270727-$ or US-20140310900-$ or US-20100274162-$ or US-20050126018-$ or US-20160206502-$ or US-20090270915-$ or US-20180288160-$ or US-20170049278-$ or US-20210128402-$ or US-20150297393-$ or US-20050209537-$ or US-20020072693-$ or US-20030028134-$ or US-20030149381-$ or US-20080314610-$ or US-20140024982-$).did. or (US-10702448-$ or US-10918565-$ or US-10857064-$ or US-10314762-$ or US-10492984-$ or US-10561574-$ or US-10428850-$ or US-10470970-$ or US-9889066-$ or US-9265689-$ or US-8342187-$ or US-8322456-$ or US-8561717-$ or US-7927259-$ or US-7503923-$ or US-7041072-$ or US-6938706-$ or US-6682496-$ or US-6228103-$ or US-5951501-$ or US-5501657-$ or US-					

		5212887-$ or US- 5088474-$ or US- 5085207-$ or US- 4991298-$ or US- 4513737-$).did. or (US- 4420995-$ or US- 4272996-$ or US- 4158246-$ or US- 3545301-$ or US- 3172675-$ or US- 10292896-$ or US- 7354383-$ or US- 7109613-$ or US- 5676637-$ or US- 10993874-$ or US- 10959911-$ or US- 10940081-$ or US- 3626934-$ or US- 4150668-$ or US- 4173217-$ or US- 4566442-$ or US- 4730605-$ or US- 5417644-$ or US- 5569168-$ or US- 5573500-$ or US- 6228042-$ or US- 6663657-$ or US- 8951216-$ or US- 4549535-$ or US- 7996996-$ or US- 3942251-$ or US- 10357425-$).did. or (US-8945104-$ or US- 9827159-$ or US- 10959908-$ or US- 6723060-$ or US- 10201470-$ or US- 6599260-$ or US- 8646348-$ or US- D329291-$ or US- D363352-$ or US- D367712-$ or US- D374934-$ or US- D388175-$ or US- D476746-$ or US- D478385-$ or US- D531733-$ or US- D544102-$ or US- D593204-$ or US- D666303-$ or US- D826418-$ or US- D842489-$ or US- D855822-$ or US- D866790-$ or US- D877351-$ or US- D884205-$ or US- D091454-$ or US- D093943-$ or US-					

		D118980-$).did. or (US- D129045-$ or US- D161484-$ or US- D163324-$ or US- D180923-$ or US- D181742-$ or US- D195145-$ or US- D197142-$ or US- D207505-$ or US- D237454-$ or US- D237455-$ or US- D287814-$ or US- D292368-$ or US- 4815224-$ or US- D310005-$ or US- D314320-$ or US- D329166-$ or US- D338802-$ or US- D345888-$ or US- D349029-$ or US- D383366-$ or US- D400758-$ or US- D430774-$ or US- D433300-$ or US- D440136-$ or US- D475595-$ or US- D481279-$ or US- D587977-$).did. or (US- D631315-$ or US- D703480-$ or US- D726495-$ or US- 10276844-$ or US- D265985-$ or US- D320379-$ or US- D300132-$ or US- D303373-$ or US- D321338-$ or US- D334012-$ or US- D345077-$ or US- D345727-$ or US- D383435-$ or US- D384639-$ or US- D387728-$ or US- D397991-$ or US- D400161-$ or US- D412485-$ or US- D417648-$ or US- D425014-$ or US- D432077-$ or US- D474445-$ or US- D475679-$ or US- D504111-$ or US- D510317-$ or US- D530270-$ or US- D544436-$).did. or (US- D547264-$ or US- D553562-$ or US- D575224-$ or US-					

		D579868-$ or US-D580353-$ or US-D597482-$ or US-D604235-$ or US-D605586-$ or US-D622660-$ or US-D682195-$ or US-D722016-$ or US-D776612-$ or US-D740222-$ or US-D817869-$ or US-D858432-$ or US-D862382-$ or US-D867279-$ or US-D919560-$ or US-D893738-$).did. or (US-3545301-$ or US-3172675-$ or US-3058651-$ or US-3452226-$ or US-2931632-$ or US-1657765-$ or US-1545027-$).did. or (KR-101406275-$ or CN-2788807-$ or CN-203598194-$ or KR-200313149-$).did. or (WO-2009014727-$).did. or (JP-2005204777-$ or JP-02019157-$ or JP-07051393-$).did. or (WO-2014118596-$ or WO-2015038005-$ or JP-2010534110-$ or WO-2013114084-$ or CN-104352341-$ or CN-201743890-$ or CN-201524220-$ or CN-201847899-$ or TW-201440753-$).did.					
L227	43	L226 and (thermometer thermister thermal$ thermostat$)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/01/12 02:03 PM
L228	2	L226 and ((positiv$ negativ$) near5 (contact))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/01/12 03:54 PM
L229	70	(A61H.cpcl.) and (((positiv$ negativ$) near5 (contact)) with (electric electrical electrically))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/01/12 04:03 PM
L230	7	L226 and (biometric$)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/01/12 04:50 PM
L231	43	L226 and ((force pressure) near5 (sensor	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/01/12 04:54 PM

		sens$4 monitor$))					
L232	45	L226 and ((force pressure) near5 (sensor sens$4 monitor$ meter))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/01/12 04:55 PM
L233	15	L226 and (accelerometer gyroscop$)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/01/12 04:55 PM
L234	601	(A61H.cpcl.) and ((percuss$ reciprocat$) near3 (gun massag$))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/01/12 05:15 PM
L235	36	(A61H.cpcl.) and (((percuss$ reciprocat$) near3 (gun massag$)) same (sensor sensing monitor$))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/01/12 05:16 PM
L236	158	L234 and (sensor sensing monitor$)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/01/12 05:16 PM
L237	86	((("Wersland") near3 ("Jason"))).INV.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/01/13 11:13 AM
L238	2	L237 and (contact$ near3 electric$5).clm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/01/13 11:14 AM
L239	81	((("Nazarian") near3 ("Benjamin"))).INV.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/01/13 11:31 AM
L240	6	L239 not L237	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/01/13 11:31 AM
L241	0	L240 and (contact$ near3 electric$5).clm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/01/13 11:31 AM
L242	65	((("Solana") near3 ("Jaime") near3 ("Sanchez"))).INV.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/01/13 11:33 AM
L243	3	L242 not L237	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/01/13 11:33 AM
L244	0	L243 and (contact$ near3 electric$5).clm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/01/13 11:34 AM
L245	38	((("Merino") near3 ("Eduardo"))).INV.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/01/13 11:34 AM
L246	0	L245 not L237	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/01/13 11:34 AM
L247	18	((("Tang") near3 ("Richard"))).INV.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/01/13 11:34 AM
L248	11	L247 not L237	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/01/13 11:34 AM
L249	0	L248 and (contact$ near3 electric$5).clm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/01/13 11:34 AM
L250	47	((("THERAGUN") near3 ("INC"))).AS,AANM.	(USPAT)	OR	ON	ON	2022/01/13 11:35 AM
L251	0	L250 and (contact$ near3 electric$5).clm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/01/13 11:35 AM
L252	1902	detent with (electric$5 near3 (connection	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/01/13 03:17 PM

		connector conductor))					
L253	10	detent with (electric$5 near3 (connection connector conductor)) with bias$ with ball	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/01/13 03:24 PM
L254	161	(electric$5 near3 (connection connector conductor)) with bias$ with ball	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/01/13 03:30 PM
L255	1251	A61H1/00,006,008.cpc.	(USPAT; USOCR)	OR	ON	ON	2022/05/05 03:55 PM
L256	3931	A61H23/00,004,006,02,0218,0245,0254,0263,04,06.cpc.	(USPAT; USOCR)	OR	ON	ON	2022/05/05 04:01 PM
L257	0	A61H2023/002,0209,0272,0281,029cpc.	(USPAT; USOCR)	OR	ON	ON	2022/05/05 04:04 PM
L258	301	A61H2023/002,0209,0272,0281,029.cpc.	(USPAT; USOCR)	OR	ON	ON	2022/05/05 04:04 PM
L259	5094	A61H2201/0107,02,0207,0214,10,50,5007,501,5012,5023,5025,5035,5043,5053,5058,5061,5064,5066,5069,5071,5082,5084,5089,5092,5094,5097.cpc.	(USPAT; USOCR)	OR	ON	ON	2022/05/05 04:06 PM
L260	467	A61H2230/20,201,25,255,30,305,50,505.cpc.	(USPAT; USOCR)	OR	ON	ON	2022/05/05 04:08 PM
L261	312	((US-20200323733-A1 OR US-20200281805-A1 OR US-20200268594-A1 OR US-20200261306-A1 OR US-20190254921-A1 OR US-20200241683-A1 OR US-20200000678-A1 OR US-20190365598-A1 OR US-20180133101-A1 OR US-20200253818-A1 OR US-20190247271-A1 OR US-20190175434-A1 OR US-20190083352-A1 OR US-20150005682-A1 OR US-20180296433-A1 OR US-20180256432-A1 OR US-20180243158-A1 OR US-20180008512-A1 OR US-20170361386-A1 OR US-20170304145-A1 OR US-20170304144-A1 OR	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/05/06 01:44 PM

		US-20170156974-A1 OR US-20170079865-A1 OR US-20150119771-A1 OR US-20130261516-A1 OR US-20130133210-A1 OR US-20120253245-A1 OR US-20110041864-A1 OR US-20100331745-A1 OR US-20100145242-A1 OR US-20100125228-A1 OR US-20080177207-A1 OR US-20070144310-A1 OR US-20060123941-A1 OR US-20050252011-A1 OR US-20050159689-A1 OR US-20050131461-A1 OR US-20040039314-A1 OR US-20030094356-A1 OR US-20200107988-A1 OR US-20200085673-A1 OR US-20200009005-A1 OR US-20120310120-A1 OR US-20020068887-A1 OR US-20200179210-A1 OR US-20190231630-A1 OR US-20190015295-A1 OR US-20200245931-A1 OR US-20200219615-A1 OR US-20200222276-A1 OR US-20190282442-A1 OR US-20130331745-A1 OR US-20150305971-A1 OR US-20120296244-A1 OR US-20090112134-A1 OR US-20200390644-A1 OR US-20130079689-A1 OR US-20050131273-A1 OR US-20130035617-A1 OR US-20170274242-A1 OR US-20070129220-A1 OR US-20190307395-A1 OR US-20170095398-A1 OR US-20120078071-A1 OR US-20200069936-					

		A1 OR US-20150216719-A1 OR US-20190290531-A1 OR US-20150305969-A1 OR US-20100081971-A1 OR US-20130014968-A1 OR US-20100162579-A1 OR US-20170156975-A1 OR US-20090326540-A1 OR US-20200354091-A1 OR US-20140207032-A1 OR US-20180353812-A1 OR US-20210020069-A1 OR US-20160346163-A1 OR US-20140194900-A1 OR US-20070150004-A1 OR US-20130281897-A1 OR US-20180288160-A1 OR US-20170049278-A1 OR US-20210128402-A1 OR US-20150297393-A1 OR US-20050209537-A1 OR US-20020072693-A1 OR US-20030028134-A1 OR US-20030149381-A1 OR US-20190262607-A1 OR US-20130046212-A1 OR US-20210244611-A1 OR US-20150005750-A1 OR US-20040260211-A1 OR US-20160206502-A1 OR US-20090270915-A1 OR US-20200069510-A1 OR US-20200330321-A1 OR US-20200261307-A1 OR US-20200289365-A1 OR US-20200261310-A1 OR US-20190017528-A1 OR US-20180200141-A1 OR US-20190015294-A1 OR US-20180263845-A1 OR US-20160367425-A1 OR US-20170027798-A1 OR US-20210022955-A1 OR					

		US-20200405574-A1 OR US-20200352821-A1 OR US-20200352820-A1 OR US-20210059898-A1 OR US-20010016697-A1 OR US-20030009116-A1 OR US-20030195443-A1 OR US-20060025710-A1 OR US-20060192527-A1 OR US-20080103419-A1 OR US-20140180331-A1 OR US-20150148592-A1 OR US-20130138023-A1 OR US-20030144615-A1 OR US-20180236572-A1 OR US-20150375315-A1 OR US-20180279843-A1 OR US-20070270727-A1 OR US-20140310900-A1 OR US-20100274162-A1 OR US-20050126018-A1 OR US-20080314610-A1 OR US-20140024982-A1).did. AND PGPB.dbnm.) OR ((US-10314762-B1 OR US-10492984-B2 OR US-10561574-B1 OR US-9889066-B2 OR US-9265689-B2 OR US-8342187-B2 OR US-8322456-B2 OR US-8561717-B2 OR US-7927259-B1 OR US-7503923-B2 OR US-7041072-B2 OR US-6938706-B2 OR US-6682496-B1 OR US-6228103-B1 OR US-5951501-A OR US-5501657-A OR US-5212887-A OR US-5088474-A OR US-5085207-A OR US-4991298-A OR US-4513737-A OR US-4420995-A OR US-4272996-A OR US-4158246-A OR US-3545301-A OR US-3172675-A OR US-					

		10292896-B2 OR US- 7354383-B2 OR US- 7109613-B2 OR US- 5676637-A OR US- 10993874-B1 OR US- 9827159-B2 OR US- 10959908-B2 OR US- 4533796-A OR US- 11219739-B2 OR US- 11253423-B1 OR US- 10682281-B2 OR US- 10702448-B2 OR US- 10918565-B2 OR US- 10857064-B2 OR US- 10428850-B2 OR US- 10470970-B2 OR US- 10959911-B2 OR US- 10940081-B2 OR US- 3626934-A OR US- 4150668-A OR US- 4173217-A OR US- 4566442-A OR US- 4730605-A OR US- 5417644-A OR US- 5569168-A OR US- 5573500-A OR US- 6228042-B1 OR US- 6663657-B1 OR US- 8951216-B2 OR US- 4549535-A OR US- 7996996-B2 OR US- 3942251-A OR US- 10357425-B2 OR US- 8945104-B2 OR US- 6723060-B2 OR US- 10201470-B2 OR US- 6599260-B2 OR US- 8646348-B2 OR US- D329291-S OR US- D363352-S OR US- D367712-S OR US- D374934-S OR US- D388175-S OR US- D476746-S OR US- D478385-S OR US- D531733-S OR US- D544102-S OR US- D593204-S OR US- D666303-S OR US- D826418-S OR US- D842489-S OR US- D855822-S OR US- D866790-S OR US- D877351-S OR US- D884205-S OR US- D091454-S OR US- D093943-S OR US- D118980-S OR US-					

		D129045-S OR US- D161484-S OR US- D163324-S OR US- D180923-S OR US- D181742-S OR US- D195145-S OR US- D197142-S OR US- D207505-S OR US- D237454-S OR US- D237455-S OR US- D287814-S OR US- D292368-S OR US- 4815224-A OR US- D310005-S OR US- D314320-S OR US- D329166-S OR US- D338802-S OR US- D345888-S OR US- D349029-S OR US- D383366-S OR US- D400758-S OR US- D430774-S OR US- D433300-S OR US- D440136-S OR US- D475595-S OR US- D481279-S OR US- D587977-S OR US- D631315-S OR US- D703480-S OR US- D726495-S OR US- 10276844-B2 OR US- D265985-S OR US- D320379-S OR US- D300132-S OR US- D303373-S OR US- D321338-S OR US- D334012-S OR US- D345077-S OR US- D345727-S OR US- D383435-S OR US- D384639-S OR US- D387728-S OR US- D397991-S OR US- D400161-S OR US- D412485-S OR US- D417648-S OR US- D425014-S OR US- D432077-S OR US- D474445-S OR US- D475679-S OR US- D504111-S OR US- D510317-S OR US- D530270-S OR US- D544436-S OR US- D547264-S OR US- D553562-S OR US- D575224-S OR US- D579868-S OR US-				

		D580353-S OR US-D597482-S OR US-D604235-S OR US-D605586-S OR US-D622660-S OR US-D682195-S OR US-D722016-S OR US-D776612-S OR US-D740222-S OR US-D817869-S OR US-D858432-S OR US-D862382-S OR US-D867279-S OR US-D919560-S OR US-D893738-S).did. AND USPT.dbnm.) OR ((US-3545301-A OR US-3172675-A OR US-3058651-A OR US-3452226-A OR US-2931632-A OR US-1657765-A OR US-1545027-A).did. AND USOC.dbnm.) OR ((WO-2014118596-A1 OR WO-2015038005-A2 OR JP-2010534110-W OR WO-2013114084-A1 OR CN-104352341-A OR CN-201743890-U OR CN-201524220-U OR CN-201847899-U OR TW-201440753-A).did. AND DWPI.dbnm.) OR ((WO-2009014727-A1).did. AND EPAB.dbnm.) OR ((JP-2005204777-A OR JP-02019157-A OR JP-07051393-A).did. AND JPAB.dbnm.) OR ((KR-101406275-B1 OR CN-2788807-Y OR CN-203598194-U OR KR-200313149-Y1).did. AND FPRS.dbnm.)				
L262	15	L261 AND (gyroscope accelerometer)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO,	OR	ON	ON	2022/05/06 01:44 PM

			NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L263	53	((("THERAGUN") near3 ("INC"))).AS,AANM.	(USPAT)	OR	ON	ON	2022/05/06 03:03 PM
L264	6	L263 AND (biometric thermal$ temperature).clm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/05/06 03:03 PM
L265	123	((("WERSLAND") near3 ("Jason")) OR (("NAZARIAN") near3 ("Benjamin")) OR (("SOLANA") near3 ("Jaime")) OR (("MERINO") near3 ("Eduardo")) OR (("TANG") near3 ("Richard"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2022/05/06 03:10 PM
L266	6	L265 AND (biometric thermal$ temperature).clm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/05/06 03:10 PM
L267	1288	A61H1/00,006,008.cpc.	(USPAT; USOCR)	OR	ON	ON	2022/09/15 11:11 AM
L268	4004	A61H23/00,004,006,02,0218,0245,0254,0263,04,06.cpc.	(USPAT; USOCR)	OR	ON	ON	2022/09/15 11:12 AM
L269	303	A61H2023/002,0209,0272,0281,029.cpc.	(USPAT; USOCR)	OR	ON	ON	2022/09/15 11:13 AM
L270	5246	A61H2201/0107,02,0207,0214,10,50,5007,501,5012,5023,2025,5035,5043,5053,5058,5061,5064,5066,5069,5071,5082,5084,5089,5092,5094,5097.cpc.	(USPAT; USOCR)	OR	ON	ON	2022/09/15 11:14 AM
L271	482	A61H2230/20,201,25,255,30,305,50,505.cpc.	(USPAT; USOCR)	OR	ON	ON	2022/09/15 11:16 AM
L272	142	((("WERSLAND") near3 ("Jason")) OR (("NAZARIAN") near3 ("Benjamin")) OR (("SOLANA") near3 ("Jaime")) OR (("MERINO") near3 ("Eduardo")) OR (("TANG") near3 ("Richard"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2022/09/15 01:49 PM
L273	17	L272 AND (sensor biometric thermal$ temperature).clm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/15 01:50 PM
L274	13	((("THERABODY")	(USPAT)	OR	ON	ON	2022/09/20

		near3 ("INC"))).AS,AANM.					04:11 PM
L275	11	L13 AND (sensor biometric thermal$ temperature).clm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/20 04:11 PM
L276	0	"18162499"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/06/05 11:14 AM
L277	641	A61H23/006.cpc.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/06/20 12:06 PM
L278	554	L277 AND @ad<="20210607"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/06/20 12:22 PM
L279	180	("0657765" OR "10201470" OR "10276844" OR "10314762" OR "10357425" OR "10959908" OR "1545027" OR "20010016697" OR "20030009116" OR "20030094356" OR "20030144615" OR "20030195443" OR "20050126018" OR "20060025710" OR "20060123941" OR "20060192527" OR "20070129220" OR "20070144310" OR "20070150004" OR "20070270727" OR "20080103419" OR "20080314610" OR "20090112134" OR "20090326540" OR "20100274162" OR "20120078071" OR "20120253245" OR "20130046212" OR "20130133210" OR "20130138023" OR "20130261516" OR "20130281897" OR "20140024982" OR "20140180331" OR "20140194900" OR "20140207032" OR "20140310900" OR "20150005682" OR "20150119771" OR "20150148592" OR "20150216719" OR "20150305969" OR "20150375315" OR "20160346163" OR "20160367425" OR	(US-PGPUB; USPAT)	OR	ON	ON	2023/06/20 05:18 PM

		"20170049278" OR "20170156974" OR "20170304145" OR "20180008512" OR "20180200141" OR "20180236572" OR "20180243158" OR "20180279843" OR "20180296433" OR "20200179210" OR "20200261306" OR "20200268594" OR "20200390644" OR "20210128402" OR "2931632" OR "3172675" OR "3452226" OR "3545301" OR "3626934" OR "3942251" OR "4150668" OR "4173217" OR "4533796" OR "4549535" OR "4566442" OR "4730605" OR "4815224" OR "5085207" OR "5212887" OR "5417644" OR "5569168" OR "5573500" OR "5951501" OR "6228042" OR "6599260" OR "6663657" OR "6682496" OR "6723050" OR "7927259" OR "7996996" OR "8342187" OR "8646348" OR "8945104" OR "8951216" OR "D091454" OR "D093943" OR "D118980" OR "D129045" OR "D161484" OR "D163324" OR "D180923" OR "D181742" OR "D195145" OR "D197142" OR "D207505" OR "D237454" OR "D237455" OR "D265985" OR					

		"D287814" OR "D292368" OR "D300132" OR "D303373" OR "D310005" OR "D314320" OR "D320379" OR "D321338" OR "D329166" OR "D329291" OR "D334012" OR "D338802" OR "D345077" OR "D345727" OR "D345888" OR "D349029" OR "D363352" OR "D367712" OR "D374934" OR "D383366" OR "D383435" OR "D384639" OR "D387728" OR "D388175" OR "D397991" OR "D400161" OR "D400758" OR "D412485" OR "D417648" OR "D425014" OR "D430774" OR "D432077" OR "D433300" OR "D440136" OR "D474445" OR "D475595" OR "D475679" OR "D476746" OR "D478385" OR "D481279" OR "D504111" OR "D510317" OR "D530270" OR "D531733" OR "D544102" OR "D544436" OR "D547264" OR "D553562" OR "D575224" OR "D579868" OR "D580353" OR "D587977" OR "D593204" OR "D597482" OR "D604235" OR "D605586" OR "D622660" OR "D631315" OR					

		"D666303" OR "D682195" OR "D703480" OR "D722016" OR "D726495" OR "D740222" OR "D776612" OR "D817869" OR "D826418" OR "D842489" OR "D855822" OR "D858432" OR "D862382" OR "D866790" OR "D867279" OR "D877351" OR "D884205" OR "D893738" OR "D919560").pn.					
L280	0	("657765").pn.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/06/20 05:23 PM
L281	29	"657765"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/06/20 05:23 PM
L282	2	CN-2788807-$.did.	(FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/06/20 06:09 PM
L283	3	CN-201524220-$.did.	(FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/06/20 06:16 PM
L284	3	CN-201743890-$.did.	(FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD,	OR	ON	ON	2023/06/20 06:16 PM

			DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L285	3	CN-201847899-$.did.	(FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/06/20 06:16 PM
L286	3	CN-203598194-$.did.	(FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/06/20 06:17 PM
L287	5	CN-104352341-$.did.	(FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/06/20 06:17 PM

L288	0	JP-003077837-$.did.	(FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/06/20 06:18 PM
L289	4	JP-3077837-$.did.	(FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/06/20 06:18 PM
L290	0	JP-0219157-$.did.	(FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/06/20 06:18 PM
L291	0	JP-H219157-$.did.	(FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA,	OR	ON	ON	2023/06/20 06:18 PM

			VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L292	5	JP-H0219157-$.did.	(FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/06/20 06:18 PM
L293	7	JP-H0447440-$.did.	(FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/06/20 06:19 PM
L294	5	JP-H0751393-$.did.	(FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/06/20 06:20 PM
L295	3	JP-2005204777-$.did.	(FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO,	OR	ON	ON	2023/06/20 06:21 PM

			MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L296	2	JP-2010534110-$.did.	(FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/06/20 06:21 PM
L297	2	KR-200313149-$.did.	(FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/06/20 06:21 PM
L298	2	KR-101123926-$.did.	(FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/06/20 06:22 PM
L299	2	KR-101406275-$.did.	(FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP,	OR	ON	ON	2023/06/20 06:22 PM

			ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L300	2	TW-201440753-$.did.	(FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/06/20 06:23 PM
L301	4	WO-2009014727-$.did.	(FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/06/20 06:23 PM
L302	3	WO-2013114084-$.did.	(FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/06/20 06:23 PM

L303	3	WO-2014118596-$.did.	(FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/06/20 06:24 PM
L304	4	WO-2015038005-$.did.	(FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/06/20 06:24 PM
L305	20048	A61H1/00,006,008.cpc. OR A61H23/00,004,006,02,0218,0245,0254,0263,04,06.cpc. OR A61H2023/002,0209,0272,0281,029.cpc. OR A61H2201/0107,02,0207,0214,10,50,5007,501,5012,5023,5025,5035,5058,5061,5064,5066,5069,5071,5082,5084,5089,5092,5094,5097.cpc. OR A61H2230/20,201,25,255,30,305,50,505.cpc.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/06/21 09:34 AM
L306	1267	L305 AND ((percuss$ reciprocat$) SAME (motor))	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/06/21 09:35 AM
L307	1077	L306 AND @ad<="20210607"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/06/21 09:35 AM
L308	2631	B23D51/16.cpc. OR B23D49/162,165,00,007,008,10,16,167.cpc.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/06/21 12:31 PM
L309	1216	L308 AND (motor)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/06/21 12:31 PM

L310	899	L309 AND @ad<="20210607"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/06/21 12:31 PM
L311	2547	B26D7/2621,2614.cpc. OR B26D5/14.cpc.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/06/23 12:01 PM
L312	1869	L311 AND @ad<="20210607"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/06/23 12:01 PM
L313	938	L311 AND (motor)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/06/23 12:01 PM
L314	833	L313 AND @ad<="20210607"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/06/23 12:01 PM
L315	543	B27B11/06.cpc. OR B27B19/00,002,006,09,02.cpc.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/06/23 01:02 PM
L316	435	L315 AND @ad<="20210607"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/06/23 01:02 PM
L317	1328	A61B17/148,142,14,144.cpc.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/06/23 01:08 PM
L318	720	L317 AND (motor)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/06/23 01:08 PM
L319	647	L318 AND @ad<="20210607"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/06/23 01:08 PM
L320	367	((US-20200323733-A1 OR US-20200281805-A1 OR US-20200268594-A1 OR US-20200261306-A1 OR US-20190254921-A1 OR US-20200241683-A1 OR US-20200000678-A1 OR US-20190365598-A1 OR US-20180133101-A1 OR US-20200253818-A1 OR US-20190247271-A1 OR US-20190175434-A1 OR US-20190083352-A1 OR US-20150005682-A1 OR US-20180296433-A1 OR US-20180256432-A1 OR US-20180243158-A1 OR US-20180008512-A1 OR US-20170361386-A1 OR US-20170304145-A1 OR US-20170304144-A1 OR US-20170156974-A1 OR US-20170079865-A1 OR US-20150119771-A1 OR US-20130261516-A1	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/06/23 05:37 PM

		OR US-20130133210-A1 OR US-20120253245-A1 OR US-20110041864-A1 OR US-20100331745-A1 OR US-20100145242-A1 OR US-20100125228-A1 OR US-20080177207-A1 OR US-20070144310-A1 OR US-20060123941-A1 OR US-20050252011-A1 OR US-20050159689-A1 OR US-20050131461-A1 OR US-20040039314-A1 OR US-20030094356-A1 OR US-20200107988-A1 OR US-20200085673-A1 OR US-20200009005-A1 OR US-20120310120-A1 OR US-20020068887-A1 OR US-20200179210-A1 OR US-20190231630-A1 OR US-20190015295-A1 OR US-20200245931-A1 OR US-20200219615-A1 OR US-20200222276-A1 OR US-20190282442-A1 OR US-20130331745-A1 OR US-20150305971-A1 OR US-20120296244-A1 OR US-20090112134-A1 OR US-20200390644-A1 OR US-20130079689-A1 OR US-20050131273-A1 OR US-20130035617-A1 OR US-20170274242-A1 OR US-20070129220-A1 OR US-20190307395-A1 OR US-20170095398-A1 OR US-20120078071-A1 OR US-20200069936-A1 OR US-20150216719-A1 OR US-20190290531-A1 OR US-20150305969-A1 OR US-					

		20100081971-A1 OR US-20130014968-A1 OR US-20100162579-A1 OR US-20170156975-A1 OR US-20090326540-A1 OR US-20200354091-A1 OR US-20140207032-A1 OR US-20180353812-A1 OR US-20210020069-A1 OR US-20160346163-A1 OR US-20140194900-A1 OR US-20070150004-A1 OR US-20130281897-A1 OR US-20180288160-A1 OR US-20170049278-A1 OR US-20210128402-A1 OR US-20150297393-A1 OR US-20050209537-A1 OR US-20020072693-A1 OR US-20030028134-A1 OR US-20030149381-A1 OR US-20190262607-A1 OR US-20130046212-A1 OR US-20210244611-A1 OR US-20220331199-A1 OR US-20220211572-A1 OR US-20220151865-A1 OR US-20220096319-A1 OR US-20220031554-A1 OR US-20210244609-A1 OR US-20210196562-A1 OR US-20210113427-A1 OR US-20210022951-A1 OR US-20200289364-A1 OR US-20200276079-A1 OR US-20200085675-A1 OR US-20190254922-A1 OR US-20210077340-A1 OR US-20170225245-A1 OR US-20170043466-A1 OR US-20060288594-A1 OR US-20150005750-A1 OR US-20040260211-A1 OR US-20090270915-A1					

		OR US-20160206502-A1 OR US-20210038472-A1 OR US-20200069510-A1 OR US-20200330321-A1 OR US-20200261307-A1 OR US-20200289365-A1 OR US-20200261310-A1 OR US-20190017528-A1 OR US-20180200141-A1 OR US-20190015294-A1 OR US-20180263845-A1 OR US-20160367425-A1 OR US-20170027798-A1 OR US-20210022955-A1 OR US-20200405574-A1 OR US-20200352821-A1 OR US-20200352820-A1 OR US-20210059898-A1 OR US-20010016697-A1 OR US-20030009116-A1 OR US-20030195443-A1 OR US-20060025710-A1 OR US-20060192527-A1 OR US-20080103419-A1 OR US-20140180331-A1 OR US-20150148592-A1 OR US-20130138023-A1 OR US-20030144615-A1 OR US-20180236572-A1 OR US-20150375315-A1 OR US-20180279843-A1 OR US-20070270727-A1 OR US-20140310900-A1 OR US-20100274162-A1 OR US-20050126018-A1 OR US-20080314610-A1 OR US-20140024982-A1 OR US-20210244610-A1).did. AND PGPB.dbnm.) OR ((US-10314762-B1 OR US-10492984-B2 OR US-10561574-B1 OR US-9889066-B2 OR US-9265689-B2 OR US-8342187-B2 OR					

		US-8322456-B2 OR US-8561717-B2 OR US-7927259-B1 OR US-7503923-B2 OR US-7041072-B2 OR US-6938706-B2 OR US-6682496-B1 OR US-6228103-B1 OR US-5951501-A OR US-5501657-A OR US-5212887-A OR US-5088474-A OR US-5085207-A OR US-4991298-A OR US-4513737-A OR US-4420995-A OR US-4272996-A OR US-4158246-A OR US-3545301-A OR US-3172675-A OR US-10292896-B2 OR US-7354383-B2 OR US-7109613-B2 OR US-5676637-A OR US-10993874-B1 OR US-9827159-B2 OR US-10959908-B2 OR US-4533796-A OR US-11219739-B2 OR US-11253423-B1 OR US-10682281-B2 OR US-11478400-B1 OR US-11497676-B2 OR US-10806660-B1 OR US-11090222-B2 OR US-11497674-B2 OR US-10912708-B2 OR US-4827914-A OR US-5644846-A OR US-5134777-A OR US-4512078-A OR US-10702448-B2 OR US-10918565-B2 OR US-10857064-B2 OR US-10428850-B2 OR US-10470970-B2 OR US-10959911-B2 OR US-10940081-B2 OR US-3626934-A OR US-4150668-A OR US-4173217-A OR US-4566442-A OR US-4730605-A OR US-5417644-A OR US-5569168-A OR US-5573500-A OR US-6228042-B1 OR US-6663657-B1 OR US-					

		8951216-B2 OR US- 4549535-A OR US- 7996996-B2 OR US- 3942251-A OR US- 10357425-B2 OR US- 8945104-B2 OR US- 6723060-B2 OR US- 10201470-B2 OR US- 6599260-B2 OR US- 8646348-B2 OR US- D329291-S OR US- D363352-S OR US- D367712-S OR US- D374934-S OR US- D388175-S OR US- D476746-S OR US- D478385-S OR US- D531733-S OR US- D544102-S OR US- D593204-S OR US- D666303-S OR US- D826418-S OR US- D842489-S OR US- D855822-S OR US- D866790-S OR US- D877351-S OR US- D884205-S OR US- D091454-S OR US- D093943-S OR US- D118980-S OR US- D129045-S OR US- D161484-S OR US- D163324-S OR US- D180923-S OR US- D181742-S OR US- D195145-S OR US- D197142-S OR US- D207505-S OR US- D237454-S OR US- D237455-S OR US- D287814-S OR US- D292368-S OR US- 4815224-A OR US- D310005-S OR US- D314320-S OR US- D329166-S OR US- D338802-S OR US- D345888-S OR US- D349029-S OR US- D383366-S OR US- D400758-S OR US- D430774-S OR US- D433300-S OR US- D440136-S OR US- D475595-S OR US- D481279-S OR US- D587977-S OR US- D631315-S OR US-				

		D703480-S OR US- D726495-S OR US- 10276844-B2 OR US- D265985-S OR US- D320379-S OR US- D300132-S OR US- D303373-S OR US- D321338-S OR US- D334012-S OR US- D345077-S OR US- D345727-S OR US- D383435-S OR US- D384639-S OR US- D387728-S OR US- D397991-S OR US- D400161-S OR US- D412485-S OR US- D417648-S OR US- D425014-S OR US- D432077-S OR US- D474445-S OR US- D475679-S OR US- D504111-S OR US- D510317-S OR US- D530270-S OR US- D544436-S OR US- D547264-S OR US- D553562-S OR US- D575224-S OR US- D579868-S OR US- D580353-S OR US- D597482-S OR US- D604235-S OR US- D605586-S OR US- D622660-S OR US- D682195-S OR US- D722016-S OR US- D776612-S OR US- D740222-S OR US- D817869-S OR US- D858432-S OR US- D862382-S OR US- D867279-S OR US- D919560-S OR US- D893738-S OR US- 0657765-A OR US- 2931632-A OR US- 3452226-A OR US- 6723050-B2).did. AND USPT.dbnm.) OR ((US- 3545301-A OR US- 3172675-A OR US- 3058651-A OR US- 0732356-A OR US- 0742534-A OR US- 3452226-A OR US- 2931632-A OR US- 1657765-A OR US-					

		1545027-A).did. AND USOC.dbnm.) OR ((WO-2014118596-A1 OR WO-2015038005-A2 OR JP-2010534110-W OR WO-2013114084-A1 OR CN-104352341-A OR CN-201743890-U OR CN-201524220-U OR CN-201847899-U OR TW-201440753-A).did. AND DWPI.dbnm.) OR ((WO-2009014727-A1).did. AND EPAB.dbnm.) OR ((JP-2005204777-A OR JP-02019157-A OR JP-07051393-A).did. AND JPAB.dbnm.) OR ((KR-101406275-B1 OR CN-2788807-Y OR CN-203598194-U OR KR-200313149-Y1 OR JP-3077837-U).did. AND FPRS.dbnm.) OR ((CN-2788807-Y OR CN-201524220-U OR CN-201743890-U OR CN-201847899-U OR CN-203598194-U OR CN-104352341-A OR JP-H0219157-A OR JP-H0447440-U OR JP-H0751393-A OR JP-2005204777-A OR JP-2010534110-A OR KR-200313149-Y1 OR KR-101123926-B1 OR KR-101406275-B1 OR TW-201440753-A OR WO-2009014727-A1 OR WO-2013114084-A1 OR WO-2014118596-A1 OR WO-2015038005-A2).did. AND FTDB.dbnm.)					
L321	88	L320 AND (LCD display screen)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/06/23 05:37 PM
L322	198	((("WERSLAND") near3 ("Jason")) OR (("NAZARIAN") near3 ("Benjamin")) OR (("SOLANA") near3 ("Jaime")) OR (("MERINO") near3 ("Eduardo")) OR	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2023/06/23 05:49 PM

		(("TANG") near3 ("Richard"))).INV.					
L323	21	L322 AND (heat$).clm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/06/23 05:49 PM
L324	103	L320 AND (heat$ hot cool$ cold$)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/06/23 05:54 PM
L325	8	L322 AND (electric$ near3 contact).clm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/06/23 06:31 PM
L326	14	L322 AND (data).clm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/06/23 07:00 PM
L327	14	L322 AND (cold cool$).clm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/06/23 07:03 PM
L328	57	L322 AND (axis axes).clm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/06/23 07:07 PM
L329	58	((("THERABODY") near3 ("INC"))).AS,AANM.	(USPAT)	OR	ON	ON	2023/06/23 07:15 PM
L330	3	L329 NOT L322	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/06/23 07:15 PM
L331	1	"18162499"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/10/11 10:21 AM
L332	5431	A61H1/00,006,008.cpc. OR A61H23/00,004,006,02,0218,0245,0254,0263,04,06.cpc. OR A61H2023/002,0209,0272,0281,029.cpc.	(USPAT; USOCR)	OR	ON	ON	2023/10/11 10:53 AM
L333	5740	A61H2201/0107,02,0207,0214,10,50,5007,501,5012,5023,5025,5035,5058,5061,5064,5066,5069,5071,5082,5084,5089,5092,5094,5097.cpc. OR A61H2230/20,201,25,255,30,305,50,505.cpc.	(USPAT; USOCR)	OR	ON	ON	2023/10/11 10:58 AM
L334	2140	B23D51/16.cpc. OR B23D49/162,165,00,007,008,10,16,167.cpc.	(USPAT; USOCR)	OR	ON	ON	2023/10/11 11:00 AM
L335	1677	B26D7/2621,2614.cpc. OR B26D5/14.cpc.	(USPAT; USOCR)	OR	ON	ON	2023/10/11 11:09 AM
L336	331	B27B11/06.cpc. OR B27B19/00,002,006,09,02.cpc.	(USPAT; USOCR)	OR	ON	ON	2023/10/11 11:11 AM
L337	625	A61B17/148,142,14,144.cpc.	(USPAT; USOCR)	OR	ON	ON	2023/10/11 11:15 AM
L338	250	("0675772" OR "10034813" OR "10252051" OR "10335345" OR "10557490" OR	(US-PGPUB; USPAT)	OR	ON	ON	2023/10/11 11:39 AM

		"10702448" OR "10758027" OR "10857064" OR "10918565" OR "10945915" OR "10959911" OR "10993874" OR "11160723" OR "1594636" OR "1657765" OR "1784301" OR "20010027280" OR "20020082532" OR "20020115947" OR "20020177795" OR "20020183668" OR "20020188233" OR "20030014079" OR "20030028134" OR "20040176710" OR "20050075591" OR "20050109137" OR "20050113870" OR "20050131461" OR "20050203445" OR "20050235988" OR "20050252011" OR "20060047315" OR "20060074455" OR "20060116614" OR "20060118841" OR "20060211961" OR "20060272664" OR "20070173886" OR "20070179414" OR "20070282228" OR "20080077061" OR "20080097260" OR "20080146980" OR "20080167588" OR "20080169715" OR "20080177207" OR "20080185888" OR "20080200849" OR "20080243041" OR "20080306417" OR "20080312568" OR "20090188119" OR "20090270777" OR "20090309313" OR "20100100119" OR "20100137907" OR "20100145242" OR "20100160841" OR "20100162579" OR "20100176919" OR "20100210194" OR "20100286569" OR				

		"20100298863" OR "20110037431" OR "20110055720" OR "20110118637" OR "20110201979" OR "20110224580" OR "20110314677" OR "20120059294" OR "20120065556" OR "20120124758" OR "20120161706" OR "20120197357" OR "20120232445" OR "20120238922" OR "20130014968" OR "20130030506" OR "20130052871" OR "20130085421" OR "20130116503" OR "20130218058" OR "20130237751" OR "20130241470" OR "20130261517" OR "20130271067" OR "20130304642" OR "20140031866" OR "20140097793" OR "20140101872" OR "20140163443" OR "20140190023" OR "20140200495" OR "20140209594" OR "20140221887" OR "20140288473" OR "20140305747" OR "20140316313" OR "20150042254" OR "20150082562" OR "20150098184" OR "20150133833" OR "20150145297" OR "20150157528" OR "20150176674" OR "20150257964" OR "20150328081" OR "20160000642" OR "20160017905" OR "20160030279" OR "20160045661" OR "20160112841" OR "20160113840" OR "20160113841" OR "20160127129" OR "20160129186" OR "20160136037" OR "20160136040" OR "20160166464" OR "20160170996" OR					

		"20160192814" OR "20160206502" OR "20160243359" OR "20160263732" OR "20160269486" OR "20160310353" OR "20160311091" OR "20160324717" OR "20160338901" OR "20170027798" OR "20170042754" OR "20170069191" OR "20170119623" OR "20170128320" OR "20170156975" OR "20170189227" OR "20170216136" OR "20170233063" OR "20170246074" OR "20170304144" OR "20170312161" OR "20170360641" OR "20180050440" OR "20180078449" OR "20180133101" OR "20180140100" OR "20180140502" OR "20180141188" OR "20180154141" OR "20180185234" OR "20180263845" OR "20180288160" OR "20180315499" OR "20180315504" OR "20190000709" OR "20190038229" OR "20190066833" OR "20190110945" OR "20190175434" OR "20190209424" OR "20190216677" OR "20190232478" OR "20190254921" OR "20190254922" OR "20190314239" OR "20190337140" OR "20190350793" OR "20190381271" OR "20200000237" OR "20200009010" OR "20200016027" OR "20200035237" OR "20200069510" OR "20200085675" OR "20200090175" OR "20200179215" OR "20200230012" OR "20200241683" OR					

		"20200261307" OR "20200294423" OR "20200352821" OR "20200397651" OR "20200405570" OR "20210000683" OR "20210022955" OR "20210059898" OR "20210085555" OR "20210330539" OR "20220000781" OR "20220007810" OR "20220054350" OR "20220087433" OR "20220241135" OR "2179594" OR "2391671" OR "2475861" OR "2987334" OR "3053559" OR "3077837" OR "3699952" OR "3705579" OR "3968789" OR "4031763" OR "4046142" OR "4088128" OR "4158246" OR "4203431" OR "4506159" OR "4513737" OR "4565189" OR "4596406" OR "4691693" OR "4692958" OR "4841955" OR "4989613" OR "4991298" OR "5014681" OR "5088474" OR "5092317" OR "5103809" OR "5123139" OR "5201149" OR "5207697" OR "5501657" OR "5656017" OR "5656018" OR "5860669" OR "5910197" OR "5925002" OR "5935089" OR "6003052" OR "6006631" OR "6146383" OR "6165145" OR "6227959" OR "6228120" OR					

		"6245031" OR "6290660" OR "6401289" OR "6406445" OR "6432072" OR "6537236" OR "6539328" OR "6558338" OR "6568089" OR "6599250" OR "6715781" OR "6723060" OR "6758826").pn.					
L339	40	("6805700" OR "6823762" OR "6846295" OR "6994575" OR "7041072" OR "7128721" OR "7169169" OR "7223250" OR "7384405" OR "7431706" OR "7470081" OR "7497639" OR "7503923" OR "7549966" OR "7731672" OR "7740249" OR "7857729" OR "7877880" OR "7927294" OR "7963717" OR "8313450" OR "8435194" OR "8479616" OR "8622943" OR "8695461" OR "8770882" OR "8777881" OR "8864143" OR "9017273" OR "9107486" OR "9132058" OR "9138257" OR "9272837" OR "9364385" OR "9416805" OR "9597256" OR "9744600" OR "9872813" OR "9889066" OR "9981366" OR "D0143678" OR "D0230522" OR "D0329292" OR "D0331467" OR	(US-PGPUB; USPAT)	OR	ON	ON	2023/10/11 11:39 AM

		"D0408543" OR "D0430938" OR "D0439984" OR "D0448852" OR "D0553252" OR "D0606192" OR "D0649657" OR "D0658759" OR "D0659644" OR "D0703337" OR "D0706433" OR "D0708742" OR "D0734863" OR "D0735348" OR "D0756180" OR "D0759237" OR "D0759238" OR "D0763442" OR "D0778439" OR "D0817732" OR "D0819221" OR "D0823478" OR "D0837395" OR "D0838378" OR "D0840547" OR "D0842491" OR "D0843656" OR "D0844896" OR "D0847362" OR "D0847364" OR "D0847990" OR "D0880419" OR "D0880714" OR "D0880715" OR "D0880716").pn.					
L340	171	(US-20020082092-$ | US-20020119947-$ | US-20080028194-$ | US-20080211981-$ | US-20080718847-$ | US-10034813-$ | US-10252051-$ | US-10335345-$ | US-10557490-$ | US-10702448-$ | US-10758027-$ | US-10857064-$ | US-10918565-$ | US-10945915-$ | US-10959911-$ | US-10993874-$ | US-11160723-$ | US-1594636-$ | US-1657765-$ | US-1784301-$ | US-20180000842-$ | US-20180810889-$ | US-	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/10/11 11:44 AM

		20200261307-$ | US- 2179594-$ | US- 2391671-$ | US- 2475861-$ | US- 2987334-$ | US- 3053559-$ | US- 3077837-$ | US- 3699952-$ | US- 3705579-$ | US- 3968789-$ | US- 4031763-$ | US- 4046142-$ | US- 4088128-$ | US- 4158246-$ | US- 4203431-$ | US- 4506159-$ | US- 4513737-$ | US- 4565189-$ | US- 4596406-$ | US- 4691693-$ | US- 4692958-$ | US- 4841955-$ | US- 4989613-$ | US- 4991298-$ | US- 5014681-$ | US- 5088474-$ | US- 5092317-$ | US- 5103809-$ | US- 5123139-$ | US- 5201149-$ | US- 5207697-$ | US- 5501657-$ | US- 5656017-$ | US- 5656018-$ | US- 5860669-$ | US- 5910197-$ | US- 5925002-$ | US- 5935089-$ | US- 6003052-$ | US- 6006631-$ | US- 6146383-$ | US- 6165145-$ | US- 6227959-$ | US- 6228120-$ | US- 6245031-$ | US- 6290660-$ | US- 6401289-$ | US- 6406445-$ | US- 6432072-$ | US- 6537236-$ | US- 6539328-$ | US- 6558338-$ | US- 6568089-$ | US- 6599250-$ | US- 6715781-$ | US- 6723060-$ | US- 6758826-$ | US- 6805700-$ | US-					

Hyper Ice, Inc. Ex. 1003-Page 773
Hyper Ice, Inc. v. Therabody, Inc.

		6823762-$ | US- 6846295-$ | US- 6994575-$ | US- 7041072-$ | US- 7128721-$ | US- 7169169-$ | US- 7223250-$ | US- 7384405-$ | US- 7431706-$ | US- 7470081-$ | US- 7497639-$ | US- 7503923-$ | US- 7549966-$ | US- 7731672-$ | US- 7740249-$ | US- 7857729-$ | US- 7877880-$ | US- 7927294-$ | US- 7963717-$ | US- 8313450-$ | US- 8435194-$ | US- 8479616-$ | US- 8622943-$ | US- 8695461-$ | US- 8770882-$ | US- 8777881-$ | US- 8864143-$ | US- 9017273-$ | US- 9107486-$ | US- 9132058-$ | US- 9138257-$ | US- 9272837-$ | US- 9364385-$ | US- 9416805-$ | US- 9597256-$ | US- 9744600-$ | US- 9872813-$ | US- 9889066-$ | US- 9981366-$ | US- D143678-$ | US- D230522-$ | US- D329292-$ | US- D331467-$ | US- D408543-$ | US- D430938-$ | US- D439984-$ | US- D448852-$ | US- D553252-$ | US- D606192-$ | US- D649657-$ | US- D658759-$ | US- D659644-$ | US- D703337-$ | US- D706433-$ | US- D708742-$ | US- D734863-$ | US- D735348-$ | US- D756180-$ | US-					

		D759237-$ | US-D759238-$ | US-D763442-$ | US-D778439-$ | US-D817732-$ | US-D819221-$ | US-D823478-$ | US-D837395-$ | US-D838378-$ | US-D840547-$ | US-D842491-$ | US-D843656-$ | US-D844896-$ | US-D847362-$ | US-D847364-$ | US-D847990-$ | US-D880419-$ | US-D880714-$ | US-D880715-$ | US-D880716-$ | US-20100210194-$ | US-20130237751-$ | US-20150133833-$ | US-20160030279-$).DID.					
L341	74	"675772"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/10/11 02:12 PM
L342	2	("0675772").pn.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/10/11 02:12 PM
L343	5	(US-20020082092-$ | US-20020119947-$ | US-20080028194-$ | US-D230522-$).DID.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/10/11 02:15 PM
L344	18	("20010027280" "20020082532" "20020115947" "20020177795" "20020183668" "20020188233" "20030014079" "20030028134" "20040176710" "20050075591" "20050109137" "20050113870" "20050131461" "20050203445" "20050235988" "20050252011" "20060047315" "20060074455").pn.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/10/11 02:18 PM
L345	18	("20060116614" "20060118841" "20060211961" "20060272664" "20070173886" "20070179414"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/10/11 02:20 PM

		"20070282228" "20080077061" "20080097260" "20080146980" "20080167588" "20080169715" "20080177207" "20080185888" "20080200849" "20080243041" "20080306417" "20080312568").pn.					
L346	16	("20090188119" "20090270777" "20090309313" "20100100119" "20100137907" "20100145242" "20100160841" "20100162579" "20100176919" "20100210194" "20100286569" "20100298863" "20110037431" "20110055720" "201101186372011020 1979" "20110224580" "20110314677").pn.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/10/11 02:28 PM
L347	18	("20090188119" "20090270777" "20090309313" "20100100119" "20100137907" "20100145242" "20100160841" "20100162579" "20100176919" "20100210194" "20100286569" "20100298863" "20110037431" "20110055720" "20110118637" "20110201979" "20110224580" "20110314677").pn.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/10/11 02:30 PM
L348	18	("20120059294" "20120065556" "20120124758" "20120161706" "20120197357" "20120232445" "20120238922" "20130014968" "20130030506" "20130052871"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/10/11 02:38 PM

		"20130085421" "20130116503" "20130218058" "20130237751" "20130241470" "20130261517" "20130271067" "20130304642").pn.					
L349	18	("20140031866" "20140097793" "20140101872" "20140163443" "20140190023" "20140200495" "20140209594" "20140221887" "20140288473" "20140305747" "20140316313" "20150042254" "20150082562" "20150098184" "20150133833" "20150145297" "20150157528" "20150176674").pn.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/10/11 02:45 PM
L350	18	("20150257964" "20150328081" "20160000642" "20160017905" "20160030279" "20160045661" "20160112841" "20160113840" "20160113841" "20160127129" "20160129186" "20160136037" "20160136040" "20160166464" "20160170996" "20160192814" "20160206502" "20160243359").pn.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/10/11 02:47 PM
L351	18	("20160263732" "20160269486" "20160310353" "20160311091" "20160324717" "20160338901" "20170027798" "20170042754" "20170069191" "20170119623" "20170128320" "20170156975" "20170189227"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/10/11 02:49 PM

		"20170216136" "20170233063" "20170246074" "20170304144" "20170312161").pn.					
L352	18	("20170360641" "20180050440" "20180078449" "20180133101" "20180140100" "20180140502" "20180141188" "20180154141" "20180185234" "20180263845" "20180288160" "20180315499" "20180315504" "20190000709" "20190038229" "20190066833" "20190110945" "20190175434").pn.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/10/11 02:51 PM
L353	16	("20190209424" "20190216677" "20190232478" "20190254921" "20190254922" "20190314239" "20190337140" "20190350793" "20190381271" "202000000237" "2020009010" "20200016027" "20200035237" "20200069510" "20200085675" "20200090175" "20200179215" "20200230012").pn.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/10/11 02:54 PM
L354	0	("202000000237" "202000009010").pn.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/10/11 02:55 PM
L355	2	("20200000237" "20200009010").pn.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/10/11 02:55 PM
L357	16	("20200241683" "20200261307" "20200294423" "20200352821" "20200397651" "20200405570" "20210000683" "20210022955" "20210059898" "20210085555" "20210330539"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/10/11 02:57 PM

		"20220000781" "20220007810" "20220054350" "20220087433" "20220241135").pn.					
L358	0	CN-304561844-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 03:59 PM
L359	3	CN-202161539-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 04:22 PM
L360	3	WO-2019186225-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 04:48 PM
L361	3	CN-106859949-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT,	OR	ON	ON	2023/10/11 06:08 PM

			JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L362	2	KR-101162978-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 06:09 PM
L363	3	WO-2021050861-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 06:41 PM
L364	3	WO-2018012105-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 06:42 PM
L365	3	WO-2013145346-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH,	OR	ON	ON	2023/10/11 06:42 PM

			CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L366	3	WO-2011159317-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 06:42 PM
L367	4	WO-2009102279-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 06:42 PM
L368	4	WO-0119316-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT;	OR	ON	ON	2023/10/11 06:43 PM

			IBM_TDB)				
L369	0	TW-I359657-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 06:43 PM
L370	0	TW-1359657-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 06:43 PM
L371	2	TW-359657-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 06:43 PM
L372	2	RU-2170567-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE,	OR	ON	ON	2023/10/11 06:43 PM

			SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L373	2	KR-20200051098-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 06:44 PM
L374	2	KR-20180031683-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 06:44 PM
L375	2	KR-20170108550-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 06:44 PM
L376	2	KR-20170106550-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT,	OR	ON	ON	2023/10/11 06:44 PM

			JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L377	2	KR-20090119424-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 06:45 PM
L378	2	KR-200435552-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 06:45 PM
L379	2	KR-100752432-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 06:45 PM
L380	0	JP-S5428491-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH,	OR	ON	ON	2023/10/11 06:46 PM

			CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L381	0	JP-S05428491-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 06:46 PM
L382	0	JP-S50428491-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 06:46 PM
L383	3	JP-5428491-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT;	OR	ON	ON	2023/10/11 06:46 PM

			IBM_TDB)				
L384	0	JP-S5230553-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 06:46 PM
L385	0	JP-S05230553-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 06:46 PM
L386	0	JP-S050230553-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 06:46 PM
L387	6	JP-H048128-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE,	OR	ON	ON	2023/10/11 06:46 PM

			SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L388	1	JP-H03218763-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 06:47 PM
L389	3	JP-5129032-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 06:47 PM
L390	3	JP-2018518347-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 06:47 PM
L391	3	JP-2015104422-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT,	OR	ON	ON	2023/10/11 06:48 PM

			JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L392	3	JP-2015035844-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 06:48 PM
L393	3	JP-2014511240-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 06:48 PM
L394	3	JP-2013119018-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 06:48 PM
L395	2	JP-2011502369-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH,	OR	ON	ON	2023/10/11 06:49 PM

			CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L396	3	JP-2008510588-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 06:49 PM
L397	3	JP-2008289616-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 06:49 PM
L398	3	JP-2006212228-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT;	OR	ON	ON	2023/10/11 06:49 PM

			IBM_TDB)				
L399	3	JP-2006034941-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 06:50 PM
L400	3	JP-2003077837-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 06:50 PM
L401	3	JP-2002282322-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 06:50 PM
L402	3	JP-2000189525-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE,	OR	ON	ON	2023/10/11 06:51 PM

			SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L403	5	GB-2262236-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 06:51 PM
L404	4	GB-2066081-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 06:51 PM
L405	3	EP-2328255-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 06:52 PM
L406	6	EP-2080500-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT,	OR	ON	ON	2023/10/11 06:52 PM

			JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L407	6	EP-1728494-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 06:52 PM
L408	5	EP-0436719-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 06:53 PM
L409	6	DE-3633888-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 06:53 PM
L410	3	DE-202015005257-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH,	OR	ON	ON	2023/10/11 06:53 PM

			CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L411	4	DE-19905199-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 06:54 PM
L412	3	DE-102015102112-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 06:54 PM
L413	3	CN-86101310-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT;	OR	ON	ON	2023/10/11 06:54 PM

			IBM_TDB)				
L414	0	CN-303250929-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 07:04 PM
L415	0	CN-0303250929-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 07:04 PM
L416	0	CN-303250924-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 07:04 PM
L417	0	CN-301664182-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE,	OR	ON	ON	2023/10/11 07:04 PM

			SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L418	3	CN-209154392-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 07:04 PM
L419	2	CN-208448086-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 07:05 PM
L420	3	CN-208405314-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 07:06 PM
L421	3	CN-207855923-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT,	OR	ON	ON	2023/10/11 07:06 PM

			JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L422	3	CN-207286298-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 07:06 PM
L423	3	CN-206081000-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 07:07 PM
L424	3	CN-205598186-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 07:09 PM
L425	3	CN-205494357-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH,	OR	ON	ON	2023/10/11 07:09 PM

			CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L426	3	CN-205459750-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 07:09 PM
L427	3	CN-205163583-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 07:09 PM
L428	3	CN-202637439-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT;	OR	ON	ON	2023/10/11 07:10 PM

			IBM_TDB)				
L429	3	CN-201333160-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 07:11 PM
L430	3	CN-201239338-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 07:11 PM
L431	3	CN-201239336-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 07:11 PM
L432	3	CN-1432452-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE,	OR	ON	ON	2023/10/11 07:11 PM

			SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L433	4	CN-113509366-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 07:12 PM
L434	3	CN-113143721-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 07:12 PM
L435	3	CN-111973419-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 07:12 PM
L436	3	CN-111616938-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT,	OR	ON	ON	2023/10/11 07:12 PM

			JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L437	3	CN-110868983-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 07:13 PM
L438	3	CN-109528473-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 07:13 PM
L439	5	CN-109259995-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 07:14 PM
L440	5	CN-106618998-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH,	OR	ON	ON	2023/10/11 07:14 PM

			CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L441	5	CN-106236528-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 07:14 PM
L442	5	CN-106074129-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 07:14 PM
L443	5	CN-104352341-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT;	OR	ON	ON	2023/10/11 07:15 PM

			IBM_TDB)				
L444	3	CN-103648320-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 07:15 PM
L445	5	CN-101888050-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 07:15 PM
L446	3	AU-2019204770-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/10/11 07:15 PM
L447	7	AT-510048-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE,	OR	ON	ON	2023/10/11 07:16 PM

			SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L449	6	"16168100"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/10/13 10:12 AM
L450	214	((("WERSLAND") near3 ("Jason")) OR (("NAZARIAN") near3 ("Benjamin")) OR (("SOLANA") near3 ("Jaime")) OR (("MERINO") near3 ("Eduardo")) OR (("TANG") near3 ("Richard"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2023/10/13 02:37 PM
L451	71	(("THERABODY") near3 ("INC"))).AS,AANM.	(USPAT)	OR	ON	ON	2023/10/13 02:38 PM
L452	16	L450 AND (axis WITH (perpendicular$ normal (right ADJ angle) "90")).clm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/10/13 02:41 PM
L453	16	(L450 OR L451) AND (axis WITH (perpendicular$ normal (right ADJ angle) "90")).clm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/10/13 02:42 PM
L454	2	WO-2023172676-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/01 11:54 AM
L456	2	("11478606" "20230001131").pn.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/12/01 11:55 AM
L457	3	CN-108543126-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL,	OR	ON	ON	2023/12/01 01:29 PM

			PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L458	3	CN-109009978-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/12/01 01:29 PM
L459	2	KR-200345192-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/03/01 02:00 PM
L460	4	("20120124758" OR "20140129174" OR "20140202493" OR "20170308046").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2024/03/01 02:52 PM
L461	3	JP-2003275265-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/03/01 03:11 PM
L462	3	WO-2021222571-$.did.	(FIT (AP, AT, AU, BE,	OR	ON	ON	2024/03/01

			BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				03:22 PM
L463	5	WO-2022011251-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/03/01 03:23 PM
L464	3	JP-S6013123-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/03/01 03:26 PM
L465	4	CN-109907965-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO;	OR	ON	ON	2024/03/01 03:27 PM

Hyper Ice, Inc. Ex. 1003-Page 805
Hyper Ice, Inc. v. Therabody, Inc.

			JPO; DERWENT; IBM_TDB)				
L466	3	CN-205286890-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/03/01 03:29 PM
L467	4	EP-1964537-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/03/01 03:31 PM
L470	747	((US-20200323733-A1 OR US-20200281805-A1 OR US-20200268594-A1 OR US-20200261306-A1 OR US-20190254921-A1 OR US-20200241683-A1 OR US-20200000678-A1 OR US-20190365598-A1 OR US-20180133101-A1 OR US-20200253818-A1 OR US-20190247271-A1 OR US-20190175434-A1 OR US-20190083352-A1 OR US-20150005682-A1 OR US-20180296433-A1 OR US-20180256432-A1 OR US-20180243158-A1 OR US-20180008512-A1 OR US-20170361386-A1	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/03/02 12:11 PM

		OR US-20170304145-A1 OR US-20170304144-A1 OR US-20170156974-A1 OR US-20170079865-A1 OR US-20150119771-A1 OR US-20130261516-A1 OR US-20130133210-A1 OR US-20120253245-A1 OR US-20110041864-A1 OR US-20100331745-A1 OR US-20100145242-A1 OR US-20100125228-A1 OR US-20080177207-A1 OR US-20070144310-A1 OR US-20060123941-A1 OR US-20050252011-A1 OR US-20050159689-A1 OR US-20050131461-A1 OR US-20040039314-A1 OR US-20030094356-A1 OR US-20200107988-A1 OR US-20200085673-A1 OR US-20200009005-A1 OR US-20120310120-A1 OR US-20020068887-A1 OR US-20200179210-A1 OR US-20190231630-A1 OR US-20190015295-A1 OR US-20200245931-A1 OR US-20200219615-A1 OR US-20200222276-A1 OR US-20190282442-A1 OR US-20130331745-A1 OR US-20150305971-A1 OR US-20120296244-A1 OR US-20090112134-A1 OR US-20200390644-A1 OR US-20130079689-A1 OR US-20050131273-A1 OR US-20130035617-A1 OR US-20170274242-A1 OR US-20070129220-A1 OR US-20190307395-A1 OR US-					

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		OR US-20170225245-A1 OR US-20170043466-A1 OR US-20060288594-A1 OR US-20150005750-A1 OR US-20040260211-A1 OR US-20160206502-A1 OR US-20090270915-A1 OR US-20210038472-A1 OR US-20200069510-A1 OR US-20200330321-A1 OR US-20200261307-A1 OR US-20200289365-A1 OR US-20200261310-A1 OR US-20190017528-A1 OR US-20180200141-A1 OR US-20190015294-A1 OR US-20180263845-A1 OR US-20160367425-A1 OR US-20170027798-A1 OR US-20210022955-A1 OR US-20200405574-A1 OR US-20200352821-A1 OR US-20200352820-A1 OR US-20210059898-A1 OR US-20010016697-A1 OR US-20030009116-A1 OR US-20030195443-A1 OR US-20060025710-A1 OR US-20060192527-A1 OR US-20080103419-A1 OR US-20140180331-A1 OR US-20150148592-A1 OR US-20130138023-A1 OR US-20030144615-A1 OR US-20180236572-A1 OR US-20150375315-A1 OR US-20180279843-A1 OR US-20070270727-A1 OR US-20140310900-A1 OR US-20100274162-A1 OR US-20050126018-A1 OR US-20080314610-A1 OR US-20140024982-A1 OR US-					

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		OR US-20100286569-A1 OR US-20100176919-A1 OR US-20100160841-A1 OR US-20100137907-A1 OR US-20100100119-A1 OR US-20090309313-A1 OR US-20090270777-A1 OR US-20090188119-A1 OR US-20130304642-A1 OR US-20130271067-A1 OR US-20130261517-A1 OR US-20130241470-A1 OR US-20130218058-A1 OR US-20130116503-A1 OR US-20130085421-A1 OR US-20130052871-A1 OR US-20130030506-A1 OR US-20120238922-A1 OR US-20120232445-A1 OR US-20120197357-A1 OR US-20120161706-A1 OR US-20120124758-A1 OR US-20120065556-A1 OR US-20120059294-A1 OR US-20150176674-A1 OR US-20150157528-A1 OR US-20150145297-A1 OR US-20150098184-A1 OR US-20150082562-A1 OR US-20150042254-A1 OR US-20140316313-A1 OR US-20140305747-A1 OR US-20140288473-A1 OR US-20140221887-A1 OR US-20140209594-A1 OR US-20140200495-A1 OR US-20140190023-A1 OR US-20140163443-A1 OR US-20140101872-A1 OR US-20140097793-A1 OR US-20140031866-A1 OR US-20160243359-A1 OR US-20160192814-A1 OR US-					

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		OR US-20200179215-A1 OR US-20200090175-A1 OR US-20200035237-A1 OR US-20200016027-A1 OR US-20190381271-A1 OR US-20190350793-A1 OR US-20190337140-A1 OR US-20190314239-A1 OR US-20190232478-A1 OR US-20190216677-A1 OR US-20190209424-A1 OR US-20200009010-A1 OR US-20200000237-A1 OR US-20220241135-A1 OR US-20220087433-A1 OR US-20220054350-A1 OR US-20220007810-A1 OR US-20220000781-A9 OR US-20210330539-A1 OR US-20210085555-A1 OR US-20210000683-A1 OR US-20200405570-A1 OR US-20200397651-A1 OR US-20200294423-A1 OR US-20170308046-A1 OR US-20140202493-A1 OR US-20140129174-A1 OR US-20230248609-A1).did. AND PGPB.dbnm.) OR ((US-10314762-B1 OR US-10492984-B2 OR US-10561574-B1 OR US-9889066-B2 OR US-9265689-B2 OR US-8342187-B2 OR US-8322456-B2 OR US-8561717-B2 OR US-7927259-B1 OR US-7503923-B2 OR US-7041072-B2 OR US-6938706-B2 OR US-6682496-B1 OR US-6228103-B1 OR US-5951501-A OR US-5501657-A OR US-5212887-A OR US-5088474-A OR US-5085207-A OR US-					

		4991298-A OR US- 4513737-A OR US- 4420995-A OR US- 4272996-A OR US- 4158246-A OR US- 3545301-A OR US- 3172675-A OR US- 10292896-B2 OR US- 7354383-B2 OR US- 7109613-B2 OR US- 5676637-A OR US- 10993874-B1 OR US- 9827159-B2 OR US- 10959908-B2 OR US- 4533796-A OR US- 11219739-B2 OR US- 11253423-B1 OR US- 10682281-B2 OR US- 11478400-B1 OR US- 11497676-B2 OR US- 10806660-B1 OR US- 11090222-B2 OR US- 11497674-B2 OR US- 10912708-B2 OR US- 4827914-A OR US- 5644846-A OR US- 5134777-A OR US- 4512078-A OR US- 10702448-B2 OR US- 10918565-B2 OR US- 10857064-B2 OR US- 10428850-B2 OR US- 10470970-B2 OR US- 10959911-B2 OR US- 10940081-B2 OR US- 3626934-A OR US- 4150668-A OR US- 4173217-A OR US- 4566442-A OR US- 4730605-A OR US- 5417644-A OR US- 5569168-A OR US- 5573500-A OR US- 6228042-B1 OR US- 6663657-B1 OR US- 8951216-B2 OR US- 4549535-A OR US- 7996996-B2 OR US- 3942251-A OR US- 10357425-B2 OR US- 8945104-B2 OR US- 6723060-B2 OR US- 10201470-B2 OR US- 6599260-B2 OR US- 8646348-B2 OR US- D329291-S OR US- D363352-S OR US- D367712-S OR US-					

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		5103809-A OR US- 5123139-A OR US- 5201149-A OR US- 5207697-A OR US- 5656018-A OR US- 5656017-A OR US- 5860669-A OR US- 5910197-A OR US- 5925002-A OR US- 5935089-A OR US- 6003052-A OR US- 6006631-A OR US- 6146383-A OR US- 6165145-A OR US- 6228120-B1 OR US- 6227959-B1 OR US- 6245031-B1 OR US- 6290660-B1 OR US- 6401289-B1 OR US- 6406445-B1 OR US- 6432072-B1 OR US- 6537236-B2 OR US- 6539328-B1 OR US- 6558338-B1 OR US- 6568089-B1 OR US- 6599250-B2 OR US- 6715781-B1 OR US- 6758826-B2 OR US- 6805700-B2 OR US- 6823762-B2 OR US- 6846295-B1 OR US- 6994575-B1 OR US- 7128721-B2 OR US- 7169169-B2 OR US- 7223250-B2 OR US- 7384405-B2 OR US- 7431706-B2 OR US- 7470081-B2 OR US- 7497639-B2 OR US- 7549966-B2 OR US- 7731672-B2 OR US- 7740249-B1 OR US- 7857729-B2 OR US- 7877880-B2 OR US- 7927294-B2 OR US- 7963717-B2 OR US- 8313450-B2 OR US- 8435194-B2 OR US- 8479616-B2 OR US- 8622943-B2 OR US- 8695461-B2 OR US- 8770882-B2 OR US- 8777881-B2 OR US- 8864143-B2 OR US- 9017273-B2 OR US- 9107486-B2 OR US- 9132058-B2 OR US- 9138257-B2 OR US-				

		9272837-B2 OR US- 9364385-B2 OR US- 9872813-B2 OR US- 9981366-B2 OR US- 10034813-B1 OR US- 10252051-B2 OR US- 10335345-B2 OR US- 10557490-B2 OR US- 10758027-B2 OR US- 10945915-B2 OR US- 11160723-B2 OR US- D329292-S OR US- D331467-S OR US- D408543-S OR US- D430938-S OR US- D439984-S OR US- D448852-S OR US- D553252-S OR US- D606192-S OR US- D649657-S OR US- D658759-S OR US- D659644-S OR US- D703337-S OR US- D706433-S OR US- D708742-S OR US- D734863-S OR US- D735348-S OR US- D756180-S OR US- D759238-S OR US- D759237-S OR US- D763442-S OR US- D778439-S OR US- D817732-S OR US- D819221-S OR US- D823478-S OR US- D837395-S OR US- D838378-S OR US- D840547-S OR US- D842491-S OR US- D843656-S OR US- D844896-S OR US- D847362-S OR US- D847364-S OR US- D847990-S OR US- D880419-S OR US- D880714-S OR US- D880715-S OR US- D880716-S).did. AND USPT.dbnm.) OR ((US- 3545301-A OR US- 3172675-A OR US- 3058651-A OR US- 0732356-A OR US- 0742534-A OR US- 3452226-A OR US- 2931632-A OR US- 1657765-A OR US- 1545027-A OR US-				

		1594636-A OR US-1784301-A OR US-2179594-A OR US-2391671-A OR US-2475861-A OR US-2987334-A OR US-3053559-A OR US-3077837-A OR US-D143678-S OR US-D230522-S OR US-0675772-A).did. AND USOC.dbnm.) OR ((WO-2014118596-A1 OR WO-2015038005-A2 OR JP-2010534110-W OR WO-2013114084-A1 OR CN-104352341-A OR CN-201743890-U OR CN-201524220-U OR CN-201847899-U OR TW-201440753-A OR RU-2170567-C1 OR CN-208448086-U).did. AND DWPI.dbnm.) OR ((WO-2009014727-A1).did. AND EPAB.dbnm.) OR ((JP-2005204777-A OR JP-02019157-A OR JP-07051393-A OR JP-2015035844-A OR JP-2003077837-A).did. AND JPAB.dbnm.) OR ((KR-101406275-B1 OR CN-2788807-Y OR CN-203598194-U OR KR-200313149-Y1 OR JP-3077837-U OR EP-0436719-A4).did. AND FPRS.dbnm.) OR ((CN-2788807-Y OR CN-201524220-U OR CN-201743890-U OR CN-201847899-U OR CN-203598194-U OR CN-104352341-A OR JP-H0219157-A OR JP-H0447440-U OR JP-H0751393-A OR JP-2005204777-A OR JP-2010534110-A OR KR-200313149-Y1 OR KR-101123926-B1 OR KR-101406275-B1 OR TW-201440753-A OR WO-2009014727-A1 OR WO-2013114084-A1					

		OR WO-2014118596-A1 OR WO-2015038005-A2 OR CN-202161539-U OR WO-2019186225-A1 OR CN-106859949-A OR KR-101162978-B1 OR WO-2021050861-A1 OR WO-2018012105-A1 OR WO-2013145346-A1 OR WO-2011159317-A1 OR WO-2009102279-A1 OR WO-0119316-A2 OR KR-20200051098-A OR KR-20180031683-A OR KR-20170108550-A OR KR-20170106550-A OR KR-20090119424-A OR KR-200435552-Y1 OR KR-100752432-B1 OR JP-H03218763-A OR JP-5129032-B2 OR JP-2018518347-A OR JP-2015104422-A OR JP-2014511240-A OR JP-2013119018-A OR JP-2011502369-A OR JP-2008510588-A OR JP-2008289616-A OR JP-2006212228-A OR JP-2006034941-A OR JP-2002282322-A OR JP-2000189525-A OR GB-2262236-A OR GB-2066081-A OR EP-2328255-A1 OR EP-2080500-A1 OR EP-1728494-A1 OR DE-3633888-A1 OR DE-202015005257-U1 OR DE-19905199-A1 OR DE-102015102112-A1 OR CN-86101310-A OR CN-209154392-U OR CN-208405314-U OR CN-207855923-U OR CN-207286298-U OR CN-206081000-U OR CN-205598186-U OR CN-205494357-U OR CN-205459750-U OR CN-205163583-U OR CN-202637439-U OR CN-201333160-Y OR CN-201239338-Y OR CN-201239336-Y					

		OR CN-1432452-A OR CN-113509366-A OR CN-113143721-A OR CN-111973419-A OR CN-111616938-A OR CN-110868983-A OR CN-109528473-A OR CN-109259995-A OR CN-106618998-A OR CN-106236528-A OR CN-106074129-A OR CN-103648320-A OR CN-101888050-A OR AU-2019204770-B1 OR AT-510048-A1 OR WO-2023172676-A2 OR CN-108543126-A OR CN-109009978-A OR KR-200345192-Y1 OR JP-2003275265-A OR WO-2021222571-A1 OR WO-2022011251-A1 OR CN-109907965-A OR CN-205286890-U OR EP-1964537-A1).did. AND FTDB.dbnm.)					
L472	233	((("WERSLAND") near3 ("Jason")) OR (("NAZARIAN") near3 ("Benjamin")) OR (("SOLANA") near3 ("Jaime")) OR (("MERINO") near3 ("Eduardo")) OR (("TANG") near3 ("Richard")))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/03/14 06:04 PM
L473	0	L472 NOT L450	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/03/14 06:05 PM
L474	85	((("THERABODY") near3 ("INC"))).AS,AANM.	(USPAT)	OR	ON	ON	2024/03/14 06:05 PM
L475	0	L474 NOT L451	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/03/14 06:05 PM
L476	5571	A61H1/00,006,008.cpc. OR A61H23/00,004,006,02,0218,0245,0254,0263,04,06.cpc. OR A61H2023/002,0209,0272,0281,029.cpc.	(USPAT; USOCR)	OR	ON	ON	2024/03/14 06:06 PM
L477	5938	A61H2201/0107,02,0207,0214,10,50,5007,501,5012,5023,5025,5035,5058,5061,5064,5066,5069,5071,5082,5084,508	(USPAT; USOCR)	OR	ON	ON	2024/03/14 06:14 PM

Hyper Ice, Inc. Ex. 1003-Page 821
Hyper Ice, Inc. v. Therabody, Inc.

		9,5092,5094,5097.cpc.					
L478	587	A61H2230/20,201,25,255,30,305,50,505.cpc.	(USPAT; USOCR)	OR	ON	ON	2024/03/14 06:16 PM
L479	2154	B23D51/16.cpc. OR B23D49/162,165,00,007,008,10,16,167.cpc.	(USPAT; USOCR)	OR	ON	ON	2024/03/14 06:17 PM
L480	1692	B26D7/2621,2614.cpc. OR B26D5/14.cpc.	(USPAT; USOCR)	OR	ON	ON	2024/03/14 06:17 PM
L481	337	B27B11/06.cpc. OR B27B19/00,002,006,09,02.cpc.	(USPAT; USOCR)	OR	ON	ON	2024/03/14 06:18 PM
L482	657	A61B17/148,142,14,144.cpc.	(USPAT; USOCR)	OR	ON	ON	2024/03/14 06:19 PM
L483	1	("20140194790").pn.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/04/05 12:41 PM
L484	5	CN-110996874-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/04/05 12:42 PM
L485	3	CN-206434556-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/04/05 12:43 PM
L486	4	WO-2008113139-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE,	OR	ON	ON	2024/04/05 12:44 PM

			SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L487	3	WO-2018119106-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/04/05 12:45 PM
L488	3	CN-110812178-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/04/05 12:46 PM
L489	5	CN-111067786-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/04/05 12:49 PM
L490	0	"18809073"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/10/12 09:13 AM
L491	1	("11478606").pn.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/10/30 09:56 AM
L492	1	("20230001131").pn.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/10/30 10:23 AM

L493	2	JP-2010534110-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/10/30 12:59 PM
L494	0	CN-301664182-$.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/10/30 01:00 PM
L495	0	CN-301664182-S.did.	(FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/10/30 01:01 PM
L497	271	((("WERSLAND") near3 ("Jason")) OR (("NAZARIAN") near3 ("Benjamin")) OR (("SANCHEZ") near3 ("SOLANA") near3 ("Jaime")) OR (("MERINO") near3 ("Eduardo")) OR (("TANG") near3 ("Richard")))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/10/30 02:15 PM

L498	44	L497 AND (((reciprocat$ motor handle) near3 (axis axes)) ((common divid$ reciprocat$) near3 plane)).clm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/10/30 02:17 PM
L499	157	((("THERABODY") near3 ("INC"))).AS,AANM.	(US-PGPUB; USPAT)	OR	ON	ON	2024/10/30 02:25 PM
L500	200	((("THERABODY") near3 ("INC")) OR ((THERAGUN) near3 (LLC))).AS,AANM.	(US-PGPUB; USPAT)	OR	ON	ON	2024/10/30 02:26 PM
L501	8	L500 NOT L497	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/10/30 02:26 PM
L502	0	L501 AND (((reciprocat$ motor handle) near3 (axis axes)) ((common divid$ reciprocat$) near3 plane)).clm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/10/30 02:26 PM
L503	808	A61H23/006.cpc.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/10/30 03:12 PM
L504	480	L503 AND @ad<="20200607"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/10/30 03:13 PM
L505	506	A61H1/00,006,008.cpc. AND (reciprocat$ percuss$)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/10/30 04:29 PM
L506	375	L505 AND @ad<="20200607"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/10/30 04:29 PM
L507	1589	(A61H23/00,004,02,0218,0245,0254,04,06.cpc. OR A61H2023/002,0209.cpc.) AND (reciprocat$ percuss$)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/10/30 05:07 PM
L508	1058	L507 AND @ad<="20200607"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/10/30 05:07 PM
L509	726	A61H2201/0107,0153.cpc. AND (reciprocat$ percuss$)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/10/30 06:17 PM
L510	414	L509 AND @ad<="20200607"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/10/30 06:17 PM
L511	2692	B23D51/16.cpc. OR B23D49/162,165,00,007,008,10,16,167.cpc.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/10/30 07:15 PM
L512	1022	L511 AND @ad<="20200607"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/10/30 07:15 PM
L513	1269	L511 AND motor	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/10/30 07:22 PM
L514	870	L513 AND @ad<="20200607"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/10/30 07:22 PM

L515	997	(B26D7/2621,2614.cpc. OR B26D5/14.cpc.) AND (motor)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/10/31 09:52 AM
L516	813	L515 AND @ad<="20200607"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/10/31 09:53 AM
L517	429	(B27B11/06.cpc. OR B27B19/00,002,006,09,02.cpc.) AND (motor)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/10/31 11:40 AM
L518	329	L517 AND @ad<="20200607"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/10/31 12:14 PM
L519	834	(A61B17/148,142,14,144.cpc.) AND (motor)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/10/31 01:46 PM
L520	591	L519 AND @ad<="20200607"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/10/31 01:46 PM
L521	1	("20220233397").pn.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/10/31 03:37 PM
L522	773	((US-20200323733-A1 OR US-20200281805-A1 OR US-20200268594-A1 OR US-20200261306-A1 OR US-20190254921-A1 OR US-20200241683-A1 OR US-20200000678-A1 OR US-20190365598-A1 OR US-20180133101-A1 OR US-20200253818-A1 OR US-20190247271-A1 OR US-20190175434-A1 OR US-20190083352-A1 OR US-20150005682-A1 OR US-20180296433-A1 OR US-20180256432-A1 OR US-20180243158-A1 OR US-20180008512-A1 OR US-20170361386-A1 OR US-20170304145-A1 OR US-20170304144-A1 OR US-20170156974-A1 OR US-20170079865-A1 OR US-20150119771-A1 OR US-20130261516-A1 OR US-20130133210-A1 OR US-20120253245-A1 OR US-20110041864-A1 OR US-20100331745-A1 OR US-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/11/01 11:39 AM

		20100145242-A1 OR US-20100125228-A1 OR US-20080177207-A1 OR US-20070144310-A1 OR US-20060123941-A1 OR US-20050252011-A1 OR US-20050159689-A1 OR US-20050131461-A1 OR US-20040039314-A1 OR US-20030094356-A1 OR US-20200107988-A1 OR US-20200085673-A1 OR US-20200009005-A1 OR US-20120310120-A1 OR US-20020068887-A1 OR US-20200179210-A1 OR US-20190231630-A1 OR US-20190015295-A1 OR US-20200245931-A1 OR US-20200219615-A1 OR US-20200222276-A1 OR US-20190282442-A1 OR US-20130331745-A1 OR US-20150305971-A1 OR US-20120296244-A1 OR US-20090112134-A1 OR US-20200390644-A1 OR US-20130079689-A1 OR US-20050131273-A1 OR US-20130035617-A1 OR US-20170274242-A1 OR US-20070129220-A1 OR US-20190307395-A1 OR US-20170095398-A1 OR US-20120078071-A1 OR US-20200069936-A1 OR US-20150216719-A1 OR US-20190290531-A1 OR US-20150305969-A1 OR US-20100081971-A1 OR US-20130014968-A1 OR US-20100162579-A1 OR US-20170156975-A1 OR US-20090326540-A1					

		OR US-20200354091-A1 OR US-20140207032-A1 OR US-20180353812-A1 OR US-20210020069-A1 OR US-20160346163-A1 OR US-20140194900-A1 OR US-20070150004-A1 OR US-20130281897-A1 OR US-20180288160-A1 OR US-20170049278-A1 OR US-20210128402-A1 OR US-20150297393-A1 OR US-20050209537-A1 OR US-20020072693-A1 OR US-20030028134-A1 OR US-20030149381-A1 OR US-20190262607-A1 OR US-20130046212-A1 OR US-20210244611-A1 OR US-20220331199-A1 OR US-20220211572-A1 OR US-20220151865-A1 OR US-20220096319-A1 OR US-20220031554-A1 OR US-20210244609-A1 OR US-20210196562-A1 OR US-20210113427-A1 OR US-20210022951-A1 OR US-20200289364-A1 OR US-20200276079-A1 OR US-20200085675-A1 OR US-20190254922-A1 OR US-20210077340-A1 OR US-20170225245-A1 OR US-20170043466-A1 OR US-20060288594-A1 OR US-20100031517-A1 OR US-20090025949-A1 OR US-20070180711-A1 OR US-20070050994-A1 OR US-20050257385-A1 OR US-20050257382-A1 OR US-20030110646-A1 OR US-					

		20150005750-A1 OR US-20040260211-A1 OR US-20160206502-A1 OR US-20090270915-A1 OR US-20210038472-A1 OR US-20220233397-A1 OR US-20200069510-A1 OR US-20200330321-A1 OR US-20200261307-A1 OR US-20200289365-A1 OR US-20200261310-A1 OR US-20190017528-A1 OR US-20180200141-A1 OR US-20190015294-A1 OR US-20180263845-A1 OR US-20160367425-A1 OR US-20170027798-A1 OR US-20210022955-A1 OR US-20200405574-A1 OR US-20200352821-A1 OR US-20200352820-A1 OR US-20210059898-A1 OR US-20010016697-A1 OR US-20030009116-A1 OR US-20030195443-A1 OR US-20060025710-A1 OR US-20060192527-A1 OR US-20080103419-A1 OR US-20140180331-A1 OR US-20150148592-A1 OR US-20130138023-A1 OR US-20030144615-A1 OR US-20180236572-A1 OR US-20150375315-A1 OR US-20180279843-A1 OR US-20070270727-A1 OR US-20140310900-A1 OR US-20100274162-A1 OR US-20050126018-A1 OR US-20080314610-A1 OR US-20140024982-A1 OR US-20210244610-A1 OR US-20100210194-A1 OR US-20130237751-A1					

		OR US-20150133833-A1 OR US-20160030279-A1 OR US-20060074455-A1 OR US-20060047315-A1 OR US-20050235988-A1 OR US-20050203445-A1 OR US-20050109137-A1 OR US-20050113870-A1 OR US-20050075591-A1 OR US-20040176710-A1 OR US-20020188233-A1 OR US-20020183668-A1 OR US-20020177795-A1 OR US-20020115947-A1 OR US-20020082532-A1 OR US-20030014079-A1 OR US-20010027280-A1 OR US-20080312568-A1 OR US-20080306417-A1 OR US-20080243041-A1 OR US-20080200849-A1 OR US-20080185888-A1 OR US-20080169715-A1 OR US-20080167588-A1 OR US-20080146980-A1 OR US-20080097260-A1 OR US-20080077061-A1 OR US-20070282228-A1 OR US-20070179414-A1 OR US-20070173886-A1 OR US-20060272664-A1 OR US-20060211961-A1 OR US-20060116614-A1 OR US-20060118841-A1 OR US-20110314677-A1 OR US-20110224580-A1 OR US-20110201979-A1 OR US-20110118637-A1 OR US-20110055720-A1 OR US-20110037431-A1 OR US-20100298863-A1 OR US-20100286569-A1 OR US-20100176919-A1 OR US-					

		20100160841-A1 OR US-20100137907-A1 OR US-20100100119-A1 OR US-20090309313-A1 OR US-20090270777-A1 OR US-20090188119-A1 OR US-20130304642-A1 OR US-20130271067-A1 OR US-20130261517-A1 OR US-20130241470-A1 OR US-20130218058-A1 OR US-20130116503-A1 OR US-20130085421-A1 OR US-20130052871-A1 OR US-20130030506-A1 OR US-20120238922-A1 OR US-20120232445-A1 OR US-20120197357-A1 OR US-20120161706-A1 OR US-20120124758-A1 OR US-20120065556-A1 OR US-20120059294-A1 OR US-20150176674-A1 OR US-20150157528-A1 OR US-20150145297-A1 OR US-20150098184-A1 OR US-20150082562-A1 OR US-20150042254-A1 OR US-20140316313-A1 OR US-20140305747-A1 OR US-20140288473-A1 OR US-20140221887-A1 OR US-20140209594-A1 OR US-20140200495-A1 OR US-20140190023-A1 OR US-20140163443-A1 OR US-20140101872-A1 OR US-20140097793-A1 OR US-20140031866-A1 OR US-20160243359-A1 OR US-20160192814-A1 OR US-20160166464-A1 OR US-20160170996-A1 OR US-20160136037-A1						

		OR US-20160136040-A1 OR US-20160129186-A1 OR US-20160127129-A1 OR US-20160113840-A1 OR US-20160113841-A1 OR US-20160112841-A1 OR US-20160045661-A1 OR US-20160017905-A1 OR US-20160000642-A1 OR US-20150328081-A1 OR US-20150257964-A1 OR US-20170312161-A1 OR US-20170246074-A1 OR US-20170233063-A1 OR US-20170216136-A1 OR US-20170189227-A1 OR US-20170128320-A1 OR US-20170119623-A1 OR US-20170069191-A1 OR US-20170042754-A1 OR US-20160338901-A1 OR US-20160324717-A1 OR US-20160310353-A1 OR US-20160311091-A1 OR US-20160269486-A1 OR US-20160263732-A1 OR US-20190110945-A1 OR US-20190066833-A1 OR US-20190038229-A1 OR US-20190000709-A1 OR US-20180315504-A1 OR US-20180315499-A1 OR US-20180185234-A1 OR US-20180154141-A1 OR US-20180140502-A1 OR US-20180141188-A1 OR US-20180140100-A1 OR US-20180078449-A1 OR US-20180050440-A1 OR US-20170360641-A1 OR US-20200230012-A1 OR US-20200179215-A1 OR US-20200090175-A1 OR US-					

		20200035237-A1 OR US-20200016027-A1 OR US-20190381271-A1 OR US-20190350793-A1 OR US-20190337140-A1 OR US-20190314239-A1 OR US-20190232478-A1 OR US-20190216677-A1 OR US-20190209424-A1 OR US-20200009010-A1 OR US-20200000237-A1 OR US-20220241135-A1 OR US-20220087433-A1 OR US-20220054350-A1 OR US-20220007810-A1 OR US-20220000781-A9 OR US-20210330539-A1 OR US-20210085555-A1 OR US-20210000683-A1 OR US-20200405570-A1 OR US-20200397651-A1 OR US-20200294423-A1 OR US-20170308046-A1 OR US-20140202493-A1 OR US-20140129174-A1 OR US-20140194790-A1 OR US-20230001131-A1 OR US-20230248609-A1).did. AND PGPB.dbnm.) OR ((US-10314762-B1 OR US-10492984-B2 OR US-10561574-B1 OR US-9889066-B2 OR US-9265689-B2 OR US-8342187-B2 OR US-8322456-B2 OR US-8561717-B2 OR US-7927259-B1 OR US-7503923-B2 OR US-7041072-B2 OR US-6938706-B2 OR US-6682496-B1 OR US-6228103-B1 OR US-5951501-A OR US-5501657-A OR US-5212887-A OR US-5088474-A OR US-5085207-A OR US-4991298-A OR US-					

		4513737-A OR US- 4420995-A OR US- 4272996-A OR US- 4158246-A OR US- 3545301-A OR US- 3172675-A OR US- 10292896-B2 OR US- 7354383-B2 OR US- 7109613-B2 OR US- 5676637-A OR US- 10993874-B1 OR US- 9827159-B2 OR US- 10959908-B2 OR US- 4533796-A OR US- 11219739-B2 OR US- 11253423-B1 OR US- 10682281-B2 OR US- 11478400-B1 OR US- 11497676-B2 OR US- 10806660-B1 OR US- 11090222-B2 OR US- 11497674-B2 OR US- 10912708-B2 OR US- 4827914-A OR US- 4088128-A OR US- 4079733-A OR US- 4238884-A OR US- 5644846-A OR US- 5134777-A OR US- 4512078-A OR US- 5716332-A OR US- 3837335-A OR US- 10702448-B2 OR US- 10918565-B2 OR US- 10857064-B2 OR US- 10428850-B2 OR US- 10470970-B2 OR US- 10959911-B2 OR US- 10940081-B2 OR US- 3626934-A OR US- 4150668-A OR US- 4173217-A OR US- 4566442-A OR US- 4730605-A OR US- 5417644-A OR US- 5569168-A OR US- 5573500-A OR US- 6228042-B1 OR US- 6663657-B1 OR US- 8951216-B2 OR US- 4549535-A OR US- 7996996-B2 OR US- 3942251-A OR US- 10357425-B2 OR US- 8945104-B2 OR US- 6723060-B2 OR US- 10201470-B2 OR US- 6599260-B2 OR US-					

		8646348-B2 OR US- D329291-S OR US- D363352-S OR US- D367712-S OR US- D374934-S OR US- D388175-S OR US- D476746-S OR US- D478385-S OR US- D531733-S OR US- D544102-S OR US- D593204-S OR US- D666303-S OR US- D826418-S OR US- D842489-S OR US- D855822-S OR US- D866790-S OR US- D877351-S OR US- D884205-S OR US- D091454-S OR US- D093943-S OR US- D118980-S OR US- D129045-S OR US- D161484-S OR US- D163324-S OR US- D180923-S OR US- D181742-S OR US- D195145-S OR US- D197142-S OR US- D207505-S OR US- D237454-S OR US- D237455-S OR US- D287814-S OR US- D292368-S OR US- 4815224-A OR US- D310005-S OR US- D314320-S OR US- D329166-S OR US- D338802-S OR US- D345888-S OR US- D349029-S OR US- D383366-S OR US- D400758-S OR US- D430774-S OR US- D433300-S OR US- D440136-S OR US- D475595-S OR US- D481279-S OR US- D587977-S OR US- D631315-S OR US- D703480-S OR US- D726495-S OR US- 10276844-B2 OR US- D265985-S OR US- D320379-S OR US- D300132-S OR US- D303373-S OR US- D321338-S OR US- D334012-S OR US-				

		D345077-S OR US- D345727-S OR US- D383435-S OR US- D384639-S OR US- D387728-S OR US- D397991-S OR US- D400161-S OR US- D412485-S OR US- D417648-S OR US- D425014-S OR US- D432077-S OR US- D474445-S OR US- D475679-S OR US- D504111-S OR US- D510317-S OR US- D530270-S OR US- D544436-S OR US- D547264-S OR US- D553562-S OR US- D575224-S OR US- D579868-S OR US- D580353-S OR US- D597482-S OR US- D604235-S OR US- D605586-S OR US- D622660-S OR US- D682195-S OR US- D722016-S OR US- D776612-S OR US- D740222-S OR US- D817869-S OR US- D858432-S OR US- D862382-S OR US- D867279-S OR US- D919560-S OR US- D893738-S OR US- 0657765-A OR US- 2931632-A OR US- 3452226-A OR US- 6723050-B2 OR US- 11564860-B2 OR US- 11357697-B2 OR US- 11452670-B2 OR US- 11160721-B2 OR US- 11160722-B2 OR US- 11559462-B2 OR US- 3699952-A OR US- 3705579-A OR US- 3968789-A OR US- 4031763-A OR US- 4046142-A OR US- 4203431-A OR US- 4506159-A OR US- 4565189-A OR US- 4596406-A OR US- 4691693-A OR US- 4692958-A OR US- 4841955-A OR US-					

		4989613-A OR US- 5014681-A OR US- 5092317-A OR US- 5103809-A OR US- 5123139-A OR US- 5201149-A OR US- 5207697-A OR US- 5656018-A OR US- 5656017-A OR US- 5860669-A OR US- 5910197-A OR US- 5925002-A OR US- 5935089-A OR US- 6003052-A OR US- 6006631-A OR US- 6146383-A OR US- 6165145-A OR US- 6228120-B1 OR US- 6227959-B1 OR US- 6245031-B1 OR US- 6290660-B1 OR US- 6401289-B1 OR US- 6406445-B1 OR US- 6432072-B1 OR US- 6537236-B2 OR US- 6539328-B1 OR US- 6558338-B1 OR US- 6568089-B1 OR US- 6599250-B2 OR US- 6715781-B1 OR US- 6758826-B2 OR US- 6805700-B2 OR US- 6823762-B2 OR US- 6846295-B1 OR US- 6994575-B1 OR US- 7128721-B2 OR US- 7169169-B2 OR US- 7223250-B2 OR US- 7384405-B2 OR US- 7431706-B2 OR US- 7470081-B2 OR US- 7497639-B2 OR US- 7549966-B2 OR US- 7731672-B2 OR US- 7740249-B1 OR US- 7857729-B2 OR US- 7877880-B2 OR US- 7927294-B2 OR US- 7963717-B2 OR US- 8313450-B2 OR US- 8435194-B2 OR US- 8479616-B2 OR US- 8622943-B2 OR US- 8695461-B2 OR US- 8770882-B2 OR US- 8777881-B2 OR US- 8864143-B2 OR US- 9017273-B2 OR US-				

		9107486-B2 OR US- 9132058-B2 OR US- 9138257-B2 OR US- 9272837-B2 OR US- 9364385-B2 OR US- 9872813-B2 OR US- 9981366-B2 OR US- 10034813-B1 OR US- 10252051-B2 OR US- 10335345-B2 OR US- 10557490-B2 OR US- 10758027-B2 OR US- 10945915-B2 OR US- 11160723-B2 OR US- D329292-S OR US- D331467-S OR US- D408543-S OR US- D430938-S OR US- D439984-S OR US- D448852-S OR US- D553252-S OR US- D606192-S OR US- D649657-S OR US- D658759-S OR US- D659644-S OR US- D703337-S OR US- D706433-S OR US- D708742-S OR US- D734863-S OR US- D735348-S OR US- D756180-S OR US- D759238-S OR US- D759237-S OR US- D763442-S OR US- D778439-S OR US- D817732-S OR US- D819221-S OR US- D823478-S OR US- D837395-S OR US- D838378-S OR US- D840547-S OR US- D842491-S OR US- D843656-S OR US- D844896-S OR US- D847362-S OR US- D847364-S OR US- D847990-S OR US- D880419-S OR US- D880714-S OR US- D880715-S OR US- D880716-S OR US- 11478606-B1 OR US- 12064387-B2 OR US- 11857481-B2).did. AND USPT.dbnm.) OR ((US- 3545301-A OR US- 3172675-A OR US- 3058651-A OR US-				

		0732356-A OR US-0742534-A OR US-0735968-A OR US-1198799-A OR US-2138815-A OR US-3452226-A OR US-2931632-A OR US-1657765-A OR US-1545027-A OR US-1594636-A OR US-1784301-A OR US-2179594-A OR US-2391671-A OR US-2475861-A OR US-2987334-A OR US-3053559-A OR US-3077837-A OR US-D143678-S OR US-D230522-S OR US-0675772-A).did. AND USOC.dbnm.) OR ((CN-109528473-A OR CN-2788807-Y OR CN-201524220-U OR CN-201743890-U OR CN-201847899-U OR CN-203598194-U OR CN-104352341-A OR JP-H0219157-A OR JP-H0447440-U OR JP-H0751393-A OR JP-2005204777-A OR JP-2010534110-A OR KR-200313149-Y1 OR KR-101123926-B1 OR KR-101406275-B1 OR TW-201440753-A OR WO-2009014727-A1 OR WO-2013114084-A1 OR WO-2014118596-A1 OR WO-2015038005-A2 OR CN-202161539-U OR WO-2019186225-A1 OR CN-106859949-A OR KR-101162978-B1 OR WO-2021050861-A1 OR WO-2018012105-A1 OR WO-2013145346-A1 OR WO-2011159317-A1 OR WO-2009102279-A1 OR WO-0119316-A2 OR KR-20200051098-A OR KR-20180031683-A OR KR-20170108550-A OR KR-20170106550-A OR					

		KR-20090119424-A OR KR-200435552-Y1 OR KR-100752432-B1 OR JP-H03218763-A OR JP-5129032-B2 OR JP-2018518347-A OR JP-2015104422-A OR JP-2014511240-A OR JP-2013119018-A OR JP-2011502369-A OR JP-2008510588-A OR JP-2008289616-A OR JP-2006212228-A OR JP-2006034941-A OR JP-2002282322-A OR JP-2000189525-A OR GB-2262236-A OR GB-2066081-A OR EP-2328255-A1 OR EP-2080500-A1 OR EP-1728494-A1 OR DE-3633888-A1 OR DE-202015005257-U1 OR DE-19905199-A1 OR DE-102015102112-A1 OR CN-86101310-A OR CN-209154392-U OR CN-208405314-U OR CN-207855923-U OR CN-207286298-U OR CN-206081000-U OR CN-205598186-U OR CN-205494357-U OR CN-205459750-U OR CN-205163583-U OR CN-202637439-U OR CN-201333160-Y OR CN-201239338-Y OR CN-201239336-Y OR CN-1432452-A OR CN-113509366-A OR CN-113143721-A OR CN-111973419-A OR CN-111616938-A OR CN-110868983-A OR CN-109259995-A OR CN-106618998-A OR CN-106236528-A OR CN-106074129-A OR CN-103648320-A OR CN-101888050-A OR AU-2019204770-B1 OR AT-510048-A1 OR WO-2023172676-A2 OR CN-108543126-A OR CN-109009978-A OR KR-200345192-Y1 OR JP-2003275265-A OR					

		WO-2021222571-A1 OR WO-2022011251-A1 OR CN-109907965-A OR CN-205286890-U OR EP-1964537-A1 OR CN-110996874-A OR CN-206434556-U OR WO-2008113139-A1 OR WO-2018119106-A1 OR CN-110812178-A OR CN-111067786-A).did. AND FTDB.dbnm.) OR ((WO-2014118596-A1 OR WO-2015038005-A2 OR JP-2010534110-W OR WO-2013114084-A1 OR CN-104352341-A OR CN-201743890-U OR CN-201524220-U OR CN-201847899-U OR TW-201440753-A OR RU-2170567-C1 OR CN-208448086-U).did. AND DWPI.dbnm.) OR ((WO-2009014727-A1).did. AND EPAB.dbnm.) OR ((JP-2005204777-A OR JP-02019157-A OR JP-07051393-A OR JP-2015035844-A OR JP-2003077837-A).did. AND JPAB.dbnm.) OR ((KR-101406275-B1 OR CN-2788807-Y OR CN-203598194-U OR KR-200313149-Y1 OR JP-3077837-U OR EP-0436719-A4).did. AND FPRS.dbnm.)				
L523	218	L522 AND (screen LCD display GUI)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT;	OR	ON	ON	2024/11/01 11:40 AM

			IBM_TDB)				
L524	773	((US-20200323733-A1 OR US-20200281805-A1 OR US-20200268594-A1 OR US-20200261306-A1 OR US-20190254921-A1 OR US-20200241683-A1 OR US-20200000678-A1 OR US-20190365598-A1 OR US-20180133101-A1 OR US-20200253818-A1 OR US-20190247271-A1 OR US-20190175434-A1 OR US-20190083352-A1 OR US-20150005682-A1 OR US-20180296433-A1 OR US-20180256432-A1 OR US-20180243158-A1 OR US-20180008512-A1 OR US-20170361386-A1 OR US-20170304145-A1 OR US-20170304144-A1 OR US-20170156974-A1 OR US-20170079865-A1 OR US-20150119771-A1 OR US-20130261516-A1 OR US-20130133210-A1 OR US-20120253245-A1 OR US-20110041864-A1 OR US-20100331745-A1 OR US-20100145242-A1 OR US-20100125228-A1 OR US-20080177207-A1 OR US-20070144310-A1 OR US-20060123941-A1 OR US-20050252011-A1 OR US-20050159689-A1 OR US-20050131461-A1 OR US-20040039314-A1 OR US-20030094356-A1 OR US-20200107988-A1 OR US-20200085673-A1 OR US-20200009005-A1 OR	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/11/01 02:08 PM

		US-20120310120-A1 OR US-20020068887-A1 OR US-20200179210-A1 OR US-20190231630-A1 OR US-20190015295-A1 OR US-20200245931-A1 OR US-20200219615-A1 OR US-20200222276-A1 OR US-20190282442-A1 OR US-20130331745-A1 OR US-20150305971-A1 OR US-20120296244-A1 OR US-20090112134-A1 OR US-20200390644-A1 OR US-20130079689-A1 OR US-20050131273-A1 OR US-20130035617-A1 OR US-20170274242-A1 OR US-20070129220-A1 OR US-20190307395-A1 OR US-20170095398-A1 OR US-20120078071-A1 OR US-20200069936-A1 OR US-20150216719-A1 OR US-20190290531-A1 OR US-20150305969-A1 OR US-20100081971-A1 OR US-20130014968-A1 OR US-20100162579-A1 OR US-20170156975-A1 OR US-20090326540-A1 OR US-20200354091-A1 OR US-20140207032-A1 OR US-20180353812-A1 OR US-20210020069-A1 OR US-20160346163-A1 OR US-20140194900-A1 OR US-20070150004-A1 OR US-20130281897-A1 OR US-20180288160-A1 OR US-20170049278-A1 OR US-20210128402-A1 OR US-20150297393-A1 OR US-20050209537-					

		A1 OR US-20020072693-A1 OR US-20030028134-A1 OR US-20030149381-A1 OR US-20190262607-A1 OR US-20130046212-A1 OR US-20210244611-A1 OR US-20220331199-A1 OR US-20220211572-A1 OR US-20220151865-A1 OR US-20220096319-A1 OR US-20220031554-A1 OR US-20210244609-A1 OR US-20210196562-A1 OR US-20210113427-A1 OR US-20210022951-A1 OR US-20200289364-A1 OR US-20200276079-A1 OR US-20200085675-A1 OR US-20190254922-A1 OR US-20210077340-A1 OR US-20170225245-A1 OR US-20170043466-A1 OR US-20060288594-A1 OR US-20100031517-A1 OR US-20090025949-A1 OR US-20070180711-A1 OR US-20070050994-A1 OR US-20050257385-A1 OR US-20050257382-A1 OR US-20030110646-A1 OR US-20150005750-A1 OR US-20040260211-A1 OR US-20160206502-A1 OR US-20090270915-A1 OR US-20210038472-A1 OR US-20220233397-A1 OR US-20200069510-A1 OR US-20200330321-A1 OR US-20200261307-A1 OR US-20200289365-A1 OR US-20200261310-A1 OR US-20190017528-A1 OR US-20180200141-A1 OR					

		US-20190015294-A1 OR US-20180263845-A1 OR US-20160367425-A1 OR US-20170027798-A1 OR US-20210022955-A1 OR US-20200405574-A1 OR US-20200352821-A1 OR US-20200352820-A1 OR US-20210059898-A1 OR US-20010016697-A1 OR US-20030009116-A1 OR US-20030195443-A1 OR US-20060025710-A1 OR US-20060192527-A1 OR US-20080103419-A1 OR US-20140180331-A1 OR US-20150148592-A1 OR US-20130138023-A1 OR US-20030144615-A1 OR US-20180236572-A1 OR US-20150375315-A1 OR US-20180279843-A1 OR US-20070270727-A1 OR US-20140310900-A1 OR US-20100274162-A1 OR US-20050126018-A1 OR US-20080314610-A1 OR US-20140024982-A1 OR US-20210244610-A1 OR US-20100210194-A1 OR US-20130237751-A1 OR US-20150133833-A1 OR US-20160030279-A1 OR US-20060074455-A1 OR US-20060047315-A1 OR US-20050235988-A1 OR US-20050203445-A1 OR US-20050109137-A1 OR US-20050113870-A1 OR US-20050075591-A1 OR US-20040176710-A1 OR US-20020188233-A1 OR US-20020183668-A1 OR US-20020177795-					

		A1 OR US-20020115947-A1 OR US-20020082532-A1 OR US-20030014079-A1 OR US-20010027280-A1 OR US-20080312568-A1 OR US-20080306417-A1 OR US-20080243041-A1 OR US-20080200849-A1 OR US-20080185888-A1 OR US-20080169715-A1 OR US-20080167588-A1 OR US-20080146980-A1 OR US-20080097260-A1 OR US-20080077061-A1 OR US-20070282228-A1 OR US-20070179414-A1 OR US-20070173886-A1 OR US-20060272664-A1 OR US-20060211961-A1 OR US-20060116614-A1 OR US-20060118841-A1 OR US-20110314677-A1 OR US-20110224580-A1 OR US-20110201979-A1 OR US-20110118637-A1 OR US-20110055720-A1 OR US-20110037431-A1 OR US-20100298863-A1 OR US-20100286569-A1 OR US-20100176919-A1 OR US-20100160841-A1 OR US-20100137907-A1 OR US-20100100119-A1 OR US-20090309313-A1 OR US-20090270777-A1 OR US-20090188119-A1 OR US-20130304642-A1 OR US-20130271067-A1 OR US-20130261517-A1 OR US-20130241470-A1 OR US-20130218058-A1 OR US-20130116503-A1 OR US-20130085421-A1 OR					

		US-20130052871-A1 OR US-20130030506-A1 OR US-20120238922-A1 OR US-20120232445-A1 OR US-20120197357-A1 OR US-20120161706-A1 OR US-20120124758-A1 OR US-20120065556-A1 OR US-20120059294-A1 OR US-20150176674-A1 OR US-20150157528-A1 OR US-20150145297-A1 OR US-20150098184-A1 OR US-20150082562-A1 OR US-20150042254-A1 OR US-20140316313-A1 OR US-20140305747-A1 OR US-20140288473-A1 OR US-20140221887-A1 OR US-20140209594-A1 OR US-20140200495-A1 OR US-20140190023-A1 OR US-20140163443-A1 OR US-20140101872-A1 OR US-20140097793-A1 OR US-20140031866-A1 OR US-20160243359-A1 OR US-20160192814-A1 OR US-20160166464-A1 OR US-20160170996-A1 OR US-20160136037-A1 OR US-20160136040-A1 OR US-20160129186-A1 OR US-20160127129-A1 OR US-20160113840-A1 OR US-20160113841-A1 OR US-20160112841-A1 OR US-20160045661-A1 OR US-20160017905-A1 OR US-20160000642-A1 OR US-20150328081-A1 OR US-20150257964-A1 OR US-20170312161-A1 OR US-20170246074-					

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PE2E SEARCH - Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
N1	3	((percuss$ near3 (massag$ therap$)) AND ((head attachment) near5 ((biometric$ thermal$ temperature) near3 (monitor$ transduc$ sens$))))).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 02:10 PM
N2	2	((percuss$ near3 (massag$ therap$)) AND ((head attachment) near5 ((biometric$ thermal$ temperature) near3 (monitor$ transduc$ sens$))) AND (electric$ near3 (contact$ connect$))).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/15 02:13 PM
N3	2	(((percuss$ reciprocat$) near5 (massag$ therap$)) AND (motor) AND (axis axes) AND (perpendicular$ normal (right ADJ angle)) AND (plane) AND (shaft pin eccentric) AND	(US-PGPUB; USPAT)	OR	ON	ON	2023/10/20 12:17 PM

		(pushrod push-rod (push ADJ rod))).clm.					
N4	2	(((percuss$ reciprocat$) near5 (massag$ therap$)) AND (motor) AND (axis axes) AND (perpendicular$ normal (right ADJ angle)) AND (plane) AND (pushrod push-rod (push ADJ rod))).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2023/10/20 12:18 PM
N5	3	(((percuss$ reciprocat$) near5 (massag$ therap$)) AND (motor) AND (axis axes) AND (perpendicular$ normal (right ADJ angle)) AND (plane) AND (shaft pin eccentric) AND (pushrod push-rod (push ADJ rod))).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2024/03/14 06:35 PM
N6	3	(((percuss$ reciprocat$) near5 (massag$ therap$)) AND (motor) AND (axis axes) AND (perpendicular$ normal (right ADJ angle)) AND (plane) AND (pushrod push-rod (push ADJ rod))).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2024/03/14 06:35 PM

UNITED STATES
PATENT AND TRADEMARK OFFICE

P.O. Box 1450
Alexandria, VA 22313 - 1450
www.uspto.gov

ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
18/809,073	**10/07/2024 04:54:16 PM Z ET**	**5015.039000J**

Title of Invention

PERCUSSIVE THERAPY DEVICE WITH ELECTRICALLY CONNECTED ATTACHMENT

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	6015	FILED BY	Rolonda Lee
PATENT CENTER #	67464065	FILING DATE	08/19/2024
CUSTOMER #	186370	FIRST NAMED INVENTOR	Jason WERSLAND
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	Joseph Venier

Documents

TOTAL DOCUMENTS: 4

DOCUMENT		PAGES	DESCRIPTION	SIZE (KB)
2024-10-07-Transmittal-Form-5015-039000J.pdf		1	Transmittal Letter	163 KB
2024-10-07-Preliminary-Amendment-5015-039000J.pdf		7	-	119 KB
2024-10-07-Preliminary-Amendment-5015-039000J-A.PE.pdf	(1-1)	1	Preliminary Amendment	94 KB
2024-10-07-Preliminary-Amendment-5015-039000J-CLM.pdf	(2-6)	5	Claims	86 KB
2024-10-07-Preliminary-Amendment-5015-039000J-REM.pdf	(7-7)	1	Applicant Arguments/Remarks Made in an Amendment	81 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
2024-10-07-Transmittal-Form-5015-039000J.pdf	AF06B553D51A36C1C66DFCEAB6EC726E76CCA1648819AF9CE018CAF5C9FC210AFE2C490F9EA6035F536FFBA3BD1298BD1EE1B1C88B032F10F6C8A8A7734B5339
2024-10-07-Preliminary-Amendment-5015-039000J.pdf	1D4C8D686527B569284410F0304881C07A13619AE036277FA0A358E76247A7DFAE2DABA9255BB9783553B6F967D6910035797E3B44638D61945ED1A204268C35
2024-10-07-Preliminary-Amendment-5015-039000J-A.PE.pdf	FFF7332A26F1B6FFDC841A1BCAA69CC8E63ED5CDD527053F166AB62960E1D2D991BAA4A8C24ACB94F96539E6A9CAF91087FAF9C5FF77AAB5ECE2758D7F42D20F
2024-10-07-Preliminary-Amendment-5015-039000J-CLM.pdf	6EEFC9E252B8EA3D1408099C87D7F897DEABF8D389377E102CC3B67A0A6E22B9A061575852B60AFADBE19BECDC85EE4FD2E5C842286129C5CDE1FAD127BD157B
2024-10-07-Preliminary-Amendment-5015-039000J-REM.pdf	2C0CA167F0470C47B9AA576E4AB221048508EBA4C585B0F78E187F652361706B5F2B99C6E4ACC61E7CEFC8B0233559921D0CC065D52F44814DD7853F53F07100

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor: Jason WERSLAND	Confirmation No.: 6015
Applicant: Therabody, Inc.	Art Unit: 3785
Application No.: 18/809,073	Examiner: Colin W. Stuart
Filing Date: August 19, 2024	Atty. Docket: 5015.039000J

Title: **PERCUSSIVE THERAPY DEVICE WITH ELECTRONICALLY CONNECTED ATTACHMENT**

Preliminary Amendment Under 37 C.F.R. § 1.115

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Mail Stop Amendment

Commissioner:

In advance of prosecution, Applicant submits the following amendments and remarks.

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) A percussive therapy system comprising:

a percussive therapy device comprising:

a housing;

a handle portion;

a motor positioned in the housing and configured to output torque about a motor axis;

an eccentric shaft configured to travel in a circle about the motor axis in response to activation of the motor; and

a push rod assembly operatively connected to the motor and configured to reciprocate in response to activation of the motor, wherein the push rod assembly comprises an output shaft configured to travel along a reciprocation axis when the push rod assembly reciprocates, the reciprocation axis extends transverse to the handle portion on a dividing plane normal to the motor axis, a proximal end of the push rod assembly is connected to the eccentric shaft at a location offset from the dividing plane in a first direction, the motor extends away from the handle portion and away from the dividing plane in a second direction opposite the first direction, and an interior angle defined between the handle portion and the output shaft is obtuse; and

an attachment configured to be operatively connected to the ~~connector~~output shaft of the percussive therapy device.

2. (Original) A percussive therapy device comprising:

a motor configured to output torque about a motor axis;

a handle portion extending along a handle portion axis;

a housing; and

Hyper Ice, Inc. Ex. 1003-Page 862
Hyper Ice, Inc. v. Therabody, Inc.

a push rod assembly comprising:

an output shaft configured to reciprocate along a reciprocation axis in response to activation of the motor and having a distal end that comprises a connector for an attachment, wherein the output shaft is centered on the reciprocation axis and the reciprocation axis extends on a dividing plane; and

a push rod having a proximal end operatively connected to the motor and a distal end connected to the output shaft;

wherein the dividing plane is normal to the motor axis, and

wherein the handle portion axis extends at an oblique angle to the reciprocation axis and intersects the reciprocation axis and the motor axis.

3. (New) The percussive therapy system of claim 1, wherein the handle portion extends longitudinally away from the reciprocation axis.

4. (New) The percussive therapy system of claim 1, wherein the percussive therapy device comprises a bearing between the eccentric shaft and the push rod assembly, the output shaft is centered on the reciprocation axis, and the bearing and the motor are positioned on opposite sides of the reciprocation axis.

5. (New) The percussive therapy system of claim 4, wherein the push rod assembly comprises a push rod, the push rod comprises a proximal end coupled to the bearing at a first distance from the reciprocation axis, the push rod comprises a distal end coupled to the output shaft at a second distance from the reciprocation axis, and the first distance is greater than the second distance.

6. (New) The percussive therapy system of claim 4, wherein the push rod assembly comprises a push rod, the push rod comprises a proximal end that extends a first distance from the

Hyper Ice, Inc. Ex. 1003-Page 863
Hyper Ice, Inc. v. Therabody, Inc.

reciprocation axis, the push rod comprises a distal end that extends a second distance from the reciprocation axis, and the first distance is greater than the second distance.

7. (New) The percussive therapy system of claim 1, wherein the device comprises a switch for activating the motor, and the switch is located on a portion of the housing that faces an opposite direction from a distal end of the push rod assembly.

8. (New) The percussive therapy system of claim 1, wherein the device comprises a switch and an electronic display that faces a same direction as the switch, wherein the switch is configured for activating the motor.

9. (New) The percussive therapy system of claim 1, wherein the handle portion extends along a handle portion axis, the reciprocation axis and the handle portion axis both lie on a common plane, and the common plane bisects the housing.

10. (New) The percussive therapy system of claim 1, comprising a battery housed in the handle portion.

11. (New) The percussive therapy system of claim 1, wherein the housing comprises a first extension that extends away from the handle portion and encloses a portion of the push rod assembly, and the housing comprises a second extension that extends away from the handle portion and the first extension.

12. (New) The percussive therapy device of claim 2, comprising a backward facing electronic display and a backward facing switch configured to activate the motor.

Hyper Ice, Inc. Ex. 1003-Page 864
Hyper Ice, Inc. v. Therabody, Inc.

13. (New) The percussive therapy device of claim 2, comprising a switch configured to activate the motor, wherein the switch is located on a portion of the housing that faces an opposite direction from the distal end of the output shaft.

14. (New) The percussive therapy device of claim 2, wherein:

the motor is located on a first side of the dividing plane;

the device includes an eccentric shaft that is configured to travel in a circle about the motor axis when the motor is active; and

the proximal end of the push rod is operatively connected to the motor by the eccentric shaft, wherein the proximal end of the push rod is coupled to the eccentric shaft on a second side of the dividing plane that is opposite from the first side of the dividing plane.

15. (New) The percussive therapy device of claim 14, wherein the proximal end of the push rod extends a first distance from the dividing plane, the distal end of the push rod extends a second distance from the dividing plane, and the first distance is greater than the second distance.

16. (New) The percussive therapy device of claim 14, wherein the proximal end of the push rod is coupled to the eccentric shaft at a first distance from the dividing plane, the distal end of the push rod is connected to the output shaft at a second distance from the dividing plane, and the first distance is greater than the second distance.

17. (New) The percussive therapy device of claim 2, wherein the handle portion extends longitudinally away from the reciprocation axis.

18. (New) The percussive therapy device of claim 2, wherein an interior angle defined between the handle portion and the output shaft is obtuse.

Hyper Ice, Inc. Ex. 1003-Page 865
Hyper Ice, Inc. v. Therabody, Inc.

19. (New) The percussive therapy system of claim 2, comprising a battery housed in the handle portion.

20. (New) The percussive therapy system of claim 2, wherein the housing comprises a first extension that extends away from the handle portion and encloses the push rod assembly, and the housing comprises a second extension that extends away from the handle portion and the first extension.

Hyper Ice, Inc. Ex. 1003-Page 866
Hyper Ice, Inc. v. Therabody, Inc.

Remarks

Upon entry of the foregoing amendment, claims 1-20 are pending in the application, with claims 1 and 2 being the independent claims. Claim 1 is amended. New claims 3-20 are sought to be added. These changes introduce no new matter, and their entry is respectfully requested.

Conclusion

Prompt and favorable consideration of this Preliminary Amendment is respectfully requested. Applicant believes the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

/Joseph K. Venier/

Joseph K. Venier
Attorney for Applicant
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23290523.1

Hyper Ice, Inc. Ex. 1003-Page 867
Hyper Ice, Inc. v. Therabody, Inc.

Doc Code: TRAN.LET

Document Description: Transmittal Letter

PTO/SB/21 (07-09)
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TRANSMITTAL FORM

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Total Number of Pages in This Submission

Application Number	18/809,073
Filing Date	August 19, 2024
First Named Inventor	Jason WERSLAND
Art Unit	3785
Examiner Name	Colin W. Stuart
Attorney Docket Number	5015.039000J

ENCLOSURES *(Check all that apply)*

- ☐ Fee Transmittal Form
  - ☐ Fee Attached
- ☑ Amendment/Reply
  - ☐ After Final
  - ☐ Affidavits/declaration(s)
- ☐ Extension of Time Request
- ☐ Express Abandonment Request
- ☐ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Reply to Missing Parts/ Incomplete Application
  - ☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☐ Petition
- ☐ Petition to Convert to a Provisional Application
- ☐ Power of Attorney, Revocation Change of Correspondence Address
- ☐ Terminal Disclaimer
- ☐ Request for Refund
- ☐ CD, Number of CD(s) _____
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- ☐ After Allowance Communication to TC
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☐ Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**
- ☐ Proprietary Information
- ☐ Status Letter
- ☐ Other Enclosure(s) (please identify below):

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Firm Name	Sterne, Kessler, Goldstein & Fox P.L.L.C.		
Signature	/Joseph K. Venier/		
Printed name	Joseph K. Venier		
Date	October 7, 2024	Reg. No.	76,838

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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 18/809,073	Filing Date 08/19/2024	☐ To be Mailed

ENTITY: ☐ LARGE ☑ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A		N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A		N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*		x $40 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $ 192 =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).				
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))					
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT	10/07/2024	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 20	Minus	** 20	= 0		x $40 =	0
	Independent (37 CFR 1.16(h))	* 2	Minus	*** 3	= 0		x $ 192 =	0
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	0

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=		x $0 =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=		x $0 =	
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	

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*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".	
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/809,073	08/19/2024	Jason WERSLAND	5015.039000J	6015

186370 7590 09/19/2024
STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.
(Therabody)
1101 K Street, NW
10th Floor
WASHINGTON, DC 20005

EXAMINER
CENTRAL, DOCKET

ART UNIT	PAPER NUMBER
OPAP	

NOTIFICATION DATE	DELIVERY MODE
09/19/2024	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

e-office@sternekessler.com

Decision Granting Request for Prioritized Examination (Track I)	**Application No.** 18/809,073	**Applicant(s)** WERSLAND et al.	
	Examiner FIKIRTE A GEREMEW	**Art Unit** OMBL	**AIA (FITF) Status** Yes

1. THE REQUEST FILED 19 August 2024 IS **GRANTED** .

   The above-identified application has met the requirements for prioritized examination
   - A. ☑ for an original nonprovisional application (Track I).
   - B. ☐ for an application undergoing continued examination (RCE).

2. **The above-identified application will undergo prioritized examination**. The application will be accorded special status throughout its entire course of prosecution until one of the following occurs:
   - A. filing a **petition for extension of time** to extend the time period for filing a reply;
   - B. filing an **amendment to amend the application to contain more than four independent claims, more than thirty total claims** , or a multiple dependent claim;
   - C. filing a **request for continued examination** ;
   - D. filing a notice of appeal;
   - E. filing a request for suspension of action;
   - F. mailing of a notice of allowance;
   - G. mailing of a final Office action;
   - H. completion of examination as defined in 37 CFR 41.102; or
   - I. abandonment of the application.

Telephone inquiries with regard to this decision should be directed to FIKIRTE GEREMEW at (703) 756-1930. In his/her absence, calls may be directed to Petition Help Desk at (571) 272-3282.

/FIKIRTE A GEREMEW/ PROGRAM SUPPORT SPECIALIST, OMBL	

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 18/809,073

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY FEE($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	64		N/A	
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	280		N/A	
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	320		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	2 minus 20 =	* 0	x =	0	OR		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	2 minus 3 =	*	x =	0			
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			0			
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				0			
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APPLICATION AS AMENDED - PART II

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
AMENDMENT A	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE($)	ADDITIONAL FEE($)	OR	RATE($)	ADDITIONAL FEE($)
AMENDMENT B	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
18/809,073	08/19/2024		824	5015.039000J	2	2

CONFIRMATION NO. 6015

FILING RECEIPT

186370
STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.
(Therabody)
1101 K Street, NW
10th Floor
WASHINGTON, DC 20005

Date Mailed: 09/04/2024

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

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Inventor(s)

Jason WERSLAND, Manhattan Beach, CA;
Benjamin NAZARIAN, Beverly Hills, CA;
Jaime SANCHEZ SOLANA, Los Angeles, CA;
Eduardo MERINO, Beverly Hills, CA;
Richard TANG, Shenzhen, CHINA;

Applicant(s)

Therabody, Inc., Los Angeles, CA;

Power of Attorney: The patent practitioners associated with Customer Number 186370

Domestic Priority data as claimed by applicant

This application is a CON of 18/162,499 01/31/2023 PAT 12,064,387
which is a CON of 17/244,278 04/29/2021 PAT 11,564,860
and is a CON of 17/739,630 05/09/2022 PAT 11,890,253
and said 17/244,278 04/29/2021 is a CIP of 17/018,099 09/11/2020 PAT 11,357,697
which is a CIP of 16/869,402 05/07/2020 PAT 10,857,064
which is a CIP of 16/796,143 02/20/2020 PAT 10,940,081
which claims benefit of 62/844,424 05/07/2019
and claims benefit of 62/899,098 09/11/2019
and claims benefit of 62/912,392 10/08/2019
and said 16/869,402 05/07/2020 is a CIP of 16/675,772 11/06/2019 PAT 10,702,448
which claims benefit of 62/785,151 12/26/2018
and said 17/244,278 04/29/2021 claims benefit of 63/133,951 01/05/2021

and claims benefit of 63/017,472 04/29/2020
and said 17/739,630 05/09/2022 is a CIP of 17/244,239 04/29/2021 PAT 11,452,670
which is a CIP of 17/018,099 09/11/2020 PAT 11,357,697
and claims benefit of 63/133,951 01/05/2021 *
and claims benefit of 63/017,472 04/29/2020
and said 17/739,630 05/09/2022 is a CIP of 17/705,300 03/26/2022 PAT 11,730,668

(*) Data provided by applicant is not consistent with PTO records.

Foreign Applications for which priority is claimed (You may be eligible to benefit from the Patent Prosecution Highway program at the USPTO. Please see http://www.uspto.gov for more information.) - None.
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If Required, Foreign Filing License Granted: 08/29/2024

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 18/809,073**

Projected Publication Date: 12/12/2024

Non-Publication Request: No

Early Publication Request: No
**** SMALL ENTITY ****
Title

PERCUSSIVE THERAPY DEVICE WITH ELECTRICALLY CONNECTED ATTACHMENT

Preliminary Class

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

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Hyper Ice, Inc. Ex. 1003-Page 876
Hyper Ice, Inc. v. Therabody, Inc.

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Kathi Vidal

Kathi Vidal
Under Secretary of Commerce for Intellectual Property and
Director of the United States Patent and Trademark Office

Derrick Brent
Deputy Under Secretary of Commerce for Intellectual Property and
Deputy Director of the United States Patent and Trademark Office

Doc Code: TRACK1.REQ
Document Description: TrackOne Request

PTO/AIA/424 (04-14)

CERTIFICATION AND REQUEST FOR PRIORITIZED EXAMINATION UNDER 37 CFR 1.102(e) (Page 1 of 1)

First Named Inventor:	Jason WERSLAND	Nonprovisional Application Number (if known):	To Be Assigned
Title of Invention:	PERCUSSIVE THERAPY DEVICE WITH ELECTRICALLY CONNECTED ATTACHMENT		

APPLICANT HEREBY CERTIFIES THE FOLLOWING AND REQUESTS PRIORITIZED EXAMINATION FOR THE ABOVE-IDENTIFIED APPLICATION.

1. The processing fee set forth in 37 CFR 1.17(i)(1) and the prioritized examination fee set forth in 37 CFR 1.17(c) have been filed with the request. The publication fee requirement is met because that fee, set forth in 37 CFR 1.18(d), is currently $0. The basic filing fee, search fee, and examination fee are filed with the request or have been already been paid. I understand that any required excess claims fees or application size fee must be paid for the application.

2. I understand that the application may not contain, or be amended to contain, more than four independent claims, more than thirty total claims, or any multiple dependent claims, and that any request for an extension of time will cause an outstanding Track I request to be dismissed.

3. The applicable box is checked below:

I. ☑ Original Application (Track One) - Prioritized Examination under § 1.102(e)(1)

i. (a) The application is an original nonprovisional utility application filed under 35 U.S.C. 111(a). This certification and request is being filed with the utility application via EFS-Web.

---OR---

(b) The application is an original nonprovisional plant application filed under 35 U.S.C. 111(a). This certification and request is being filed with the plant application in paper.

ii. An executed inventor's oath or declaration under 37 CFR 1.63 or 37 CFR 1.64 for each inventor, **or** the application data sheet meeting the conditions specified in 37 CFR 1.53(f)(3)(i) is filed with the application.

II. ☐ Request for Continued Examination - Prioritized Examination under § 1.102(e)(2)

i. A request for continued examination has been filed with, or prior to, this form.
ii. If the application is a utility application, this certification and request is being filed via EFS-Web.
iii. The application is an original nonprovisional utility application filed under 35 U.S.C. 111(a), or is a national stage entry under 35 U.S.C. 371.
iv. This certification and request is being filed prior to the mailing of a first Office action responsive to the request for continued examination.
v. No prior request for continued examination has been granted prioritized examination status under 37 CFR 1.102(e)(2).

Signature /Joseph K. Venier/	Date August 19, 2024
Name (Print/Typed) Joseph K. Venier	Practitioner Registration Number 76,838

Note: *This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. Submit multiple forms if more than one signature is required.**

☐ *Total of _____ forms are submitted.

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

UNITED STATES
PATENT AND TRADEMARK OFFICE

P.O. Box 1450
Alexandria, VA 22313 - 1450
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ELECTRONIC PAYMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
18/809,073	**08/19/2024 06:31:33 PM Z ET**	**5015.039000J**

Title of Invention

PERCUSSIVE THERAPY DEVICE WITH ELECTRICALLY CONNECTED ATTACHMENT

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	6015	FILED BY	Kim Perry
PATENT CENTER #	66842364	AUTHORIZED BY	Joseph Venier
CUSTOMER #	186370	FILING DATE	-
CORRESPONDENCE ADDRESS	-	FIRST NAMED INVENTOR	Jason WERSLAND

Payment Information

PAYMENT METHOD	PAYMENT TRANSACTION ID	PAYMENT AUTHORIZED BY
CARD / 1007	**E20248II33567813**	**Kim Perry**

FEE CODE	DESCRIPTION	ITEM PRICE($)	QUANTITY	ITEM TOTAL($)
2830	PROCESSING FEE, EXCEPT IN PROVISIONAL APPLICATIONS	56.00	1	56.00
2817	REQUEST FOR PRIORITIZED EXAMINATION	1680.00	1	1680.00
2111	UTILITY PATENT APPL. SEARCH FEE	280.00	1	280.00
4011	BASIC FILING FEE- UTILITY	64.00	1	64.00
2311	EXAMINATION OF ORIGINAL PATENT APPLICATION	320.00	1	320.00
2054	Non-DOCX Filing Surcharge	160.00	1	160.00
			TOTAL AMOUNT:	**$2,560.00**

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor: Jason, WERSLAND	Confirmation No.: To Be Assigned
Applicant: Therabody, Inc.	Art Unit: To Be Assigned
Application No.: To Be Assigned	Examiner: To Be Assigned
Filing Date: Herewith	Atty. Docket: 5015.039000J

Title: **PERCUSSIVE THERAPY DEVICE WITH INTERCHANGEABLE MODULES**

Information Disclosure Statement

Mail Stop Amendment

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Commissioner:

Listed on accompanying IDS Form PTO/SB/08 or its equivalent are documents that may be considered material to the patentability of this application as defined in 37 C.F.R. §1.56, and in compliance with the duty of disclosure requirements of 37 C.F.R. §§ 1.97 and 1.98.

Applicant has listed dates on the attached IDS Form based on information presently available to the undersigned. However, the listed dates should not be construed as an admission that the information was actually published on the date indicated.

Applicant reserves the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered.

This statement should not be construed as a representation that a search has been made, or that information more material to the examination of the present patent application does not exist. The Examiner is specifically requested not to rely solely on the material submitted herewith.

This Information Disclosure Statement is being filed under 37 C.F.R. § 1.97(b) and is being filed before the mailing date of a first Office Action on the merits. No statement or fee is required.

In accordance with 37 C.F.R. § 1.98(a)(2)(ii), no copies of U.S. patents and patent application publications cited as documents **US1-US518** on the attached IDS Form are submitted.

Copies of the **FP1-FP119** and **NPL1-NPL73** documents were cited by or submitted to the Office in an IDS that complies with 37 C.F.R. § 1.98(a)-(c) in Application No. 18/162,499, filed January 31, 2023, which is relied upon for an earlier filing date under 35 U.S.C. § 120. Thus, copies of these documents are not attached. 37 C.F.R. § 1.98(d).

It is expected that the examiner will review the prosecution and cited art in the parent Application Nos. 18/162,499; 17/244,278; 17/739,630; 17/018,099; 16/869,402; 16/796,143; 16/675,772; 17/244,239; 17/018,099; and 17/705,300 in accordance with MPEP 2001.06(b), and indicate in the next communication from the office that the art cited in the earlier prosecution history has been reviewed in connection with the present application.

It is respectfully requested that the Examiner initial and return a copy of the enclosed IDS Forms, and indicate in the official file wrapper of this patent application that the documents have been considered.

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

/Joseph K. Venier/

Joseph K. Venier
Attorney for Applicant
Registration No. 76,838

Date: August 19, 2024

1101 K Street NW, 10th Floor
Washington, D.C. 20005
(202) 371-2600

Hyper Ice, Inc. Ex. 1003-Page 883
Hyper Ice, Inc. v. Therabody, Inc.

Doc Code: PA..
Document Description: Power of Attorney

PTO/AIA/82A (07-13)
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TRANSMITTAL FOR POWER OF ATTORNEY TO ONE OR MORE REGISTERED PRACTITIONERS

NOTE: This form is to be submitted with the Power of Attorney by Applicant form (PTO/AIA/82B) to identify the application to which the Power of Attorney is directed, in accordance with 37 CFR 1.5, unless the application number and filing date are identified in the Power of Attorney by Applicant form. If neither form PTO/AIA/82A nor form PTO/AIA82B identifies the application to which the Power of Attorney is directed, the Power of Attorney will not be recognized in the application.

Application Number	To Be Assigned
Filing Date	Herewith
First Named Inventor	Jason WERSLAND
Title	PERCUSSIVE THERAPY DEVICE WITH ELECTRICALLY CONNECTED ATTACHMENT
Art Unit	To Be Assigned
Examiner Name	To Be Assigned
Attorney Docket Number	5015.039000J

SIGNATURE of Applicant or Patent Practitioner

Signature	/Joseph K. Venier/	Date (Optional)	August 19, 2024
Name	Joseph K. Venier	Registration Number	76,838
Title (if Applicant is a juristic entity)	Attorney for Applicant		
Applicant Name (if Applicant is a juristic entity)	Therabody, Inc.		

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. If more than one applicant, use multiple forms.

☐ *Total of _____ forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor: Jason WERSLAND	Confirmation No.: *To Be Assigned*
Applicant: Therabody, Inc.	Art Unit: *To Be Assigned*
Application No.: *To Be Assigned*	Examiner: *To Be Assigned*
Filed: *Herewith*	Atty. Docket: 5015.039000J

(Continuation of Appl. No. 18/162,499; Filed January 31, 2023)

Title: **PERCUSSIVE THERAPY DEVICE WITH ELECTRICALLY CONNECTED ATTACHMENT**

Authorization to Treat a Reply as Incorporating an Extension of Time Under 37 C.F.R. § 1.136(a)(3)

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Commissioner:

The U.S. Patent and Trademark Office is hereby authorized to treat any concurrent or future reply that requires a petition for an extension of time under this paragraph for its timely submission, as incorporating a petition for extension of time for the appropriate length of time. The U.S. Patent and Trademark Office is hereby authorized to charge all required extension of time fees to our Deposit Account No. 19-0036, if such fees are not otherwise provided for in such reply.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

/Joseph K. Venier/

Joseph K. Venier
Attorney for Applicant
Registration No. 76,838

Date: August 19, 2024

1101 K Street, NW, 10th Floor
Washington, D.C. 20005
Main: 202-371-2600
Direct: 202-772-8785

22908755.1

PTO/AIA/15 (10-17)
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UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.	5015.039000J
First Named Inventor	Jason WERSLAND
Title	PERCUSSIVE THERAPY DEVICE WITH ELECTRICALLY CONNECTED ATTACHMENT
Priority Mail Express® Label No.	

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

1. ☐ **Fee Transmittal Form** (PTO/SB/17 or equivalent)
2. ☑ **Applicant asserts small entity status.** See 37 CFR 1.27
3. ☐ **Applicant certifies micro entity status.** See 37 CFR 1.29. Applicant must attach form PTO/SB/15A or B or equivalent.
4. ☑ **Specification** [*Total Pages* 64] Both the claims and abstract must start on a new page. *(See MPEP § 608.01(a) for information on the preferred arrangement)*
5. ☑ **Drawing(s)** (35 U.S.C. 113) [*Total Sheets* 51]
6. **Inventor's Oath or Declaration** [*Total Pages* 5] *(including substitute statements under 37 CFR 1.64 and assignments serving as an oath or declaration under 37 CFR 1.63(e))*
   a. ☐ Newly executed (original or copy)
   b. ☑ A copy from a prior application (37 CFR 1.63(d))
7. ☑ **Application Data Sheet** ** See note below.* See 37 CFR 1.76 (PTO/AIA/14 or equivalent)
8. **CD-ROM or CD-R** in duplicate, large table, or Computer Program (*Appendix*)
   ☐ Landscape Table on CD
9. **Nucleotide and/or Amino Acid Sequence Submission** (*if applicable, items a. – c. are required*)
   a. ☐ Computer Readable Form (CRF)
   b. ☐ Specification Sequence Listing on:
      i. ☐ CD-ROM or CD-R (2 copies); or
      ii. ☐ Paper
   c. ☐ Statements verifying identity of above copies

ADDRESS TO:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

ACCOMPANYING APPLICATION PAPERS

10. ☐ **Assignment Papers** (cover sheet & document(s))
    Name of Assignee _____
11. ☐ **37 CFR 3.73(c) Statement** (*when there is an assignee*) ☑ **Power of Attorney**
12. ☐ **English Translation Document** (*if applicable*)
13. ☑ **Information Disclosure Statement** (PTO/SB/08 or PTO-1449)
    ☐ Copies of citations attached
14. ☐ **Preliminary Amendment**
15. ☐ **Return Receipt Postcard** (*MPEP § 503*) (*Should be specifically itemized*)
16. ☐ **Certified Copy of Priority Document(s)** (*if foreign priority is claimed*)
17. ☐ **Nonpublication Request** Under 35 U.S.C. 122(b)(2)(B)(i). Applicant must attach form PTO/SB/35 or equivalent.
18. ☑ **Other:** Authorization Under 37 C.F.R. § 1.136(a)(3); Certification and Request for Prioritized Examination Under 37 C.F.R. § 1.102(e); Online Credit Card Authorization for $2,560.00 to cover: $664.00 – Application Filing Fees; $160.00 – Non-DOCX Filing Surcharge $1,680.00 – Track One Request Fee; $56.00 – Processing Fee.

***Note**: (1) Benefit claims under 37 CFR 1.78 and foreign priority claims under 1.55 **must** be included in an Application Data Sheet (ADS).
(2) For applications filed under 35 U.S.C. 111, the application must contain an ADS specifying the applicant if the applicant is an assignee, person to whom the inventor is under an obligation to assign, or person who otherwise shows sufficient proprietary interest in the matter. See 37 CFR 1.46(b).

19. CORRESPONDENCE ADDRESS

☑ The address associated with Customer Number: 186370 **OR** ☐ Correspondence address below

Name					
Address					
City		State		Zip Code	
Country		Telephone		Email	

Signature	/Joseph K. Venier/	Date	August 19, 2024
Name (Print/Type)	Joseph K. Venier	Registration No. (Attorney/Agent)	76,838

This collection of information is required by 37 CFR 1.53(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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PTO/AIA/14 (02-18)
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	5015.039000J
	Application Number	
Title of Invention	PERCUSSIVE THERAPY DEVICE WITH ELECTRICALLY CONNECTED ATTACHMENT	

The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.
This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.

Secrecy Order 37 CFR 5.2:

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Inventor Information:

Inventor 1 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Jason		WERSLAND	

Residence Information (Select One) ◉ US Residency ○ Non US Residency ○ Active US Military Service

City	Manhattan Beach	State/Province	CA	Country of Residence	US

Mailing Address of Inventor:

Address 1	c/o Therabody, Inc.
Address 2	1640 S. Sepulveda Blvd., Suite 300

City	Los Angeles	State/Province	CA
Postal Code	90025	Country	US

Inventor 2 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Benjamin		NAZARIAN	

Residence Information (Select One) ◉ US Residency ○ Non US Residency ○ Active US Military Service

City	Beverly Hills	State/Province	CA	Country of Residence	US

Mailing Address of Inventor:

Address 1	c/o Therabody, Inc.
Address 2	1640 S. Sepulveda Blvd., Suite 300

City	Los Angeles	State/Province	CA
Postal Code	90025	Country	US

Inventor 3 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Jaime		SANCHEZ SOLANA	

Residence Information (Select One) ◉ US Residency ○ Non US Residency ○ Active US Military Service

PTO/AIA/14 (02-18)
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	5015.039000J
	Application Number	
Title of Invention	PERCUSSIVE THERAPY DEVICE WITH ELECTRICALLY CONNECTED ATTACHMENT	

City	Los Angeles	State/Province	CA	Country of Residence	

Mailing Address of Inventor:

Address 1	c/o Therabody, Inc.		
Address 2	1640 S. Sepulveda Blvd., Suite 300		
City	Los Angeles	State/Province	CA
Postal Code	90025	Country	US

Inventor 4 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Eduardo		MERINO	

Residence Information (Select One) (•) US Residency ( ) Non US Residency ( ) Active US Military Service

City	Beverly Hills	State/Province	CA	Country of Residence	US

Mailing Address of Inventor:

Address 1	c/o Therabody, Inc.		
Address 2	1640 S. Sepulveda Blvd., Suite 300		
City	Los Angeles	State/Province	CA
Postal Code	90025	Country	US

Inventor 5 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Richard		TANG	

Residence Information (Select One) ( ) US Residency (•) Non US Residency ( ) Active US Military Service

City	Shenzhen	Country of Residence	CN

Mailing Address of Inventor:

Address 1	c/o Therabody, Inc.		
Address 2	1640 S. Sepulveda Blvd., Suite 300		
City	Los Angeles	State/Province	CA
Postal Code	90025	Country	US

All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button. Add

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

PTO/AIA/14 (02-18)
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	5015.039000J
	Application Number	
Title of Invention	PERCUSSIVE THERAPY DEVICE WITH ELECTRICALLY CONNECTED ATTACHMENT	

☐ An Address is being provided for the correspondence Information of this application.			
Customer Number	186370		
Email Address		Add Email	Remove Email

Application Information:

Title of the Invention	PERCUSSIVE THERAPY DEVICE WITH ELECTRICALLY CONNECTED ATTACHMENT		
Attorney Docket Number	5015.039000J	**Small Entity Status Claimed**	☒
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	51	**Suggested Figure for Publication (if any)**	

Filing By Reference:

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32).
Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	◉ Customer Number	○ US Patent Practitioner	○ Limited Recognition (37 CFR 11.9)
Customer Number	186370		

PTO/AIA/14 (02-18)
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	5015.039000J
	Application Number	
Title of Invention	PERCUSSIVE THERAPY DEVICE WITH ELECTRICALLY CONNECTED ATTACHMENT	

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim information in the Application Data Sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.
When referring to the current application, please leave the "Application Number" field blank.

Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
	Continuation of	18/162499	2023-01-31

Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
18/162499	Continuation of	17/244278	2021-04-29	11564860	2023-01-31

Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
18/162499	Continuation of	17/739630	2022-05-09	11890253	2024-02-06

Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
17/244278	Continuation in part of	17/018099	2020-09-11	11357697	2022-06-14

Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
17/018099	Continuation in part of	16/869402	2020-05-07	10857064	2020-12-08

Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
16/869402	Continuation in part of	16/796143	2020-02-20	10940081	2021-03-09

Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
16/796143	Claims benefit of provisional	62/844424	2019-05-07

Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
16/796143	Claims benefit of provisional	62/899098	2019-09-11

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	5015.039000J
	Application Number	
Title of Invention	PERCUSSIVE THERAPY DEVICE WITH ELECTRICALLY CONNECTED ATTACHMENT	

Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
16/796143	Claims benefit of provisional	62/912392	2019-10-08

Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
16/869402	Continuation in part of	16/675772	2019-11-06	10702448	2020-07-07

Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
16/675772	Claims benefit of provisional	62/785151	2018-12-26

Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
17/244278	Claims benefit of provisional	63/133951	2021-01-05

Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
17/244278	Claims benefit of provisional	63/017472	2020-04-29

Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
17/739630	Continuation in part of	17/244239	2021-04-29	11452670	2022-09-27

Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
17/244239	Continuation in part of	17/018099	2020-09-11	11357697	2022-06-14

Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
17/244239	Claims benefit of provisional	63/133951	2021-01-04

Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
17/244239	Claims benefit of provisional	63/017472	2020-04-29

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	5015.039000J
	Application Number	
Title of Invention	PERCUSSIVE THERAPY DEVICE WITH ELECTRICALLY CONNECTED ATTACHMENT	

Prior Application Status	Patented			Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
17/739630	Continuation in part of	17/705300	2022-03-26	11730668	2023-08-22
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button.				Add	

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)[i] the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

			Remove
Application Number	Country[i]	Filing Date (YYYY-MM-DD)	Access Code[i] (if applicable)
Additional Foreign Priority Data may be generated within this form by selecting the **Add** button.			Add

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.
NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

PTO/AIA/14 (02-18)
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	5015.039000J
	Application Number	
Title of Invention	PERCUSSIVE THERAPY DEVICE WITH ELECTRICALLY CONNECTED ATTACHMENT	

Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant **must opt-out** of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

☐ A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

☐ B. Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

NOTE: Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	5015.039000J
	Application Number	
Title of Invention	PERCUSSIVE THERAPY DEVICE WITH ELECTRICALLY CONNECTED ATTACHMENT	

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Applicant 1 Remove

If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.

Clear

◉ Assignee	○ Legal Representative under 35 U.S.C. 117	○ Joint Inventor
○ Person to whom the inventor is obligated to assign.	○ Person who shows sufficient proprietary interest	

If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:

Name of the Deceased or Legally Incapacitated Inventor:

If the Applicant is an Organization check here. ☒

Organization Name	Therabody, Inc.		
Mailing Address Information For Applicant:			
Address 1	1640 S. Sepulveda Blvd., Suite 300		
Address 2			
City	Los Angeles	**State/Province**	CA
Country	US	Postal Code	90025
Phone Number		Fax Number	
Email Address			

Additional Applicant Data may be generated within this form by selecting the Add button. Add

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

PTO/AIA/14 (02-18)
Approved for use through 11/30/2020. OMB 0651-0032
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	5015.039000J
	Application Number	
Title of Invention	PERCUSSIVE THERAPY DEVICE WITH ELECTRICALLY CONNECTED ATTACHMENT	

Assignee 1

Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.

Remove

If the Assignee or Non-Applicant Assignee is an Organization check here. ☐

Prefix	**Given Name**	Middle Name	**Family Name**	Suffix

Mailing Address Information For Assignee including Non-Applicant Assignee:

Address 1			
Address 2			
City		**State/Province**	
Country i		Postal Code	
Phone Number		Fax Number	
Email Address			

Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button. Add

Signature:

Remove

NOTE: This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). **However, if this Application Data Sheet is submitted with the INITIAL filing of the application and either box A or B is not checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c).**

This Application Data Sheet **must** be signed by a patent practitioner if one or more of the applicants is a **juristic entity** (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, **all** joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of **all** joint inventor-applicants.

See 37 CFR 1.4(d) for the manner of making signatures and certifications.

Signature	/Joseph K. Venier/			Date (YYYY-MM-DD)	2024-08-19
First Name	Joseph	Last Name	Venier	Registration Number	76,838

Additional Signature may be generated within this form by selecting the Add button. Add

PTO/AIA/14 (02-18)
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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	5015.039000J
	Application Number	
Title of Invention	PERCUSSIVE THERAPY DEVICE WITH ELECTRICALLY CONNECTED ATTACHMENT	

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1 The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3 A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent CooperationTreaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Doc Code: PA..
Document Description: Power of Attorney

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POWER OF ATTORNEY BY APPLICANT

I hereby revoke all previous powers of attorney given in the application identified in either the attached transmittal letter or the boxes below.

Application Number	Filing Date

(Note: The boxes above may be left blank if information is provided on form PTO/AIA/82A.)

☑ I hereby appoint the Patent Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above: 186370

OR

☐ I hereby appoint Practitioner(s) named in the attached list (form PTO/AIA/82C) as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the patent application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above. (Note: Complete form PTO/AIA/82C.)

Please recognize or change the correspondence address for the application identified in the attached transmittal letter or the boxes above to:

☑ The address associated with the above-mentioned Customer Number

OR

☐ The address associated with Customer Number:

OR

☐ Firm or Individual Name					
Address					
City		State		Zip	
Country					
Telephone		Email			

I am the Applicant (if the Applicant is a juristic entity, list the Applicant name in the box):

Therabody, Inc.

☐ Inventor or Joint Inventor (title not required below)

☐ Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)

☑ Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)

☐ Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document) (provide signer's title if applicant is a juristic entity)

SIGNATURE of Applicant for Patent

The undersigned (whose title is supplied below) is authorized to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

Signature	/Jonathan Feldman/	Date (Optional)	
Name	Jonathan Feldman		
Title	General Counsel & Secretary		

NOTE: Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. If more than one applicant, use multiple forms.

☐ Total of forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

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DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of Invention	PERCUSSIVE THERAPY DEVICE WITH ELECTRICALLY CONNECTED ATTACHMENT

As the below named inventor, I hereby declare that:

This declaration is directed to:

☐ The attached application, or

☒ United States application or PCT international application number 17/244,278 filed on April 29, 2021.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

WARNING:

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.

LEGAL NAME OF INVENTOR

Inventor: Jason Wersland Date (Optional) :

Signature: /Jason Wersland/

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 1 minute to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

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DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of Invention	PERCUSSIVE THERAPY DEVICE WITH ELECTRICALLY CONNECTED ATTACHMENT

As the below named inventor, I hereby declare that:

This declaration is directed to:

☐ The attached application, or

☒ United States application or PCT international application number 17/244,278 filed on April 29, 2021.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

WARNING:

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LEGAL NAME OF INVENTOR

Inventor: Benjamin Nazarian Date (Optional) :

Signature: /Benjamin Nazarian/

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.

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DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of Invention	PERCUSSIVE THERAPY DEVICE WITH ELECTRICALLY CONNECTED ATTACHMENT

As the below named inventor, I hereby declare that:

This declaration is directed to:

☐ The attached application, or

☒ United States application or PCT international application number 17/244,278 filed on April 29, 2021.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

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LEGAL NAME OF INVENTOR

Inventor: Jaime Sanchez Solana Date (Optional) :

Signature: /Jaime Sanchez/

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LEGAL NAME OF INVENTOR

Inventor: Eduardo Merino Date (Optional) :

Signature: /Eduardo Merino/

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LEGAL NAME OF INVENTOR

Inventor: Richard Tang Date (Optional) :

Signature: / Richard Tang/

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PERCUSSIVE THERAPY DEVICE WITH ELECTRICALLY CONNECTED ATTACHMENT

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application is a continuation of U.S. Patent Application No. 18/162,499, filed January 31, 2023, which is a continuation of U.S. Patent Application No. 17/244,278 filed April 29, 2021, now U.S. Patent No. 11,564,860. U.S. Patent Application No. 18/162,499 is a continuation of 17/739,630, filed May 9, 2022, now U.S. Patent No. 11,890,253. U.S. Patent Application No 17/244,278 is a continuation-in-part of U.S. Patent Application No. 17/018,099, filed September 11, 2020, now U.S. Patent No. 11,357,697, which is a continuation-in-part of U.S. Patent Application No. 16/869,402, filed May 7, 2020, now U.S. Patent No. 10,857,064, which is a continuation-in-part of U.S. Patent Application No. 16/796,143, filed February 20, 2020, now U.S. Patent No. 10,940,081, which claims the benefit of U.S. Provisional Application No. 62/844,424, filed May 7, 2019, U.S. Provisional Application No. 62/899,098, filed September 11, 2019, and U.S. Provisional Application No. 62/912,392, filed October 8, 2019. U.S. Patent Application No. 16/869,402 is also a continuation-in-part of U.S. Patent Application No. 16/675,772, filed November 6, 2019, now U.S. Patent No. 10,702,448, which claims the benefit of U.S. Provisional Application No. 62/785,151, filed December 26, 2018. U.S. Patent Application No. 17/244,278 also claims the benefit of U.S. Provisional Application No. 63/133,951, filed January 5, 2021 and U.S. Provisional Application No. 63/017,472, filed April 29, 2020. U.S. Patent Application No. 17/739,630 is also a continuation-in-part of U.S. Patent Application No. 17/244,239, filed April 29, 2021, now U.S. Patent No. 11,452,670, which is a continuation-in-part of U.S. Patent Application No. 17/018,099, filed September 11, 2020, now U.S. Patent No. 11,357,697. U.S. Patent Application No. 17/244,239 also claims the benefit of U.S. Provisional Application No. 63/133,951, filed January 4, 2021 and U.S. Provisional Application No. 63/017,472, filed April 29, 2020. U.S. Patent Application No. 17/739,630 is also a continuation-in-part of U.S. Patent Application No. 17/705,300, filed March 26, 2022, now U.S. Patent No. 11,730,668. All applications listed above are incorporated by reference herein in their entireties.

FIELD OF THE INVENTION

[0002] The present invention relates generally to massage devices and more particularly to a percussive therapy device that includes an electrically connected or smart attachment.

BACKGROUND OF THE INVENTION

[0003] Massage devices often provide ineffective massages that are superficial and do not provide any real benefit. Accordingly, there is a need for an improved massage device. Furthermore, percussive massage devices are often used in an ineffective manner. Accordingly, there is a need for a percussive therapy device to be automated to provide effective massage or recovery.

SUMMARY OF THE PREFERRED EMBODIMENTS

[0004] In accordance with a first aspect of the present invention there is provided a percussive therapy system that includes a percussive therapy device that includes a housing, an electrical source, a motor positioned in the housing, a switch for activating the motor, a push rod assembly operatively connected to the motor and configured to reciprocate in response to activation of the motor, and an attachment configured to be operatively connected to a distal end of the push rod assembly of the percussive massage device and to provide at least one therapeutic effect to a user.

[0005] In a preferred embodiment, the attachment comprises at least one of an actuator configured to provide the at least one therapeutic effect to the user and a sensor configured to obtain at least one of biometric data of the user and information regarding operation of the percussive therapy device. The actuator may include at least one of a vibration actuator, a heating actuator, a cooling actuator, and an exfoliating actuator. The sensor may include at least one of a thermal sensor, an oxygen sensor, a blood flow sensor, a force meter, a gyroscope, and an accelerometer.

[0006] In a preferred embodiment, the system also includes a routine controller that is configured to initiate a protocol configured to provide user instructions to apply the attachment to a first body part until a thermal sensor senses that the first body part has reached a predetermined temperature.

[0007] In a preferred embodiment, the system is configured to determine at least one characteristic of the attachment. The at least one characteristic of the attachment may include a type of the attachment, a sensor of the attachment, and an actuator of the attachment. Preferably, the system also includes a wireless communication module configured to transmit the at least one characteristic to at least one of the percussive therapy device and a remote device.

[0008] In a preferred embodiment, the attachment includes a first set of electrical contacts. In a preferred embodiment, the distal end of the push rod assembly includes an attachment member that includes first and second balls biased outwardly therefrom. The first and second balls may be the first set of electrical contacts.

[0009] In accordance with another aspect of the present invention there is provided a method of providing at least one therapeutic effect to a user that includes obtaining a percussive therapy device that includes a housing, an electrical source, a motor positioned in the housing, a switch for activating the motor, a push rod assembly operatively connected to the motor and configured to reciprocate in response to activation of the motor, obtaining an attachment configured to be operatively connected to the percussive massage device and configured to provide at least one therapeutic effect to a user, and operating the percussive therapy device using the attachment. The at least one therapeutic effect may include vibration, percussion, heating, cooling, and exfoliation.

[0010] In a preferred embodiment, the attachment is further configured to obtain at least one of thermal data, blood-oxygen content data, blood flow data, angular position data, linear position data, and force magnitude data.

[0011] The method can also include the step of providing a recommendation to the user. In a preferred embodiment, the recommendation is generated from at least one of the thermal data, the angular position data, the linear position data, and the force magnitude data to assist in providing the at least one therapeutic effect to the user.

[0012] The method can also include the steps of providing the at least one therapeutic effect to a first body part of the user, monitoring a temperature of the first body part of the user, determining that the first body part of the user has reached a predetermined temperature, and providing user instructions to the user to cease providing the at least one therapeutic effect to the first body part when the first body part has reached the predetermined

Hyper Ice, Inc. Ex. 1003-Page 906
Hyper Ice, Inc. v. Therabody, Inc.

temperature. The at least one therapeutic effect may be provided in accordance with a protocol.

[0013] In a preferred embodiment, the method can further include the step of determining at least one characteristic of the attachment. The method can also include the step of providing a prompt communicating the at least one characteristic of the attachment to the user.

BRIEF DESCRIPTION OF THE DRAWINGS

[0014] The invention may be more readily understood by referring to the accompanying drawings in which:

[0015] FIG. 1 is a side elevational view of a percussive massage device in accordance with a preferred embodiment of the present invention;

[0016] FIG. 2is a block diagram showing interconnected components of a percussive massage device with a force meter;

[0017] FIG. 3 is a circuit diagram of a microcontroller unit with pin outputs in accordance with one embodiment;

[0018] FIG. 4 is a circuit diagram used for battery voltage detection in accordance with one embodiment;

[0019] FIG. 5 is a circuit diagram for detection and measurement of voltage of the motor of the percussive massage device in accordance with one embodiment;

[0020] FIG. 6 is a flow diagram showing a method of detecting force applied by the percussive massage device in accordance with a preferred embodiment;

[0021] FIG. 7 is a flow diagram showing a method of generating a lookup table correlating voltage to force in accordance with a preferred embodiment;

Hyper Ice, Inc. Ex. 1003-Page 907
Hyper Ice, Inc. v. Therabody, Inc.

[0022] FIG. 8 is a graph plotting a lookup table for use by a method of detecting force applied by the percussive massage device that was generated by correlating voltage to force in accordance with a preferred embodiment;

[0023] FIG. 9 is a flow diagram showing a method of calibrating a lookup table according to a preferred embodiment;

[0024] FIG. 10 is a graph plotting a lookup table generated by a method of detecting force applied by the percussive massage device against a lookup table calibrated by using a method of calibrating a lookup table according to a preferred embodiment;

[0025] FIG. 11 is a flow diagram showing a method of calibrating a lookup table;

[0026] FIG. 12 is a graph plotting a lookup table after being calibrated in accordance with a preferred embodiment;

[0027] FIG. 13 is a flow diagram showing a method of detecting force applied by a percussive massage device in accordance with a preferred embodiment;

[0028] FIG. 14 is a flow diagram showing a method of generating a lookup table correlating power to force in accordance with a preferred embodiment;

[0029] FIG. 15 is a graph plotting a lookup table for use by a method of detecting force of that was generated by correlating power to force in accordance with a preferred embodiment;

[0030] FIG. 16 is a flow diagram showing a method of calibrating a lookup table in accordance with a preferred embodiment;

[0031] FIG. 17 is a graph plotting a lookup table after being calibrated in accordance with a preferred embodiment;

[0032] FIG. 18 is a perspective view of a percussive massage device in accordance with a preferred embodiment of the present invention;

Hyper Ice, Inc. Ex. 1003-Page 908
Hyper Ice, Inc. v. Therabody, Inc.

[0033] FIG. 19 is a perspective view of the percussive massage device with a portion of the housing removed;

[0034] FIG. 20 is a perspective view of the motor;

[0035] FIG. 21 is a perspective view of the percussive massage device of FIG. 18 with a portion of the housing removed;

[0036] FIGS. 22A and 22B are cross sectional views of the head portion and motor;

[0037] FIG. 23 is an exploded view of some of the internal components of percussive massage device of FIG. 18;

[0038] FIG. 23A is an exploded view of the motor and motor mount;

[0039] FIG. 24 is a chart showing steps of Protocol 1 in accordance with a method of performing a routine for a percussive massage device;

[0040] FIG. 25 is a chart showing steps of a "Shin Splints" protocol in accordance with a method of performing a routine for a percussive massage device;

[0041] FIGS. 26A, 26B, 26C, and 26D are methods of performing a routine for a percussive massage device;

[0042] FIG. 27 is a front view of a graphical user interface showing a "Right Bicep" protocol;

[0043] FIG. 28 is a front view of a graphical user interface showing a "Right Bicep" protocol;

[0044] FIG. 29 is perspective view of a percussive massage device with a portion of the housing removed and showing the motor mount orienting the motor shaft axis extending longitudinally;

[0045] FIG. 30 is an exploded perspective view of the motor mount, motor and other components from FIG. 29;

Hyper Ice, Inc. Ex. 1003-Page 909
Hyper Ice, Inc. v. Therabody, Inc.

[0046] FIG. 31 is a perspective view showing the motor and motor mount exploded out of the housing;

[0047] FIG. 32 is a perspective view showing the motor and motor mount exploded out of the housing on the opposite side as FIG. 31;

[0048] FIG. 33 is a cross-sectional perspective view;

[0049] FIG. 34 is a perspective view of a percussive massage device that includes a heart rate monitor;

[0050] FIG. 35 is a perspective view of a percussive massage device that includes a heart rate monitor with first and second pulse contacts;

[0051] FIG. 36 is a perspective view of a percussive massage device that includes a temperature sensor or monitor;

[0052] FIG. 36A is a detailed view of the temperature reading on the screen taken from FIG. 34;

[0053] FIG. 37 is a side elevational schematic of a percussive therapy device with a heated male attachment member;

[0054] FIG. 38 is a side elevational schematic of a percussive therapy device with a male attachment member with first and second electrical contacts;

[0055] FIG. 39 is a bottom view of male attachment member with first and second electrical contacts;

[0056] FIG. 40 is a massage member with a heating element therein;

[0057] FIG. 41 is a perspective view of a percussive therapy device that includes a gyroscope and accelerometer;

[0058] FIGS. 42A-C are perspective views of a percussive therapy device and graphical representations thereof on a display;

Hyper Ice, Inc. Ex. 1003-Page 910
Hyper Ice, Inc. v. Therabody, Inc.

[0059] FIG. 43 is a perspective view of an attachment configured to be operably connected with a percussive therapy device;

[0060] FIG. 44 is a perspective view of an attachment configured to be operably connected with a percussive therapy device;

[0061] FIG. 45 is a bottom view of an attachment configured to be operably connected with a percussive therapy device;

[0062] FIG. 46 is a perspective view of a percussive therapy system including a percussive therapy device and an attachment thereon;

[0063] FIG. 47 is a perspective view of a percussive therapy system including a percussive therapy device and an attachment thereon;

[0064] FIG. 48 is a flow diagram of a method of providing at least one therapeutic effect to a user in accordance with an embodiment of the present invention

[0065] FIG. 49 is a flow diagram of a method of preparing a user's body part for exercise in accordance with an embodiment of the present invention.

[0066] Like numerals refer to like parts throughout the several views of the drawings.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0067] The following description and drawings are illustrative and are not to be construed as limiting. Numerous specific details are described to provide a thorough understanding of the disclosure. However, in certain instances, well-known or conventional details are not described in order to avoid obscuring the description. References to one or another embodiment in the present disclosure can be, but not necessarily are, references to the same embodiment; and, such references mean at least one of the embodiments.

[0068] Reference in this specification to "one embodiment" or "an embodiment" means that a particular feature, structure, or characteristic described in connection with the embodiment is included in at least one embodiment of the disclosure. Appearances of the

Hyper Ice, Inc. Ex. 1003-Page 911
Hyper Ice, Inc. v. Therabody, Inc.

phrase "in one embodiment" in various places in the specification do not necessarily refer to the same embodiment, nor are separate or alternative embodiments mutually exclusive of other embodiments. Moreover, various features are described which may be exhibited by some embodiments and not by others. Similarly, various requirements are described which may be requirements for some embodiments but not other embodiments.

[0069] The terms used in this specification generally have their ordinary meanings in the art, within the context of the disclosure, and in the specific context where each term is used. Certain terms that are used to describe the disclosure are discussed below, or elsewhere in the specification, to provide additional guidance to the practitioner regarding the description of the disclosure. For convenience, certain terms may be highlighted, for example using italics and/or quotation marks: The use of highlighting has no influence on the scope and meaning of a term; the scope and meaning of a term is the same, in the same context, whether or not it is highlighted. It will be appreciated that the same thing can be said in more than one way.

[0070] Consequently, alternative language and synonyms may be used for any one or more of the terms discussed herein. Nor is any special significance to be placed upon whether or not a term is elaborated or discussed herein. Synonyms for certain terms are provided. A recital of one or more synonyms does not exclude the use of other synonyms. The use of examples anywhere in this specification including examples of any terms discussed herein is illustrative only, and is not intended to further limit the scope and meaning of the disclosure or of any exemplified term. Likewise, the disclosure is not limited to various embodiments given in this specification.

[0071] Without intent to further limit the scope of the disclosure, examples of instruments, apparatus, methods and their related results according to the embodiments of the present disclosure are given below. Note that titles or subtitles may be used in the examples for

Hyper Ice, Inc. Ex. 1003-Page 912
Hyper Ice, Inc. v. Therabody, Inc.

convenience of a reader, which in no way should limit the scope of the disclosure. Unless otherwise defined, all technical and scientific terms used herein have the same meaning as commonly understood by one of ordinary skill in the art to which this disclosure pertains. In the case of conflict, the present document, including definitions, will control.

[0072] It will be appreciated that terms such as "front," "back," "top," "bottom," "side," "short," "long," "up," "down," and "below" used herein are merely for ease of description and refer to the orientation of the components as shown in the figures. It should be understood that any orientation of the components described herein is within the scope of the present invention.

[0073] While many embodiments are described herein, at least some of the described embodiments provide an apparatus, system, and method for a reciprocating treatment device.

[0074] FIG. 1 shows an embodiment of a percussive massage device 400 that includes a rechargeable battery (and replaceable or removable battery) 114 (FIG. 19). As shown in FIG. 1, in a preferred embodiment, the percussive massage device 400 includes three handle portions (referred to herein as first handle portion 143, second handle portion 145 and third handle portion 147) that cooperate to define a central or handle opening 149. All of the handle portions are generally straight and long enough that they are configured such that a person can grasp that particular handle portion to utilize the device. The ability to grasp the different handle portions allows a person (when using the device on their own body) to use the device on different body parts and from different angles, thus providing the ability to reach body parts, such as the back, that might not be possible without the three handle portions. Generally straight means that the majority of the handle portion is straight, but can include rounded edges or corners where the different handle portions meet or where the handle portions meet the bulge portion or the finger protrusion, etc.

[0075] As shown in FIG. 1, the first handle portion 143 defines a first handle portion axis A1, the second handle portion 145 defines a second handle portion axis A2 and the third handle portion 147 defines a third handle portion axis A3 that cooperate to form a triangle.

In a preferred embodiment, the battery 114 is housed in the second handle portion 145 and the motor 406 (FIG. 19) is housed in the third handle portion 147.

[0076] In a preferred embodiment, the first handle portion 143 has an interior edge 143a, the second handle portion 145 has an interior edge 145a and the third handle portion 147 has an interior edge 147a, which all cooperate to at least partially define the handle opening 149. As shown in FIG. 1, in a preferred embodiment, the first handle portion 143 includes a finger protrusion 151 that includes a finger surface 151a or fourth interior surface that extends between the interior edge 143a of the first handle portion and the interior edge 147a of the third handle portion 147 and at least partially defines the handle opening 149. In use, a user can place their index finger against the finger surface 151a. The finger protrusion and surface provide a feedback point or support surface such that when a user places their index finger against the surface it helps the user with control and comfort of using the device. In a preferred embodiment, at least a portion of the finger surface 151a is straight, as shown in FIG. 1 (as opposed to the other "corners" of the handle opening 149 being rounded).

[0077] As shown in FIG. 1, with the finger surface 151a being straight, the first handle portion interior surface, second handle portion interior surface, third handle portion interior surface and finger surface cooperate to define a quadrilateral with radii or rounded edges between each of the straight surfaces.

[0078] FIGS. 2-20 show embodiments in accordance with a percussion massage device with a force meter. FIG. 2 is a block diagram showing interconnected components of a percussive therapy device with a force meter 400. In an embodiment, the percussive therapy device with force meter 400 includes a microcontroller unit 701, a battery pack management unit 702, an NTC sensor 703, a power charging management unit 704, a wireless charging management unit 705, a wireless charging receiving system 706, a

Hyper Ice, Inc. Ex. 1003-Page 914
Hyper Ice, Inc. v. Therabody, Inc.

voltage management unit 707 (5V 3.3V Voltage Management in drawings), battery charging inputs 708 (20V 2.25A Charging Inputs in drawings), a display 709 (Force/Battery/Speed Display in drawings), a wireless control unit 710 (Bluetooth Control in drawings), an OLED screen 711, an OLED screen control system 712, a motor 713, a motor drive system 714, a PWM speed setup unit 715, an over-current protection unit 716, and a power switch unit 717 (Power On/Off OLED Screen SW in drawings). In the embodiment shown in accordance with FIG. 2, each block in the diagram is shown as a separate component. In alternative embodiments, however, certain components may be combined without departing from the scope of the present disclosure.

[0079] The microcontroller unit 701, in an embodiment, is a microcontroller unit including a processor, a memory, and input/output peripherals. In other embodiments, however the microcontroller unit 701 is an ST Microelectronics STM32F030K6 series of microcontroller units, STM32F030C8T6 series of microcontrollers, STM32F030CCT6 series of microcontrollers, or an equivalent microcontroller.

[0080] One of ordinary skill would understand that the memory of the microcontroller unit 701 is configured to store machine-readable code for processing by the processor of the microcontroller unit 701. Various other configurations may exist depending on whether the designer of the percussive massage device with force meter 400 desires to implement the machine-readable code in software, firmware, or both. In an embodiment, the machine-readable code is stored on the memory and configured to be executed by a processor of the microcontroller 701. In an embodiment, the machine-readable code is stored on computer-readable media.

[0081] The battery pack management unit 702, in an embodiment, is implemented in firmware or software and configured to be used in connection with the microcontroller unit 701. In this embodiment, the firmware or software is stored in memory (not shown) and

Hyper Ice, Inc. Ex. 1003-Page 915
Hyper Ice, Inc. v. Therabody, Inc.

configured to be obtainable by the microcontroller unit 701. The battery pack management unit 702 may also be a combination of firmware, software, and hardware, in another embodiment. The battery pack management unit 702 is coupled with the NTC sensor 703. The NTC sensor 703 is a negative temperature coefficient thermistor used by the battery pack management unit 702 to sense temperature of the battery pack. For example, the NTC sensor 703 is a thermistor with B value of 3950 +/- 1%, and a resistance of 10 kΩ. In another example, the thermistor has a resistance of 100 kΩ. One of ordinary skill in the art would recognize that a thermistor is a resistor whose resistance is dependent upon temperature. In other embodiments, however, the NTC sensor 703 may be another type of temperature sensing device or component used in connection with the battery pack management unit 702.

[0082] The power charging management unit 704, in an embodiment, is implemented in firmware or software and configured to be used in connection with the microcontroller unit 701. Similarly to the battery pack management unit 702, the power charging management unit 704 firmware or software is stored in memory (not shown) and configured to be obtainable by the microcontroller unit 701. The power charging management unit 704 may also be a combination of firmware, software, and hardware, in another embodiment. In various embodiments, the power charging management unit 704 is configured to charge a battery pack via a direct connection or through an external charger, such as when configured to be operable with rechargeable batteries.

[0083] The wireless charging management unit 705, in an embodiment, is coupled to the battery pack management unit 702 and the battery charging inputs 708. In other embodiments, the battery or battery pack is charged using other conventional methodologies, such as, for example, charging the battery or battery pack using a wire or cord coupled to the battery charging inputs 708.

Hyper Ice, Inc. Ex. 1003-Page 916
Hyper Ice, Inc. v. Therabody, Inc.

[0084] The wireless charging receiving system 706, in an embodiment, is coupled to the power charging management unit 704 and the display 709. The wireless charging receiving system 706 includes one or more of firmware, software, and hardware. In an embodiment, the wireless charging receiving system 706 is configured to receive information pertaining to battery capacity, charging metrics, and other information pertaining to wireless charging, and to pass along the information to the power charging management unit 704. The wireless charging receiving system 706 preferably includes a wireless charging pad used to charge the percussive massage device with force meter 400. One of ordinary skill in the art would understand that a variety of wireless charging devices may be utilized to wirelessly charge the percussive massage device with force meter 400. As one example, the Qi wireless charging standard and related devices may be utilized to wirelessly charge the percussive massage device with force meter 400.

[0085] The voltage management unit 707, in an embodiment, is a DC voltage regulator that steps down 5 volt to 3.3 volt power for use by the microcontroller unit 701. The voltage management unit 707 may also perform additional functions for management of 3.3 volt power for use by the microcontroller unit 701. In an embodiment, the voltage management unit 707 is implemented using a series of electronic components such as, for example, implementing a resistive divider using electronic components. In another embodiment, the voltage management unit 707 is a stand-alone voltage regulator module and/or device designed to step down voltage from 5 volts to 3.3 volts. One of ordinary skill in the art would understand the various methodologies and devices available to step down 5 volts to 3.3 volts.

[0086] The battery charging inputs 708, in an embodiment, are interfaces by which a wire or cord may be inserted for charging the percussive massage device with force meter 400. For example, a standardized barrel connector is the battery charging inputs 708. In another

Hyper Ice, Inc. Ex. 1003-Page 917
Hyper Ice, Inc. v. Therabody, Inc.

example, the battery charging inputs 708 is a USB connector. Other more specialized charging methodologies may require a particular battery charging input not described above.

[0087] The display 709, in an embodiment, displays a series of LEDs depicting an amount of force applied by the percussive massage device with force meter 400. In an alternative embodiment, the display 709 displays a series of LEDs depicting the current battery or battery pack charge of the percussive massage device with force meter 400. In yet another embodiment, the display 709 displays a series of LEDs depicting the current speed of the percussive massage device with force meter 400. One of ordinary skill in the art would recognize that while LEDs have been specified in the above-referenced embodiments, other embodiments not using LEDs are within the scope of this disclosure, such as, for example, liquid crystal displays, OLEDs, CRT displays, or plasma displays. One of ordinary skill in the art would also understand that it may be advantageous in an embodiment utilizing a battery or battery pack to use low-power options to ensure battery power longevity. In an embodiment, the display 709 is a 128x64 pixel OLED display.

[0088] The wireless control unit 710 is a wireless connectivity device that may be implemented in a wireless microcontroller unit. In an embodiment, the wireless control unit 710 is a Bluetooth transceiver module configured to couple, via Bluetooth, to a remote device. In an embodiment, the Bluetooth module is a Bluetooth Low-Energy (BLE) module configured to be run in broadcast mode. The wireless control unit 710 is coupled to the microcontroller unit 701. In an embodiment, the remote device is a smartphone having an embedded Bluetooth module. In an alternative embodiment, the remote device is a personal computer having Bluetooth connectivity. In other embodiments, other wireless connectivity standards besides the Bluetooth wireless standard may be utilized. It will be appreciated that the Bluetooth connectivity or other wireless connectivity may be described

Hyper Ice, Inc. Ex. 1003-Page 918
Hyper Ice, Inc. v. Therabody, Inc.

herein as being implemented in a wireless connection device. The wireless connection device can be a separate module, can be included in the MCU or other component of the device, or can be a separate chip. In summary, the percussive therapy device including a wireless connection device means that the percussive massage device can connect to another electronic device wirelessly (e.g., a phone, tablet, computer, computer, voice controlled speaker, regular speaker, etc.). One of ordinary skill in the art would recognize that low-power wireless control modules may be advantageous when the percussive massage device with force meter 400 is utilizing a battery or battery pack.

[0089] The OLED screen 711 and the OLED screen control system 712, in an embodiment, are configured to display substantially the same information as the display 709 referenced above. The OLED screen 711 is coupled to the OLED screen control system 511. The OLED screen control system 712 is coupled to the microcontroller unit 701, the OLED screen 711, and the power switch unit 717. In an embodiment, the display 709 and the OLED screen 711 may be redundant and it may only be necessary to utilize one or the other.

[0090] The motor 713, in an embodiment, is a brushless direct current (BLDC) motor. The motor 713 and the motor drive system 714, in an embodiment, are configured to vary the speed (i.e., rotational motion) that may be converted to reciprocal motion. In other embodiments, the motor 713 is a brushed DC motor, a brushed AC motor, or a brushless AC motor. One of ordinary skill in the art would understand that choosing a brushless or brushed motor, or direct current or alternating current, may vary depending on the application and intended size, battery power, and use.

[0091] The PWM speed setup unit 715, in an embodiment, is used to control pulse width modulation utilized to drive the motor 713. The PWM speed setup unit 715 is coupled to the microcontroller unit 701 and the over-current protection unit 716. One of ordinary skill

Hyper Ice, Inc. Ex. 1003-Page 919
Hyper Ice, Inc. v. Therabody, Inc.

in the art would understand that pulse width modulation is one way to vary the average power applied to the motor 713, resulting in varying speed as desired. In alternative embodiments, one of ordinary skill in the art would understand that there are a variety of methods to vary the speed of a brushless DC motor. For example, voltage to the motor 713 may be controlled in other non-PWM methods.

[0092] The over-current protection unit 716, in an embodiment, may be a feature of an integrated system-in-package to prevent damage caused by high currents to the motor. In other embodiments, the over-current protection unit 716 is implemented using a series of electronic components configured to protect the motor from excessively high current.

[0093] The power switch unit 717, in an embodiment, is configured to turn on and turn off the percussive massage device with force meter 400. The power switch unit 717 is coupled to the OLED screen control system 712 and the microcontroller unit 701. In an embodiment, the power switch unit 717 is the switch 405.

[0094] FIG. 3 shows a circuit diagram of the microcontroller unit 701 with pin outputs. In this embodiment, the STM32F030K6 series of microcontroller units is utilized. The circuit diagram depicts +3.3 volt power being provided to the VDD inputs of the microcontroller unit 701. Input PA3 is labeled "Motor_VOL", the voltage of the motor 713. Input PA2 is "bt_v", the battery or battery pack voltage. The microcontroller unit is configured to receive analog voltage on inputs PA2 and PA3 and to convert it to digital voltage using the microcontroller's analog-to-digital converter. In this embodiment, the analog-to-digital converter is a 12-bit ADC. One of ordinary skill in the art would understand that other microcontrollers may utilize voltage sensing and analog-to-digital converters to perform similar functions. In yet other embodiments, an analog-to-digital converter module separate from a microcontroller may be utilized.

Hyper Ice, Inc. Ex. 1003-Page 920
Hyper Ice, Inc. v. Therabody, Inc.

[0095] FIG. 4 shows a circuit diagram used for battery voltage detection. In this embodiment, +BT, the positive battery terminal 602, is coupled to a circuit consisting of a P-channel MOSFET 604, an N-Channel MOSFET 608, 0.1 μF capacitor 610, 100 kΩ resistors 612, 614, 68 kΩ resistor 616, 1 kΩ resistors 618, 620, and 10 kΩ resistors 622, 624. The circuit is configured to provide an input analog voltage of the battery or battery pack, or bt_v, to the microcontroller unit 701 of FIG. 2. In other embodiments, voltage of the battery or battery pack may be achieved using a voltage reader coupled to the terminals of the battery or battery pack.

[0096] FIG. 5 shows a circuit diagram for detection and measurement of voltage of the motor 713 of the percussive massage device. In this embodiment, voltage sensing resistor 626 is coupled in parallel with the microcontroller unit 701, and coupled to the motor 713. In an embodiment, the voltage sensing resistor has a value of 0.0025 Ω. The circuit depicted in FIG. 5 is configured to provide the Motor_VOL input into the microcontroller unit 701 of FIG. 2. In an embodiment, the input analog voltage is amplified. In another embodiment, the voltage of the motor 713 is measured or sensed using a separate series of electronic components or a standalone device and input into a microprocessor for use with the method of displaying a force on the percussive massage device.

[0097] FIG. 6 is a flow diagram showing a method 800 of detecting force applied by the percussive massage device in accordance with a preferred embodiment. At Step 802, a voltage magnitude V is obtained. In an embodiment, voltage magnitude V is an analog voltage obtained by using the circuit disclosed in FIG. 2. In that circuit, a block curve signal from the motor 713 (i.e., a Hall effect sensor) is simulated in the circuit as current using the resistor R, which is placed in parallel with the microcontroller unit 701. In other embodiments, voltage that corresponds to the current operating speed of the motor 713 may be generated in a variety of other ways. The voltage magnitude V may be input to a

Hyper Ice, Inc. Ex. 1003-Page 921
Hyper Ice, Inc. v. Therabody, Inc.

microcontroller unit 701 that converts analog voltage to digital voltage using an analog-to-digital converter, such as that implemented in the STM32F030K6 microcontroller unit. The STM32F030K6 microcontroller unit coverts analog voltage magnitude to a digital code corresponding to the 12-bit ADC (i.e., 0 to 4096). The digital code represents a voltage magnitude corresponding to the original voltage magnitude V obtained.

[0098] At Step 804, a lookup table is generated that correlates voltage V to force magnitude F. In an embodiment, the lookup table is generated using a method 900 of generating a lookup table correlating voltage to force. For example, the force magnitude F may be expressed in pounds of force. In an alternative embodiment, the force magnitude F may be expressed in Newtons of force.

[0099] At Step 806, the force magnitude F corresponding to voltage magnitude V is displayed on the percussive massage device with force meter 400. In an embodiment, a series of LED lights may be utilized to depict varying amounts of force as the force is being applied by the percussive massage device with force meter 400. Thus, as the amount of force magnitude F increases, more LEDs on the series of LED lights will be lit. Preferably, the series of LED lights consists of 12 LED lights.

[00100] FIG. 7 is a flow diagram showing a method 900 of generating a lookup table correlating voltage to force. At Step 902, a maximum magnitude of force, F_{MAX}, is determined. The magnitude of F_{MAX} may be determined by assessing the maximum desired force to apply using the percussive massage device with force meter 400. As an example, F_{MAX} is 60 pounds of force.

[00101] At Step 904, a maximum magnitude of voltage, V_{MAX}, is determined. The magnitude of V_{MAX} may be determined by assessing the maximum theoretical voltage change possible by the percussive massage device with force meter 400. As an example, V_{MAX} is 1.8 volts.

Hyper Ice, Inc. Ex. 1003-Page 922
Hyper Ice, Inc. v. Therabody, Inc.

[0182] At Step 906, F_{MAX} is divided into equal increments. Using the above example from Step 902, 60 pounds of force is divided into 60 one-pound increments.

[0183] At Step 908, V_{MAX} is divided into the same amount of increments as determined in Step 906 above. Thus, using the above example from Step 904, 1.8 volts is divided into 60 0.03-volt increments.

[0184] At Step 910, a lookup table (LUT) is generated that correlates the increments of pounds of force with the increments of voltage. This necessarily creates a linear relationship between force and voltage. FIG. 8 is a graph plotting the LUT for use by the method of detecting force of FIG. 6 that was generated using the specific example identified in FIG. 7. The graph depicts calculated force that was calculated using the method 900.

[0185] A problem may arise in that the theoretical maximum voltage assumption at Step 904 in the method 900 is inaccurate. It may also be the case that as the percussive massage device with force meter 400 is used, the maximum available voltage degrades over time. In other words, the battery or battery pack voltage may decrease.

[0186] Accordingly, a method 1000 of calibrating the LUT generated by method 900 may be advantageous. FIG. 9 is a flow diagram showing a method 1000 of calibrating a LUT. At Step 1002, battery pack voltage BV is obtained. In an embodiment, battery pack voltage magnitude BV is an analog voltage obtained by using the circuit disclosed in FIG. 4. In that circuit, the battery pack voltage magnitude BV may be input to a microcontroller unit 701 that converts analog voltage to digital voltage using an analog-to-digital converter, such as that implemented in the STM32F030K6 microcontroller unit. The STM32F030K6 microcontroller unit coverts analog voltage magnitude to a digital code corresponding to the 12-bit ADC (i.e., 0 to 4096). The digital code represents a voltage magnitude corresponding to the original battery pack voltage magnitude BV obtained.

Hyper Ice, Inc. Ex. 1003-Page 923
Hyper Ice, Inc. v. Therabody, Inc.

[0187] At Step 1004, V_{MAX} is set to the actual battery voltage magnitude BV output. As an example, may decrease from 1.8 volts to 1.74 volts, a 0.6 volt decrease. At Step 1006, the LUT linear correlation is adjusted to reflect the lower V_{MAX}. FIG. 10 is a graph plotting the LUT calculated by the method 900 against the LUT calibrated by using the method 1000. The LUT resulting from method 1000 depicts a calibrated force rather than a calculated force.

[0188] FIG. 11 is a flow diagram showing a method 1100 of calibrating a LUT. The method 1100 may be performed after the method 900, or entirely separately from the method 900. At Step 1102, battery pack voltage BV is measured. In an embodiment, the measurement is done without applying any force from the percussive massage device with force meter 400. In an embodiment, the battery pack voltage BV is measured using an external voltage meter. In another embodiment, the battery pack and/or microcontroller unit 701 have embedded solutions for directly measuring battery pack voltage BV.

[0189] At Step 1104, the display on the percussive massage device with force meter 400 that displays the force magnitude F is read to determine the force magnitude F corresponding to the measured battery pack voltage BV.

[0190] At Step 1106, a force meter is used to measure actual force being applied. In an embodiment, the force meter is a push/pull force meter. The direct measurement of force allows calibration of the LUT by comparing the displayed force magnitude F with the measured actual force. At Step 1108, the LUT is updated with a corrected force corresponding with the measured battery pack voltage BV. After Step 1108, Steps 1102-1106 are repeated for each successive voltage increment. In the embodiment depicted in accordance with the method 900, Steps 1102-1106 are repeated for every 0.03-volt increment. FIG. 12 is a graph plotting the LUT calculated by the method 1100 after all 3-volt increments had been updated.

Hyper Ice, Inc. Ex. 1003-Page 924
Hyper Ice, Inc. v. Therabody, Inc.

[0111] FIG. 13 is a flow diagram showing a method 1200 of detecting force applied by a percussive massage device in accordance with a preferred embodiment. At Step 1202, current magnitude C of a battery pack is obtained. In an embodiment, current magnitude C is input into the microcontroller unit 701. At Step 1204, voltage magnitude BV of a battery pack is obtained. In an embodiment, voltage magnitude BV is input into the microcontroller unit 701. At Step 1206, power is calculated using the product of C and BV. In an embodiment, the microcontroller unit 701 is configured to calculate power by multiplying C and BV. At Step 1208, a lookup table is generated that correlates power magnitude P to force magnitude F. In an embodiment, the lookup table is generated using a method 1300 of generating a lookup table correlating power to force. For example, the power magnitude P may be expressed in watts. In an alternative embodiment, force magnitude F may be expressed in pounds of force or Newtons of force.

[0112] At Step 1210, the force magnitude F corresponding to power magnitude P is displayed on the percussive massage device with force meter 400. In an embodiment, a series of LED lights may be utilized to depict varying amounts of force as the force is being applied by the percussive massage device with force meter 400. Thus, as the amount of force magnitude F increases, more LEDs on the series of LED lights will be lit. Preferably, the series of LED lights consists of 12 LED lights.

[0113] FIG. 14 is a flow diagram showing a method 1300 of generating a lookup table correlating power to force. At Step 1302, a maximum magnitude of power, F_{MAX}, is determined. A theoretical maximum magnitude of power, however, is not a reasonable assumption if the total effective power may be calculated. Equation 1 may be utilized to determine Total Maximum Effective Power (EP_{MAX}).

$$Equation\ 1: Total\ EP_{MAX} = P_{MAX} \times Total\ EP$$

Hyper Ice, Inc. Ex. 1003-Page 925
Hyper Ice, Inc. v. Therabody, Inc.

[0114] Equation 2 may be utilized to calculate Total EP, which is then input into Equation 1 above.

$$Equation\ 2: Total\ EP = EP_{BATTERY} \times EP_{PCBA} \times EP_{MOTOR}$$

where Total EP, $EP_{BATTERY}$, EP_{PCBA}, and EP_{MOTOR} are all expressed in percentages, and where PCBA is a printed circuit board assembly.

[0115] In an embodiment, EP (Battery) is 85%, EP (PCBA) is 95%, and EP (Motor) is 75%. Thus, using Equation 2, Total EP is 85% * 95% * 75% = 60.5625%.

[0116] In this embodiment, P_{MAX} is calculated by multiplying the maximum voltage V_{MAX} and the maximum amperage C_{MAX} of the battery pack such as in Equation 3. P_{MAX} is then input into Equation 1.

$$P_{MAX} = V_{MAX} \times C_{MAX}$$

[0117] In this embodiment, V_{MAX} is 16.8 volts and C_{MAX} is 20 amperes. Thus, P_{MAX} is 336 watts.

[00118] Turning back now to Equation 1, if P_{MAX} is 336 watts and Total EP is 60.5625%, then Total EP_{MAX} is 203 watts.

[0119] At Step 1304, a minimum amount of power P_{MIN}, is determined. It will be recognized by one of ordinary skill in the art that the power without any force being applied (i.e., no load) will be non-zero. Thus, P_{MIN} of 12 watts is assumed. One of ordinary skill will also understand that the value of is equivalent to the rated power without load, which may be derived from V_{MAX} and C_{MIN}.

[0120] At Step 1306, a maximum magnitude of force, F_{MAX}, is determined. The magnitude of F_{MAX} may be determined by assessing the maximum desired force to apply using the percussive massage device with force meter 400. As an example, F_{MAX} is 60 pounds of force.

Hyper Ice, Inc. Ex. 1003-Page 926
Hyper Ice, Inc. v. Therabody, Inc.

[0121] At Step 1308, Total EP_{MAX} is divided into equal increments. In an embodiment, Total EP_{MAX} is divided in 3 watt increments per one pound of force, starting at P_{MIN} (12 watts). It will be recognized by one of ordinary skill in the art that if F_{MAX} is 60 pounds of force, the total desired force output of the percussive massage device with force meter 400, then 60 pounds of force correlates to 189 watts, within the calculated Total EP_{MAX}.

[0122] At Step 1310, a LUT is generated that correlates the increments of pounds of force with the increments of power in watts. This necessarily creates a linear relationship between force and voltage. FIG. 15 is a graph plotting the LUT for use by the method of detecting force of FIG. 13 that was generated using the specific example identified in FIG. 10. The graph depicts calculated force that was calculated using the method 1200.

[0123] Similarly to the method 900, a problem may arise in that the measured voltage of the battery pack at Step 1204 in the method 1200 is inaccurate. It may also be the case that as the percussive massage device with force meter 400 is used, the maximum available voltage degrades over time. In other words, the battery or battery pack voltage may decrease.

[0124] FIG. 16 is a flow diagram showing a method 1400 of calibrating a LUT. The method 1400 may be performed after the method 900 or the method 1200, or entirely separately from the method 900 or the method 1200. At Step 1402, current magnitude C of a battery pack is obtained. In an embodiment, current magnitude C is input into the microcontroller unit 701.

[0125] At Step 1404, battery pack voltage BV is measured. In an embodiment, the measurement is done without applying any force from the percussive massage device with force meter 400. In an embodiment, the battery pack voltage BV is measured using an external voltage meter. In another embodiment, the battery pack and/or microcontroller unit 701 have embedded solutions for directly measuring battery pack voltage BV. At Step

Hyper Ice, Inc. Ex. 1003-Page 927
Hyper Ice, Inc. v. Therabody, Inc.

1406, power is calculated using the product of C and BV. In an embodiment, the microcontroller unit 701 is configured to calculate power by multiplying C and BV.

[0126] At Step 1408, the display on the percussive massage device with force meter 400 that displays the force magnitude F is read to determine the force magnitude F corresponding to the calculated power. At Step 1410, a force meter is used to measure actual force being applied. In an embodiment, the force meter is a push/pull force meter. The direct measurement of force allows calibration of the LUT by comparing the displayed force magnitude F with the measured actual force. At Step 1412, the LUT is updated with a corrected force corresponding with the measured power. After Step 1412, Steps 1402-1410 are repeated for each power or force increment. In the embodiment depicted in accordance with the method 900, Steps 1402-1410 are repeated for every 3-watt increment. FIG. 17 is a graph plotting the LUT calculated by the method 1400 after all 3-watt increments had been updated.

[0127] FIGS. 18-19 show an exemplary percussive massage device 400 that embodies the features disclosed herein. Generally, the percussive massage device 400 includes a housing 101, an electrical source or battery pack 114, a motor 406 positioned in the housing 101, and a switch 405 for activating the motor 406. The electronics (see printed circuit board 408 in FIG. 19) includes the controller that is configured to obtain a voltage of the motor, generate a lookup table correlating voltage to force applied by the percussive massage device, and display a force magnitude corresponding to the obtained voltage using the lookup table. FIG. 20 is a perspective view of the motor 406.

[0128] As shown in FIGS. 21-23, in a preferred embodiment, the motor 406 is located in the head portion 12. The percussive massage device 400 can include a rotatable arm that is part of rotation housing 44. The motor 406 is located in the rotation housing 44, which is

Hyper Ice, Inc. Ex. 1003-Page 928
Hyper Ice, Inc. v. Therabody, Inc.

housed with the head portion 12 of the housing 101. In another embodiment, the rotation capability can be omitted.

[0129] In a preferred embodiment, the device includes a push rod or shaft 14 that is connected directly to a shaft 16 that is rotated by the motor 406 and the motor shaft 21 extending therefrom. The shaft 16 can be part of a counterweight assembly 17 that includes a counterweight 19. In a preferred embodiment, the push rod 14 is L-shaped or includes an arc shape, as shown in FIGS. 22A-22B. Preferably, the point where the push rod 14 is connected to the shaft 16 is offset from the reciprocating path that the distal end 18 of the push rod 14 (and the massage attachment 628) travel. This capability is provided by the arc or L-shape. It should be appreciated that the push rod 14 is designed such that it can transmit the force at least partially diagonally or in an arc along its shape instead of vertically so the motor can be located at or near the middle of the device, otherwise a large protrusion would be necessary to keep the shaft in the center with the motor offset therefrom (and positioned in the protrusion). The arc also allows the push rod 14 to have a close clearance with the motor, as shown in FIGS. 22A and 22B and allows the outer housing to be smaller than similar prior art devices, therefore making the device 400 lower profile. FIG. 22A shows the push rod 14 at the bottom dead center of its travel and FIG. 22B shows the push rod 14 at the top dead center of its travel. Preferably one or more bearings 20 are included at the proximal end of the push rod 14 where it connects to the motor to counteract the diagonal forces and preventing the push rod 14 from moving and touching the motor 406. The bearing 20 is received on shaft 16 and a threaded fastener 26 is received in a co-axial opening 16a in shaft 16. The proximal end of the push rod 14 is received on bearing 20. These components are all shown in FIG. 23.

[0130] In a preferred embodiment, device 400 includes a number of dampening components that are made of an elastomer or the like and damp vibrations to keep the device relatively

Hyper Ice, Inc. Ex. 1003-Page 929
Hyper Ice, Inc. v. Therabody, Inc.

quiet. For example, as shown in FIG. 23, device 400 includes dampening rings 426 (similar to inner suspension rings 219) that surround the rotation housing 44 (with first and second rotation housing halves 44a and 44b) and help dampen the sound of vibration between the rotation housing and outer housing 101.

[0131] As shown in FIGS. 23 and 23A, the device 400 preferably also includes a motor mount 24 that secures the motor 406 in place and is secured to the housing 101. Motor 406 includes a receiving member 28 with three protrusions 30 (and number between one and ten can be included) that is received in a protrusion opening 32 defined in the motor mount 24 (in first wall 38). Flanges 34 extending from the motor mount 24 help keep the protrusions 30 in place. The motor 406 is preferably secured via threaded fasteners or the like to the motor mount 24. Motor shaft 21 extends into the motor mount interior 36, which is defined between first and second walls 38 and a side 40 that extends part of the way around the circumference. The counterweight assembly 17, proximal end of the push rod 14 and related components for converting the rotation of the motor shaft 21 to reciprocating motion are position in the motor mount interior 36. The push rod 14 extends downwardly out of the motor mount interior and through a push rod opening 42 in the side 40. In a preferred embodiment, the motor mount 24 is connected directly to the housing 101 via fasteners 46 that are secured to mounting members 48 in the housing (see FIG. 23A). It will be appreciated that the term push rod assembly used herein includes any of the components discussed herein or combinations thereof, e.g., push rod 14, output shaft 108, reciprocator 310, second rod portion 236, that extend from the rotating motor shaft 21, shaft 246 or the like that provide reciprocating motion and include the attachment on the distal end thereof. The push rod assembly also includes the male connector 110 (and any related components) or any other connector at the end of the reciprocating components that allows connection of an attachment to be used for massage or therapy.

Hyper Ice, Inc. Ex. 1003-Page 930
Hyper Ice, Inc. v. Therabody, Inc.

[0132] In a preferred embodiment, the device 400 is associated with and can be operated by an app or software that runs on a mobile device such as a phone, watch or tablet (or any computer). The app can connect to the device 400 via bluetooth or other wireless connection protocol. The app can have any or all of the following functions. Furthermore, any of the functions discussed herein can be added to the touch screen/scroll wheel or button(s) capability directly on the device. If the user walks or is located too far away from the device, the device will not work or activate. The device can be turned on an off using the app as well as the touch screen or button on the device. The app can control the variable speeds (e.g., anywhere between 1750-3000 RPM). A timer can be implemented so the device stops after a predetermined period of time.

[0133] In a preferred embodiment the device, via the app or the touch screen and other functional buttons, etc. includes different treatment protocols or routines associated therewith. During the routine, the device can vary different aspects or outputs of the device or make changes based on time, speed (frequency), amplitude (stroke), arm position, force, temperature, grip (i.e., which handle portion to grip), attachment (e.g., cone, ball, dampener, etc.) and body part. The device (via the app, touch screen, haptic feedback or audibly via a speaker) can also prompt the user to make some of these changes at certain points throughout the routine, e.g., arm position, grip, attachment changes and body part changes. One of ordinary skill in the art will understand that, depending upon the particular design of the device, one or more of these outputs are applicable, while in other devices, all options described are applicable.

[0134] When the start of the protocol is selected, the device runs through a preprogrammed routine. For example, the device may operate at a first RPM for a first period of time and then operate at a second RPM for a second period of time and/or at a first amplitude for a first period of time and then operate at a second amplitude for a second period of time. The

Hyper Ice, Inc. Ex. 1003-Page 931
Hyper Ice, Inc. v. Therabody, Inc.

routines can also include prompts (e.g., haptic feedback) for letting the user to know to move to a new body part. These routines or treatments can be related to recovery, blood flow increase, performance, etc. and can each include a preprogrammed routine or protocol. These routines can also help facilitate certain activities, such as sleep, interval training, stairs, post-run, post-workout, recovery, wellness, post-core exercise, high intensity (plyometric) workouts, among others. The routines can also assist in providing relief and recovery from ailments such as plantar fasciitis, "tech neck," muscle cramps, jet lag, sciatica, carpal tunnel, knots, and shin splints, among others. The routines can also prompt or instruct the user to switch attachments (e.g., attachment 628 shown in FIG. 21) or positions of the arm or rotation housing. The prompts can include sounds, haptic feedback (e.g., vibration of the device or mobile device), textual instructions or visual representation such as a graphic or picture on the app or touch screen, etc. For example, the app may instruct the user to start with the ball attachment with the arm in position two. Then the user hits start and the device runs at a first frequency for a predetermined amount of time. The app or device then prompts the user to begin the next step in the routine and instructs the user to change to the cone attachment and to place the arm in position 1 (e.g., see the arm position in FIG. 18). The arm can include any number of positions, e.g., 1-10 positions or 1-3 positions or 1-2 positions. The user hits start again and the device runs at a second frequency for a predetermined amount of time. The protocol can be divided into steps where, at each step, varied outputs are predetermined or specified.

[0135] Referring again to FIGS. 18-19, in a preferred embodiment, the device 400 includes a housing 101, an electrical source 114, a motor 406 positioned in the housing 101, a switch 405 (which can be any of the touch screen 409, rocker button 447, button 403 or any other switch or button) for activating the motor 406, and a routine controller 630. The device 400 is configured to mate with an attachment 628. The attachment can be, for example, the

Hyper Ice, Inc. Ex. 1003-Page 932
Hyper Ice, Inc. v. Therabody, Inc.

attachment 628 shown in FIG. 21. The attachment is affixed to the male connector 110 so that the shaft or push rod assembly 108 moves the attachment reciprocally in accordance with a specified amplitude. For example, the amplitude is depicted in FIGS. 22A and 22B, where FIG. 22A shows the attachment at a maximum extended position and FIG. 22B shows the attachment at a minimum extended position. The distance between maximum and minimum extended positions can, in an embodiment, define the amplitude.

[0136] The routine controller 630 is configured to perform a routine in connection with one or more specified protocols. The routine controller 630 can be, for example, the microcontroller unit 701 depicted in FIG. 2. The routine controller 630 can also be a standalone microcontroller separate from the microcontroller 701. The routine controller can step through different steps of a specified protocol designed to target specified muscle groups and to provide certain therapeutic effects, as described herein.

[0137] FIG. 24 is a table showing an example of a protocol in accordance with a preferred embodiment. Protocol 1 is divided into four steps, each depicting a specified time, speed, amplitude, attachment, force, temperature, and grip. At Step 1, the device 400 is activated for 30 seconds at a speed of 1550 RPM. A routine controller 630 may be utilized to turn on the percussive massage device and implement a speed of the attachment 628 of 1550 RPM. One of ordinary skill in the art would understand that the speed of the attachment 628 is directly proportional to the speed of the motor 406. The amplitude of the percussive massage device is set to be 2 in accordance with Protocol 1. This may translate to a specified distance that an attachment 628 moves while in use, as described above. Step 1 also specifies a dampener attachment affixed to the device 400, a force of "1" be applied by the device 400, and a temperature of 21 °C be applied to the attachment.

[0138] One of ordinary skill in the art would understand that the force to be applied by the device 400 may depend upon the pressure exerted by the user in pressing the attachment

Hyper Ice, Inc. Ex. 1003-Page 933
Hyper Ice, Inc. v. Therabody, Inc.

onto a person's body part. As described more fully herein, the force to be applied by the device 400 may be the target force. In an embodiment where the user provides pressure to exert a particular force upon a person's body part, the routine controller 630 may adjust the output of the device 400 to ensure that the force actually applied by the attachment is the target force. The routine controller 630 may also be configured to provide feedback to the user to increase or decrease pressure on a person's body part to meet the target force. Each of these embodiments is applicable to each of the steps of a given protocol, including in Steps 2-4 below, as well as Steps 1-4 of the protocol shown in FIG. 25.

[0139] Step 1 also specifies that the device 400 is to be operated using grip 1. Grip 1, for example, may be a grip on the first handle portion 143, otherwise referred to as a "regular" or "standard" grip. Grip 2, for example, may be a grip on the third handle portion 147, otherwise referred to as a "reverse" grip. An "inverse" grip can also be used on third handle portion 147. Grip 3, for example, may be a grip shown on the second handle portion 145, otherwise referred to as a "base" grip.

[0140] At Step 2, Protocol 1 specifies that the device 400 be activated for 15 seconds at 2100 RPM, with an amplitude of "3", a force of "3", and a temperature of 26 °C. Step 2 specifies that the small ball attachment 628 be used, and that the device 400 is to be operated using grip 1. Step 2 therefore requires that the dampener attachment in Step 1 be replaced by the small ball attachment, but specifies that the same grip is to be used.

[0141] At Step 3, Protocol 1 specifies that the device 400 be activated for 30 seconds, at 2200 RPM, with an amplitude of "1", a force of "3", and a temperature of 29 °C. Step 3 specifies that the dampener attachment 628 be used, and that the device 400 is to be operated using grip 1. Step 3 therefore requires that the small ball attachment in Step 2 be replaced by the dampener attachment, but specifies that the same grip is to be used.

Hyper Ice, Inc. Ex. 1003-Page 934
Hyper Ice, Inc. v. Therabody, Inc.

[0142] At Step 4, Protocol 1 specifies that the device 400 be activated for 45 seconds, at 2400 RPM, with an amplitude of "4", a force of "2", and a temperature of 32 °C. Step 3 specifies that the large ball attachment be used, and that the device 400 is to be operated using grip 1. Step 3 therefore requires that the dampener attachment in Step 2 be replaced by the large ball attachment, but specifies that the same grip is to be used. It will be appreciated that Protocol 1 is provided as an example to the reader of many of the different outputs that can be changed during a myriad of treatment protocols that can be provided or developed. It will be further appreciated that any one or more of the outputs can be a part of a protocol or routine and any of the outputs discussed herein can be omitted. For example, a protocol may only include time and speed or only time speed and force, or only time, speed and grip or any other combination of the outputs described herein.

[0143] FIG. 25 is a table showing an example of a "Shin Splints" protocol in accordance with a preferred embodiment. Like Protocol 1, the Shin Splints protocol is divided into four steps, each depicting a specified time, speed, amplitude, attachment, force, temperature, and grip, but also specifying a particular arm position and body part to which to apply the attachment. At Step 1, the device 400 is activated for 1 minute at a speed of 1500 RPM, with an amplitude of "1", a force of "2", and a temperature of 21 °C. Step 1 specifies that the dampener attachment be used, and that the device 400 is to be operated using grip 2 ("Reverse"), to the right shin.

[0144] Step 1 also specifies the arm position to be used is arm position 1. One of ordinary skill in the art would understand that the numbers of arm position (e.g., 1, 2, 3, 4, etc.) are predetermined arm positions intended to be used during a particular protocol. The part of the body to which the attachment 628 is to be applied is one of the factors in determining an optimal arm position. The arm position, however, may be determined by the user and is not required to otherwise implement a protocol. As discussed above, a "standard" grip

Hyper Ice, Inc. Ex. 1003-Page 935
Hyper Ice, Inc. v. Therabody, Inc.

may be utilized with arm position to apply to specific parts of the body, a "reverse" grip may be utilized with arm position to apply to specific parts of the body, and a "base" grip may be utilized with arm position to apply to specific parts of the body. One of ordinary skill in the art would recognize that the any arm position in combination with the particular grip 143, 145, 147 may vary depending on the application. One of ordinary skill in the art will understand that setting the arm position of a device 400 depends upon the specific device. For example, certain devices may allow a user to adjust arm position while others do not. For those that do not, this step does not apply. In other embodiments, this step may be performed during execution of the steps of the particular protocol.

[0145] At Step 2, the Shin Splints protocol specifies that the device 400 be activated for 1 minute at 1500 RPM, with an amplitude of "1", a force of "2", and a temperature of 21 °C. Step 2 specifies that the dampener attachment be used, and that the device 400 is to be operated using grip 2 ("Reverse"), at an arm position 1, to the left shin. Step 2 therefore uses the same attachment, grip, and arm position as Step 1, but is applied to the other shin.

[0146] At Step 3, the Shin Splints protocol specifies that the device 400 be activated for 1 minute at 2000 RPM, with an amplitude of "3", a force of "3", and a temperature of 24 °C. Step 2 specifies that the dampener attachment be used, and that the device 400 is to be operated using grip 3 ("Base"), at an arm position 1, to the right calf. Step 3 therefore requires that the user change grips from "reverse" to "base" grips, but specifies that the same attachment and arm position be used.

[0147] At Step 4, the Shin Splints protocol specifies that the device 400 be activated for 1 minute at 2000 RPM, with an amplitude of "3", a force of "3", and a temperature of 24 °C. Step 2 specifies that the dampener attachment be used, and that the device 400 is to be operated using grip 3 ("Base"), at an arm position 1, to the left calf. Step 2 therefore uses the same attachment, grip, and arm position as Step 1, but is applied to the other calf.

Hyper Ice, Inc. Ex. 1003-Page 936
Hyper Ice, Inc. v. Therabody, Inc.

[0148] FIGS. 26A-C are a series of flow diagrams showing a method 1500 of executing a routine for a percussive massage device.

[0149] FIG. 26A is a flow diagram showing an exemplary protocol initiation. At Step 1502, Protocol 1 is initiated. Protocol 1, for example, is the Protocol 1 depicted in FIG. 24 or the "Shin Splints" Protocol depicted in FIG. 25. One of ordinary skill in the art would understand that Protocol 1 depicted in FIG. 24 does not include all of the outputs that are specified in the Shin Splints Protocol depicted in FIG. 25, and thus, not all steps of the method 1500 apply to the Protocol 1 depicted in FIG. 24.

[0150] At Step 1504, a user is prompted to set the arm position to the specified arm position. The user may be the person using the device 400 on their own body or on the body of another person. The arm position specified in the Shin Splints Protocol is arm position 1, for example.

[0151] At Step 1506, the user is prompted to use a specified grip or handle portion 143, 145, 147 on the device 400. The grip specified in the Shin Splints Protocol is the third handle portion 147, for example. As described herein, the grip may vary depending on the particular protocol or step.

[0152] At Step 1508, the user is prompted to affix a specified attachment to the device 400. As described herein, the attachment may vary depending on the particular protocol or step.

[0153] At Step 1510, the method determines whether the arm position and the grip position 143, 145, 147 are configured appropriately and whether the attachment 628 is affixed. Step 1510 may involve a prompt to the user by haptic feedback, application interface, or touch screen (among other types of prompts) in which the user is asked to proceed when the appropriate arm position, grip, and attachment are ready. In other embodiments, the device 400 may sense that the arm position and grip are appropriate and that an attachment is

Hyper Ice, Inc. Ex. 1003-Page 937
Hyper Ice, Inc. v. Therabody, Inc.

affixed before proceeding automatically. In an embodiment, Step 1510 is repeated until the arm position, grip, and attachment are ready.

[0154] FIG. 26B is a flow diagram showing an exemplary Step 1 of the protocol, continuing the method 1500 where FIG. 26A left off.

[0155] At Step 1512, Step 1 of the protocol is initiated. Step 1, for example, is Step 1 depicted in FIGS. 24 and 25, for example.

[0156] At Step 1514, the method 1500 applies a specified time period (T_1) in which the device 400 is activated, a speed of the attachment, an amplitude of the attachment, a force of the attachment, and a temperature of the attachment. In an embodiment, one or more of these outputs of the device 400 are applied. These outputs may be applied by the routine controller 630. One of ordinary skill in the art would understand that a user's implementation of the device 400 on a body part is not required to apply certain of these outputs. For example, the time period, speed, amplitude, and temperature are not necessarily dependent upon a user applying pressure to a body part. On the other hand, the force applied by the attachment 628 may require a user to exert pressure on a body part for a target force (or a target force range) to be reached. Further, the temperature may vary depending on whether the attachment 628 is applied to a body part, or not, and to which body part it is applied. Thus, the temperature may need to be adjusted during application of the attachment 628 to reach a desired temperature predetermined by the protocol. In another embodiment, the temperature may be adjusted by a user.

[0157] After time period T_1, the user may be prompted to change the attachment 628, arm position, and/or grip position 143, 145, 147. These outputs may need to be implemented prior to the start of Step 2 of a protocol. In the Shin Splints Protocol depicted in FIG. 25, the attachment 628, arm position and grip position 143, 145, 147 remain the same. At Step 1516, after time period T_1, the user is prompted to set the arm position to the specified arm

Hyper Ice, Inc. Ex. 1003-Page 938
Hyper Ice, Inc. v. Therabody, Inc.

position. The user may be the person using the device 400 on their own body or on the body of another person.

[0158] At Step 1518, the user is prompted to use a specified grip 143, 145, 147 on the device 400. As described herein, the grip may vary depending on the particular protocol or step.

[0159] At Step 1520, the user is prompted to affix a specified attachment 628 to the device 400. As described herein, the attachment 628 may vary depending on the particular protocol or step.

[0160] At Step 1522, the method determines whether the arm position and the grip position 143, 145, 147 are configured appropriately and whether the attachment 628 is affixed. This step and all other like steps are optional. Step 1510 may involve a prompt to the user by haptic feedback, application interface, or touch screen (among other types of prompts) in which the user is prompted to move to the next step in the routine and/or requested to proceed when the appropriate arm position, grip, and attachment are ready. In other embodiments, the device 400 may sense that the arm position and grip are appropriate and that an attachment is affixed before proceeding automatically. In an embodiment, Step 1522 is repeated until the arm position, grip, and attachment are ready.

[0161] FIG. 26C is a flow diagram showing an exemplary Step 2 of the protocol, continuing the method 1500 where FIG. 26B left off.

[0162] At Step 1524, Step 2 of the protocol is initiated. Step 2, for example, is Step 2 depicted in FIGS. 44 and 45, for example.

[0163] At Step 1526, the method 1500 applies a specified time period (T_2) in which the device 400 is activated, a speed of the attachment, an amplitude of the attachment, a force of the attachment, and a temperature of the attachment. In an embodiment, one or more of these outputs of the device 400 are applied. These outputs may be applied by the routine controller 630. One of ordinary skill in the art would understand that a user's

Hyper Ice, Inc. Ex. 1003-Page 939
Hyper Ice, Inc. v. Therabody, Inc.

implementation of the device 400 on a body part is not required to apply certain of these outputs. For example, the time period, speed, amplitude, and temperature are not necessarily dependent upon a user applying pressure to a body part. On the other hand, the force applied by the attachment 628 may require a user to exert pressure on a body part for a target force to be reached. Further, the temperature may vary depending on whether the attachment 628 is applied to a body part, or not, and to which body part it is applied. Thus, the temperature may need to be adjusted during application of the attachment 628 to reach a desired temperature predetermined by the protocol. In another embodiment, the temperature may be adjusted by a user.

[0164] After time period T_2, the user may be prompted to change the attachment 628, arm position and/or grip position 143, 145, 147. These outputs may need to be implemented prior to the start of Step 3 of a protocol. In the Shin Splints Protocol depicted in FIG. 25, the attachment 628 and arm position remain the same, but the grip 143, 145, 147 is adjusted to the base grip. At Step 1528, after time period T_2, the user is prompted to set the arm position to the specified arm position. The user may be the person using the device 400 on their own body or on the body of another person.

[0165] At Steps 1528-1534, therefore, steps substantially the same as Steps 1516-1522 are performed. After Step 1534, Steps 3-4 are initiated in substantially the same manner as Steps 1-2. For example, Steps 3 and 4 may be Steps 3 and 4 of the Protocol 1 depicted in FIG. 24 or the Shin Splints Protocol depicted in FIG. 25. Furthermore, Step 1534 can be omitted in a device where none of the grip, arm position or attachment can be sensed by the device. In this embodiment, the given protocol simply moves from step 1 to step 2 prompting the user to make a change (but regardless of whether the user has actually made a change).

Hyper Ice, Inc. Ex. 1003-Page 940
Hyper Ice, Inc. v. Therabody, Inc.

[0166] As an alternative to FIG. 26C, FIG. 26D is a flow diagram depicting an alternative Step 2 of a protocol. In the alternative Step 2, a force meter adjustment is implemented.

[0167] Steps 1536-1538 are performed substantially the same as Steps 1524-1526 in previous Step 2 above.

[0168] At Step 1540, the force being applied by the attachment 628 is monitored. In the embodiment shown in FIG. 26D, the method 1500 utilizes the force meter 400 to monitor the force actually being applied by the user.

[0169] At Step 1542, the force is displayed to the user. In an embodiment, the force is displayed on an application interface 1584 such as a graphical user interface. In other embodiments, individual use or combined use of the application interface 1584, touch screen 1582, the OLED screen 711, or the like, may be used to display the force.

[0170] At Step 1546, the user is prompted to increase or decrease the force being applied to a body part according to the specified protocol during T_2. FIG. 28 is a diagram showing a touch screen 1582 in accordance with an exemplary embodiment of the display of the force. A force display 1590 shows an exemplary embodiment of Step 1546. The force display 1590 shows a series of force measurements over the course of the "Right Bicep" step of a protocol. A force display prompt 1592 is used to display a message to the user such as "PERFECT PRESSURE: WELL DONE" when the force applied by the attachment 628 matches or corresponds to a target force predetermined by the protocol. In this embodiment, the force display prompt 1592 may recite "INCREASE PRESSURE" or the like if the measured force applied by the attachment 628 is lower than the target force predetermined by the protocol. Consequently, if the measured force applied by the attachment 628 is higher than the target force predetermined by the protocol, then the force display prompt 1592 may recite "DECREASE PRESSURE" or the like. The user may then adjust the pressure the user is exerting on the body part to either increase pressure or

Hyper Ice, Inc. Ex. 1003-Page 941
Hyper Ice, Inc. v. Therabody, Inc.

decrease pressure according to the force display prompt 1592 so that the measured force is equivalent or substantially equivalent to the target force.

[0171] After time period T_2, the user may be prompted to change the attachment 628, arm position and/or grip position 143, 145, 147. These outputs may need to be implemented prior to the start of Step 3 of a protocol. In the Shin Splints Protocol depicted in FIG. 25, the attachment 628 and arm position remain the same, but the grip 143, 145, 147 is adjusted to the base grip. At Step 1528, after time period T_2, the user is prompted to set the arm position to the specified arm position. The user may be the person using the device 400 on their own body or on the body of another person.

[0172] At Steps 1548-1552, therefore, steps substantially the same as Steps 1516-1522 are performed. After Step 1534, Steps 3-4 are initiated in substantially the same manner as Steps 1-2. For example, Steps 3 and 4 may be Steps 3 and 4 of the Protocol 1 depicted in FIG. 24 or the Shin Splints Protocol depicted in FIG. 25.

[0173] FIG. 27 is a diagram in accordance with an exemplary embodiment of an application interface 1584. At the top of the interface 1584, a protocol field 1556 is displayed to the user. In this embodiment, the protocol field 1556 is "TECH NECK." The protocol title 1556 also shows the overall time period of the protocol.

[0174] The next portion of the interface 1584 shows step fields 1558-1568 of the protocol that are displayed to the user. In this embodiment, the step fields identify the title of the step and time period of the step. For example, step field 1558 is titled "RIGHT BICEP" (where the treatment will be provided) and the time period of activation is "0:30 MIN."

[0175] The interface 1584 also includes a current step field 1570 that identifies the current step title 1570, a grip title display 1572, and an attachment title display 1574.

[0176] The interface 1584 also includes a time display 1576 and a time remaining display 1578 to show the user how much time has occurred during that step and the time remaining

Hyper Ice, Inc. Ex. 1003-Page 942
Hyper Ice, Inc. v. Therabody, Inc.

in that step. Finally, the interface 1584 includes a control field 1580 to play, skip back, and skip forward from step to step.

[0177] As described above, FIG. 28 shows a touch screen 1582 on a mobile device. The touch screen 1582 displays a graphic depicting a starting point 1586 "A" and an end point 1588 "B" (thereby defining a treatment path) showing the user where to apply the attachment 628 to the specified body part. In FIG. 27, the display instructs the user to move the attachment from the lower portion of the right bicep to the upper portion of the right bicep (the treatment path) during the current step. In some embodiments, during a single step, the user may be prompted or shown on the graphical user interface more than one treatment path (or a first treatment path and a second treatment path) on the same body part/muscle or on different body parts/muscles. For example, during the right bicep step, the user may be prompted to first move the device along the path shown in FIG. 28, but, during the same thirty second step may also be prompted or shown a path that is parallel to the path shown in FIG. 28.

[0178] FIGS. 29-33 show a device 457 similar to device 400 described above. However, the motor 402 is oriented differently (the motor shaft axis A4 extends perpendicular to the motor shaft axis in device 400), as shown in FIG. 29. It will be appreciated that all embodiments discussed herein or shown in different drawings are interchangeable and the components or inventive concepts in one embodiment can be substituted with or into components or inventive concepts in other embodiments. All parts in all embodiments are optional and are interchangeable or usable with parts from or with other embodiments. As shown in FIG. 30, the motor mount 401 includes a mounting wall 427 with first and second mounting flanges 429 extending therefrom and a shaft opening 430 defined therein. The boss members 432 include a threaded opening 433 defined therein. The boss members 432 receive cylindrical dampening feet 461 with annular slots 425 defined therein on the

Hyper Ice, Inc. Ex. 1003-Page 943
Hyper Ice, Inc. v. Therabody, Inc.

outside thereof and threaded fasteners 46 in the threaded openings 433. As shown in FIGS. 31-33, the motor mount 401 attaches to both housing halves 103 of the housing 101. The mounting members 48, which are essentially an inwardly extending ring are received in annular slots 425 of the cylindrical dampening members 461. In other words, the cylindrical dampening members 461 are received in the opening 435 of mounting members 48 and the ring portion 434 of the mounting members 48 is received in the annular slots 425. The threaded fasteners 46 extend through the central openings of the cylindrical dampening members 461 (and the openings in the mounting members 48) and are threaded into the threaded openings 433 in the boss members 432. This secures the motor mount 401 to the housing halves 103 and the housing 101. The cylindrical dampening members are made of rubber or the like and help reduce vibrations.

[0179] Furthermore, the motor mount 401 mounts the motor 402 so that the motor shaft axis A4 (the rotation axis), extends forwardly and backwardly with respect to the orientation of the device 457 in use. This direction is also considered longitudinally. The motor shaft axis A4 (or a plane defined by the motor shaft axis) bisects the housing 101.

[0180] FIGS. 34-36 show another embodiment where the percussive massage device 436 includes a heart rate sensor 437 that is located on the top handle or first handle portion 143 of the device. Any type of heart rate sensor is within the scope of the invention. Heart rate sensor 437 is a hear rate sensor that uses infrared to measure and record heart rate and can also measure and record heart rate variability, if desired. In an exemplary use, heart rate is measured using a process called photoplethysmography or PPG. This involves shining a specific wavelength of light, which usually appears green, from a pulse oximeter sensor on the underside or upper side (e.g., top of the first handle portion) of the device where it touches the skin. As the light illuminates the tissue, the pulse oximeter measures changes in light absorption and the device then uses this data to generate a heart rate measurement.

Hyper Ice, Inc. Ex. 1003-Page 944
Hyper Ice, Inc. v. Therabody, Inc.

The electronics associated with heart rate sensor 437 are included in the housing 101 and can be separate or on the main PCB. The screen 409 displays the heart rate data. A heart rate monitor opening 438 is defined in the housing and the heart rate sensor 437 is mounted therein, as shown in FIG. 34.

[0181] FIG. 35 shows another type of heart rate monitor or sensor 439 that can be utilized and includes first and second pulse sensors or contacts 440. A first pulse sensor is positioned so that it contacts the user's palm in use and the second pulse sensor is positioned so that it contacts the user's fingers in use. The first handle portion 143 can also include an indent where the contact is located so the user knows where to place their index finger. It will be appreciated that the any of the heart rate sensors can be positioned on the second and third handle portions or on all three handle portions.

[0182] FIGS. 36 and 36A show device 457 including a thermal sensor 462. Any type of thermal sensor is within the scope of the invention. In the embodiment of FIG. 34, the thermal sensor 462 is an infrared thermometer module installed in the housing 101 of the device (shown in a non-limiting position in FIG. 36 on the third handle portion 147) that allows the user to measure the temperature of the user's muscles or other body part. FIG. 36A shows the temperature readout on the screen 409. The thermal sensor 462 is preferably in data and/or electrical communication with the PCB. The temperature data can also be communicated to the app. In an infrared thermometer, infrared light is focused on the body part to be measured or to be treated or while being treated and the infrared thermometer module measures energy or radiation coming from the surface. The detector then translates the amount of electricity generated into a temperature reading of the particular muscle, body part, etc. The infrared beam (see FIG. 36) is emitted through an opening in the third handle portion 147 of the housing 101 and the module is mounted within the housing.

Hyper Ice, Inc. Ex. 1003-Page 945
Hyper Ice, Inc. v. Therabody, Inc.

[0183] In a preferred embodiment, the temperature reading capability is integrated with and a part of the treatment routines or protocols described herein. For example, instead of a routine or a step within a routine running or extending for a predetermined period of time, the routine or step (i.e., the amount of time a particular muscle or body part is treated or targeted) can extend until the muscle or body part (referred to generally herein as a body part) reaches a predetermined temperature. Accordingly, reaching a predetermined temperature can be substituted for predetermined period of time for any of the routines discussed herein. For example, step 1526 in FIG. 26C can be substituted with the method 1500 applies the device 400 is activated until a specified temperature is reached. This can be used to be sure that a body part has been warmed up properly prior to exercise. Therefore, in use, the temperature will rise from a starting temperature to a predetermined finishing temperature and the routine can then go to the next step or end. There also may be a number of "temperature steps" that are each part of the a routine. For example, in the first step, the muscle may go from the starting temperature and move to a second temperature. The next step may treatment and temperature reading from the second temperature to a higher third temperature. The temperature range between the starting and the finish temperature within the routine may also be different for each user. Furthermore, haptic feedback or other notification or instructions can be provided to let the user know when the finish temperature or predetermined temperature has been reached and they can move to the next step in the routine.

[0184] As shown in FIG. 34, in a preferred embodiment, the device 400 includes screen 409, which may or may not be a touch screen, as well as button(s) for operating the device. In the embodiment shown in FIG. 34, the device also includes a center button 403 for turning the device on and off and a ring/rocker button 447 that provides the ability to scroll left and

Hyper Ice, Inc. Ex. 1003-Page 946
Hyper Ice, Inc. v. Therabody, Inc.

right (e.g., to the preset treatments discussed herein) and up and down (e.g., to control the speed or frequency).

[0185] As shown in FIG. 35, in a preferred embodiment, the arm cover 449 includes a rounded edge or surface to prevent a user's fingers from getting caught therein. and the upper portion of the male connector 110 each include rounded edges As shown in FIG. 29, in a preferred embodiment, the male connector 110 includes an alignment tab 497 above each ball that mates with a slot in the female opening. These tabs 497 help with proper alignment with the treatment structure.

[0186] In another preferred embodiment, any of the devices taught herein can include a mechanism for heating or changing the temperature of the attachment (massage element, treatment structure, Ampbit) on the end of the reciprocating shaft. The attachment can include an electrical resistance element therein that is provides to heat to the muscles. In a preferred embodiment, the electrical resistance element is connected to the PCB via a hollow shaft. The two outwardly biased metal spring balls on the male connector act as the electrical connector to the attachment.

[0187] FIGS. 37-40 show embodiments of a percussive massage device that includes a heated massage attachment or massage member. In the embodiment shown in FIG. 37, the male attachment member 110 includes a heating pad or heating element 502 therein. The heating element 502 is preferably electrically connected via electrical wiring 506 or the like to the PCB 504 of the device. Any type of heating is within the scope of the present invention. In a preferred embodiment, the heating element is an electrical resistance member that is located in the end of the male connector 110. In this embodiment, a wire connects the electrical resistance member to the PCB and the battery. The wiring 506 may extend through a hollow shaft or other conduit and is guided through the housing, down the shaft and into the male connector 110. The heating element 502 may be internal within the

Hyper Ice, Inc. Ex. 1003-Page 947
Hyper Ice, Inc. v. Therabody, Inc.

male connector 110 or may be part of the exterior surface, as shown in FIG. 37. In an embodiment with a female connector on the device (at the end of the shaft), the heating element can be in the female connector. In use, the heated male attachment member transfers heat to the massage member, which heats the outer surface of the massage member, which can then be applied to the user's body part. The PCB can include a controller for controlling the temperature. More than one temperature setting can be provided (e.g., 2-10 settings) so that different temperatures can be utilized by the user as desired. Cooler temperatures can also be provided. The attachment member and the massage member can be made of or partially made of a material that is a good conductor of heat.

[0188] FIGS. 38-40 show another preferred embodiment with a heated or temperature controlled massage member 508. All disclosure related to the FIG. 37 embodiment is repeated for this embodiment. In this embodiment, the female or male attachment member 110 is electrically connected to the complementary male or female attachment member in the massage member to provide power to heat or cool the massage member 508. FIG. 38 shows the device with power running from the PCB 504 to the male attachment member 110. As shown in FIG. 39, the male attachment member 110 includes positive and negative electrical contacts 510 that mate with opposing positive and negative electrical contacts 512 in the female attachment member in the massage member 508, as shown in FIG. 40. FIG. 39 shows a male attachment member with metal balls 514 that are received in indentations in the female attachment member. The metal balls 514 can be the electrical contacts 510 and the electrical contacts 512 can be positioned in the indentations in the female attachment member. The heating element 502 may be internal within the massage member 508 or may be part of the exterior surface.

Hyper Ice, Inc. Ex. 1003-Page 948
Hyper Ice, Inc. v. Therabody, Inc.

[0189] In use, an electrical connection is made when the massage member 508 is secured to the device and to the male attachment member 110. When heating or cooling is turned on, the heating element 502 in the massage member 508 is heated, which can then be applied to the user's body part. The heating element or electrical resistance member (e.g., heated pad) can be located in or on the massage member (e.g., ball, cone, etc.) and the metal connection between the male connector and the massage member is used to electrically connect to the battery.

[0190] The electrical connection between the male or female attachment member 110 permits a variety of uses beyond heating with the heating element 502. In a preferred embodiment, a heating element 502 radiates wavelengths to produce heat on a user's body part. The male or female attachment member 110, for example, may be utilized for a variety of other uses, such as vibration, percussion, cooling, and exfoliating. The male or female attachment member 110 may be configured as an actuator designed to provide these uses. For example, percussion is already achieved using the attachment 628. However, the attachment 628 or 508 may be modified to add or replace the heating element 502 with a cooling, vibration, or exfoliating element. Other uses and actuators may be utilized without departing from the scope of the present invention.

[0191] As shown in FIGS. 41-42C, in a preferred embodiment, the percussive therapy device 100 includes an angular position sensor 516 and a linear position sensor 518. See FIG. 37. For example, the angular position sensor 516 is a gyroscope 516 and the linear position sensor 518 is an accelerometer 518. One or more gyroscopes, accelerometers, sensors or the like can be included on or in the device for detecting and gathering data. The system including the device 100 and the angular position sensor 516 and the linear position sensor 518 allows data to be gathered regarding the angular and linear positioning of the device 100. Data can include angular positioning (α,β,γ) (i.e., angular position data) and

Hyper Ice, Inc. Ex. 1003-Page 949
Hyper Ice, Inc. v. Therabody, Inc.

linear movement in three axes (x,y,z) (i.e., linear position data), for example. In a preferred embodiment, a sensor chipboard 504 is included in the device 100 to measure variations in its angular position in three axes, α, β and γ via a gyroscope 516 and to track linear movement of the device in three axes x, y and z via an accelerometer 518. See FIG. 37. The angular position sensor 516 and the linear position sensor 518 may be implemented on the sensor chipboard 504, or they may constitute separate electronic devices operably connected to the sensor chipboard 504. Other suitable configurations of the angular position sensor 516 and the linear position sensor 518 exist without departing from the scope of this invention.

[0192] In an embodiment, the printed circuit board 408 of the device 100 powers the angular position sensor 516 and a linear position sensor 518 and stores the data the sensors generate. For example, the sensor data may be stored in a memory (not shown). In another embodiment, the PCB 408 integrally incorporates the sensor chipboard 504. Preferably, the PCB 408 broadcasts and/or transmits data generated by the sensors through a wireless connectivity standard, such as Bluetooth. For example, the wireless connectivity standard is implemented via the wireless control unit 710 (FIG. 2). The sensors are configured to accurately map how the device 100 moves with respect to the user's muscle during the treatment. In an embodiment, the sensors may also include an oxygen saturation sensor to monitor an amount of oxygen content in the user's blood (e.g., a pulse oximeter or the like), and a blood flow sensor to monitor magnitude and/or velocity of the user's blood flow.

[0193] FIGS. 42A-42C show exemplary angular positioning using the angular position sensor 516. As the device 100 is rotated left and right (see FIGS. 42A and 42B) in x and y axes, and tilted upwardly (see FIG. 42C) in the z axis, the angles and direction of the device 100 are shown on a computer monitor or display. The depictions shown in FIGS. 42A-42C illustrate a graphical representation of the device 100 as the device 100 is moved.

Hyper Ice, Inc. Ex. 1003-Page 950
Hyper Ice, Inc. v. Therabody, Inc.

While FIGS. 42A-42C illustrate angular movement of the device 100, the linear movement of the device 100 is also graphically represented on a computer monitor or display in like manner. It will be appreciated that the movement is shown on the computer monitor in the drawings to provide an example of how the angular position sensor 516 senses the movement.

[0194] In a preferred embodiment, the angular and linear position sensors 516, 518, coupled with the force meter of the percussive therapy device 400 discussed above, can be used to map the treatment of a muscle or body part as the device 400 is being used in a three-dimensional display. This "map" or data can be displayed through or on an application or on the touch screen 1582. For example, angular and linear position data obtained from the angular and linear position sensors 516, 518 can be graphically represented via the application or on the touch screen 1582. The angular and linear position data can assist the user in applying a particular protocol or routine, for example, such as those depicted in FIGS. 24-28 and accompanying descriptions, or the like. In addition to angular and linear movement, the force meter of device 400 (or device 457) can obtain force magnitude data to assist the user in administering a routine or protocol constituting a therapeutic treatment to the user (or to another person to whom the user is administering the treatment). For example, the map of angular and linear position and force magnitude can be compared against the routine or protocol. The routine or protocol, in this example, will specify a muscle group, a linear and/or angular path (see FIG. 28, for example, with the starting point 1586 and the ending point 1588, in two dimensions), and a force magnitude that the user is intended to exert on the muscle group (see FIG. 28, for example, with the force display 1590 and force display prompt 1592). In a preferred embodiment, the muscle group, linear and angular position, and force magnitude (i.e., depression on the muscle group) is graphically presented in a three dimensional display. Preferably, the display also

Hyper Ice, Inc. Ex. 1003-Page 951
Hyper Ice, Inc. v. Therabody, Inc.

graphically illustrates when the user's linear movement, angular movement, or force magnitude exerted on the muscle group is following the protocol or routine. If the user is not following the routine or protocol, the user will receive a prompt to take corrective action to follow the routine or protocol correctly. For example, the prompt may alert the user that the user is applying the attachment 628 to a different muscle group than that specified by the protocol. The prompt may be haptic feedback, application interface, or touch screen (among other types of prompts). The prompt may also be presented in a two-dimensional or three-dimensional graphical representation. As a result, the device can track over time what regions of a user's muscles or body parts are being worked the most and whether the user is positioning the device correctly. The prompt may also let the user know they are positioning the device incorrectly or they are working on the wrong body part (e.g., during the treatment protocols).

[0195] Referring again to FIG. 36, the device 457 is shown depressing the attachment 628 onto a user's body part. In accordance with the description above, the depression may be graphically represented in two or three dimensions on a display. In practice, the attachment 628 shown in FIG. 36 is configured to provide percussive effect to the user's body part, and thus, exerts a force onto the user's body part. The force meter measures the force magnitude of the attachment 628 when depressed onto the user's body part. The force magnitude data is then transmitted to a monitor/display, application, or touch screen 1582, or the like, to show a user (or other person) the amount of force exerted on the user's body part during a protocol or routine. Gathering multi-sensory data allows for augmented reality features that can be used to train users and recovery professionals virtually on how to use the device 400, 457.

[0196] As an example, while a user's quad muscle is not a uniform shape, it is possible to simplify the user's quad muscle to the shape of a cylinder. The angular and linear position

Hyper Ice, Inc. Ex. 1003-Page 952
Hyper Ice, Inc. v. Therabody, Inc.

can be ascertained, and thus, a determination can be made concerning how the device 400, 457 is positioned relative to the cylinder. Further, a determination can be made concerning the direction the percussive arm (e.g., push rod assembly 14, shaft 16, and/or attachment 628) is directed of the device 400, 457. The determination can also be made concerning how the device is moving relative to the cylinder in linear coordinates. The force magnitude from the force meter of the device 400, 457 allows confirmation that the device 400, 457 is in contact with the muscle, as well as the intensity and duration of that interaction.

[0197] Similarly, the device 400, 457 can also include a thermal sensor 462 or thermometer 462 that can determine the temperature of the user's muscle and to provide feedback to the device and/or application. See FIG. 36, thermal sensor 462. For example, an electronic thermometer 462 that reads the temperature of the user's skin or muscle before, during and/or after treatment can be included. In an embodiment, the thermal sensor 462 is located in the housing 12 of the device 400, 457 where infrared radiation or wavelengths can be used to measure temperature. In another embodiment, the thermometer 462 can be positioned to require direct contact to measure the temperature and/or it may utilize wireless technology, like an infrared sensor, to make the temperature readings. For example, FIG. 40 illustrates how the attachment 508 may function as (or include) a thermal sensor 462, a heating element 502, or both. Similarly to the heating element 502 as shown in FIG. 37, for example, the thermal sensor 462 may be connected to the PCB 504 via the electrical wiring 506 and may be located in the attachment 628. The electrical contacts 510, 512 (or metal balls 514) as shown in the embodiments of FIGS. 38-39 provide electrical connectivity between the PCB 504, the male or female connector 110, and thus, the thermal sensor 462. As with the heating element 502, a thermal sensor 462 may be utilized as part of a protocol or routine.

Hyper Ice, Inc. Ex. 1003-Page 953
Hyper Ice, Inc. v. Therabody, Inc.

[0198] In an embodiment, a three-dimensional rendering of thermal readings from the thermal sensor 462 is provided to a user to show incremental increases in temperature over time. For example, a three-dimensional rendering may show varying colors from blue (e.g., cool) to yellow/orange (e.g., medium temperature) to red (e.g., hot) to illustrate to the user the increase in temperature over time.

[0199] An accessory, module or attachment module 520 can be used with and attached or secured to a percussive massage or percussive therapy device 100, 400, 457 as part of a percussive therapy system 500. In a preferred embodiment, the attachment module 520 includes a thermal sensor or thermometer 462 that can determine the temperature of the user's muscle and to provide feedback to a device and/or application. In a preferred embodiment, the thermal sensor 462 allows the application to determine or customize the timing of each step within a protocol. The temperature can be used to determine blood flow and therefore muscle readiness for a specific goal (e.g., relaxation, performance, focus).

[0200] As shown in FIGS. 43-45, in a preferred embodiment, the attachment module 520 includes a housing 522, a thermal sensor 524, a battery 526, a printed circuit board (PCB) 528 (that includes a gyroscope 516 or other angular/positional device, e.g., the angular position sensor 516, and/or an accelerometer 518 or other linear/positional device, e.g., the linear position sensor 518), a button 530 and a wireless communication module 532 (e.g., a Bluetooth module). In a preferred embodiment, the housing 522 includes a securement portion 534 defined therein so that the attachment module 520 can be secured to a percussive therapy device 400, 457. The securement portion 534 or recess 534 can include rubber on the inside thereof to provide grip on the percussive therapy device. Protrusions 536 are preferably included on both sides of the housing 522 to provide grip when securing and removing the attachment module 520 from the percussive therapy device 400, 457. In another embodiment, the wireless connection module can be omitted and the attachment

Hyper Ice, Inc. Ex. 1003-Page 954
Hyper Ice, Inc. v. Therabody, Inc.

module can include a display or screen for displaying information, such as temperature, angular and linear position, or any other information obtained or sensed by the attachment module.

[0281] As described above with respect to FIG. 36, any type of thermal sensor 524 is within the scope of the invention. In the embodiment shown in FIGS. 43-45, the thermal sensor 524 is an infrared thermometer module installed in the housing 522 and directed downwardly when installed on a percussive therapy device 100 as shown in FIGS. 46-47 (shown in a non-limiting position on the front arm of the percussive therapy device 100). In another embodiment, the thermal sensor 524 is the thermal sensor 462 and can be secured to the third handle portion 147 or bottom of a percussive therapy device 400, 457 or on any handle portion 143, 145, 147 or part of a percussive therapy device 400, 457 where it can be positioned and allow the user to measure the temperature of the user's muscles or other body part. See FIG. 36. The attachment module 520 can be used with any type of percussive therapy device 500, massage device or other device where temperature and/or positioning measurements are desired. It will be appreciated that all embodiments and components thereof are interchangeable with all other embodiments and components thereof.

[0282] In a preferred embodiment, the attachment module 520 communicates wirelessly with the percussive therapy device 400 and/or the application on the user's mobile device. See FIG. 2, the wireless control unit 710, and accompanying discussion. In another embodiment, the attachment module 520 is physically and electrically connected to the device 400 and no wireless module is needed as communication is achieved through conventional electrical wires or the like.

[0283] Referring again to FIG. 36A, a temperature readout on the screen 409 of the percussive therapy device 100 is shown. The thermal sensor 524 is preferably in data

Hyper Ice, Inc. Ex. 1003-Page 955
Hyper Ice, Inc. v. Therabody, Inc.

and/or electrical communication with the PCB 528 and the data is communicated to one or both of the device 400 or application.

[0284] In a preferred embodiment, the temperature reading capability is integrated with and a part of the treatment routines or protocols described herein or by reference. For example, instead of a routine or a step within a routine running or extending for a predetermined period of time, the routine or step (i.e., the amount of time a particular muscle or body part is treated or targeted) can extend until the muscle or body part (referred to generally herein as a body part) reaches a predetermined temperature. Accordingly, reaching a predetermined temperature can be substituted for predetermined period of time for any of the routines. For example, step 1526 in FIG. 26C can be substituted for the step of "apply attachment to specified body part until a specified temperature is reached." This can be used to be sure that a body part has been warmed up properly prior to exercise. Therefore, in use, the temperature will rise from a starting temperature to a predetermined finishing temperature and the routine can then go to the next step or end. There also may be a number of "temperature steps" that are each part of the a routine. For example, during the first step, the muscle may increase in temperature from the starting temperature to a second temperature. The next step may involve additional treatment until the temperature reading increases from the second temperature to a higher third temperature. The temperature range between the starting and the finish temperature within the routine may also be different for each user. Furthermore, haptic feedback or other notification or instructions can be provided to let the user know when the finish temperature or predetermined temperature has been reached and that they can move to the next step in the routine.

[0285] In a preferred embodiment, the attachment module 520 includes an angular position sensor 516 (e.g., gyroscope 516) and/or a linear position sensor 518 (e.g., accelerometer 518). Each or both can be implemented as part of the PCB 18. One or more gyroscopes

Hyper Ice, Inc. Ex. 1003-Page 956
Hyper Ice, Inc. v. Therabody, Inc.

516, accelerometers 518, sensors or the like can be included on or in the device 400 for detecting and gathering data. One or more actuators may also be included on or in the device 400 for providing at least one therapeutic effect. Thus, the description above referencing gyroscopes, 516, accelerometers 518, attachments 628, 508, male or female attachment members 110, or sensors or actuators within or without the housing 101 is instructive and within the scope of the attachment module 520. See FIGS. 36-42C. For example, a heating element 502 may be implemented in the attachment module 520 to utilize radiation to penetrate skin and muscle to a certain depth. This treatment can result in muscle recovery.

[0286] In an embodiment, the percussive therapy system 500 is configured to determine at least one characteristic of the attachment 628, 508. For example, a percussive therapy device 100, 400 itself may include circuitry and wired or wireless communication to sense the type of attachment the user intends to use in connection with the device 100, 400. For example, the device 100, 400 may sense that the attachment 628 is a dampener. Other characteristics of the attachment 628, 508 may be sensed. For example, the existence of one or more sensors included in the attachment 628, 508 may be sensed. In addition, the existence of one or more actuators included in the attachment 628, 508 may be sensed. In an embodiment, the device 100, 400 senses when the attachment 628, 508 is attached to a distal end of the push rod assembly 14. Once the attachment 628, 508 is attached, then the device may, through wired connections (e.g., positive/negative contacts 510, 512 or the like, or other wired electrical connections), sense the various characteristics of the attachment 628, 508. In this embodiment, the wired connections may communicate with the PCB 408, 504 so that the device 100, 400 determines the characteristics. In another embodiment, the attachment 628, 508 may include wireless communication capabilities and communicate the characteristics wirelessly. One of ordinary skill in the art would

Hyper Ice, Inc. Ex. 1003-Page 957
Hyper Ice, Inc. v. Therabody, Inc.

understand that there are a variety of methodologies to employ to communicate the characteristics to the device 100, 400 and/or the user, preferably through communication on a remote device or touch screen 1582.

[0287] FIG. 48 is a flow diagram of a method 1600 of providing at least one therapeutic effect to a user in accordance with an embodiment of the present invention. At Step 1602, a percussive therapy device 400, 457 is operated on a user's body part. For example, the user initiates a protocol such as that shown in FIGS. 24-28 and accompanying descriptions, or the like. In accordance with the specified protocol initiated, the user typically is instructed to operate the percussive therapy device (or other suitable therapeutic treatment or effect) in accordance with steps of the protocol in a specified fashion. For example, the user may be instructed to orient the device 400, 457 at a specified angle relative to a muscle group, along a linear path relative to the specified muscle group, and/or with a certain amount of force exerted on the specified muscle group. At Step 1604, angular position data is obtained from a gyroscope 516 in three rotational axes (α,β,γ). The gyroscope may also be an angular position sensor 516 or suitable replacement. At Step 1606, adjustment of an angular position of the percussive massage device 400, 457 is recommended in response to the angular position data. As illustrated in FIGS. 42A-C, the angular position data may show that the angular position of the device 400, 457 is correctly oriented relative to a body part. It may also reveal that the angular position of the device 400, 457 is incorrectly oriented. Thus, the recommendation preferably instructs the user to orient the device 400, 457 properly relative to the body part.

[0288] At Step 1608, linear position data is obtained from an accelerometer 518 in three linear axes (x, y, z). The accelerometer may also be a linear position sensor 518 or suitable replacement. At Step 1610, adjustment of a linear position of the percussive massage device 400, 457 is recommended in response to the linear position data. For example, in

Hyper Ice, Inc. Ex. 1003-Page 958
Hyper Ice, Inc. v. Therabody, Inc.

FIG. 28, a right bicep routine is shown that instructs the user to move the device 400, 457 from the starting point 1586 (A) to the ending point 1588 (B). If the user correctly follows the linear path from (A) to (B), then the recommendation may indicate so to the user. If the user is not correctly following the linear path from (A) to (B), then the recommendation preferably instructs the user to adjust the linear position of the device 400, 457 and/or attachment 628 to correctly follow the linear path and the predetermined routine.

[0209] At Step 1612, force magnitude data is obtained from a force meter included in the percussive therapy device 400, 457. At Step 1614, application of the attachment 628 of device 400, 457 to the user's body part is recommended if the attachment 628 is not in contact with the user's body part in response to the force magnitude data. For example, the force magnitude is approximately zero (or a de minimus threshold amount) that may be predetermined if the attachment is not in contact with the user's body part.

[0210] At Step 1616, adjustment of a force magnitude exerted on the user by the attachment 628 of the device 400, 457 is recommended in response to the force magnitude data. For example, in FIG. 28, a force magnitude exerted on a right bicep is illustrated in accordance with the force display 1590. In that embodiment, the force display prompt 1592 reads "PERFECT PRESSURE: WELL DONE", indicating that the pressure the user is exerting on the right bicep is in accordance with the pressure specified by the predetermined right bicep routine. In the event that the force magnitude is lower or higher than the pressure specified by the routine, the recommendation will read "INCREASE PRESSURE" or "DECREASE PRESSURE" as needed.

[0211] At Step 1618, a three-dimensional representation of the device 400, 457 and its angular and/or linear position and/or force magnitude is displayed on a display. The angular position of the device 400, 457, in an embodiment, is displayed similarly to the graphic shown in FIG. 42A-C. The display may be situated on a touch screen 1582, a

Hyper Ice, Inc. Ex. 1003-Page 959
Hyper Ice, Inc. v. Therabody, Inc.

mobile device, or other remote device. The display of the three-dimensional device is utilized to assist the user in adjustment of the angular and/or linear position of the device and/or the pressure (e.g., force magnitude) exerted on the user's body part. See FIGS. 42A-C and accompanying description concerning "mapping" of device 400, 457 relative to the user's body part.

[0212] FIG. 49 is a flow diagram of a method 1620 of preparing a user's body part for exercise in accordance with an embodiment of the present invention. At Step 1622, a therapeutic effect is provided to the user's body part using the percussive therapy device 400, 457. The therapeutic effect may include a variety of massage or other treatments, including vibration, concussion, heat, or exfoliation. A heating element 502 or other heating actuator may be implemented to increase the temperature during the time that the therapeutic effect is provided to the user.

[0213] At Step 1624, a temperature of the user's body part is monitored. At Step 1626, it is determined whether the temperature reading is greater than or equal to a predetermined threshold temperature. Once the temperature reaches the predetermined threshold temperature, for example, the user's body part is ready for exercise. This may vary depending on the user and the user's body part. If the temperature is less than the predetermined threshold temperature, Steps 1622 and 1624 are repeated. If the temperature is greater than or equal to the predetermined threshold temperature, then Step 1628 is implemented. At Step 1628, user instructions are provided to cease providing the therapeutic effect to the user's body part. The user's body part is warm enough to exercise safely and effectively with lower risk for exercise-related injury, and can also improve performance of the user during the exercise.

[0214] Although the operations of the method(s) herein are shown and described in a particular order, the order of the operations of each method may be altered so that certain

Hyper Ice, Inc. Ex. 1003-Page 960
Hyper Ice, Inc. v. Therabody, Inc.

operations may be performed in an inverse order or so that certain operations may be performed, at least in part, concurrently with other operations. In another embodiment, instructions or sub-operations of distinct operations may be implemented in an intermittent and/or alternating manner.

[0215] Unless the context clearly requires otherwise, throughout the description and the claims, the words "comprise," "comprising," and the like are to be construed in an inclusive sense, as opposed to an exclusive or exhaustive sense; that is to say, in the sense of "including, but not limited to." As used herein, the terms "connected," "coupled," or any variant thereof, means any connection or coupling, either direct or indirect, between two or more elements; the coupling of connection between the elements can be physical, logical, or a combination thereof. Additionally, the words "herein," "above," "below," and words of similar import, when used in this application, shall refer to this application as a whole and not to any particular portions of this application. Where the context permits, words in the above Detailed Description of the Preferred Embodiments using the singular or plural number may also include the plural or singular number respectively. The word "or" in reference to a list of two or more items, covers all of the following interpretations of the word: any of the items in the list, all of the items in the list, and any combination of the items in the list.

[0216] Embodiments are envisioned where any of the aspects, features, component or steps herein may be omitted and/or are option. Furthermore, where appropriate any of these optional aspects, features, component or steps discussed herein in relation to one aspect of the invention may be applied to another aspect of the invention.

[0217] The above-detailed description of embodiments of the disclosure is not intended to be exhaustive or to limit the teachings to the precise form disclosed above. While specific embodiments of and examples for the disclosure are described above for illustrative

Hyper Ice, Inc. Ex. 1003-Page 961
Hyper Ice, Inc. v. Therabody, Inc.

purposes, various equivalent modifications are possible within the scope of the disclosure, as those skilled in the relevant art will recognize. For example, while processes or blocks are presented in a given order, alternative embodiments may perform routines having steps, or employ systems having blocks, in a different order, and some processes or blocks may be deleted, moved, added, subdivided, combined, and/or modified to provide alternative or subcombinations. Each of these processes or blocks may be implemented in a variety of different ways. Also, while processes or blocks are at times shown as being performed in series, these processes or blocks may instead be performed in parallel, or may be performed, at different times. Further any specific numbers noted herein are only examples: alternative implementations may employ differing values or ranges.

[0218] The above-detailed description of embodiments of the disclosure is not intended to be exhaustive or to limit the teachings to the precise form disclosed above. While specific embodiments of and examples for the disclosure are described above for illustrative purposes, various equivalent modifications are possible within the scope of the disclosure, as those skilled in the relevant art will recognize. Further, any specific numbers noted herein are only examples: alternative implementations may employ differing values, measurements or ranges. It will be appreciated that any dimensions given herein are only exemplary and that none of the dimensions or descriptions are limiting on the present invention.

[0219] The teachings of the disclosure provided herein can be applied to other systems, not necessarily the system described above. The elements and acts of the various embodiments described above can be combined to provide further embodiments.

[0220] Any patents and applications and other references noted above, including any that may be listed in accompanying filing papers, are incorporated herein by reference in their entirety. Aspects of the disclosure can be modified, if necessary, to employ the systems,

Hyper Ice, Inc. Ex. 1003-Page 962
Hyper Ice, Inc. v. Therabody, Inc.

functions, and concepts of the various references described above to provide yet further embodiments of the disclosure.

[0221] These and other changes can be made to the disclosure in light of the above Detailed Description of the Preferred Embodiments. While the above description describes certain embodiments of the disclosure, and describes the best mode contemplated, no matter how detailed the above appears in text, the teachings can be practiced in many ways. Details of the system may vary considerably in its implementation details, while still being encompassed by the subject matter disclosed herein. As noted above, particular terminology used when describing certain features or aspects of the disclosure should not be taken to imply that the terminology is being redefined herein to be restricted to any specific characteristics, features or aspects of the disclosure with which that terminology is associated. In general, the terms used in the following claims should not be construed to limit the disclosures to the specific embodiments disclosed in the specification unless the above Detailed Description of the Preferred Embodiments section explicitly defines such terms. Accordingly, the actual scope of the disclosure encompasses not only the disclosed embodiments, but also all equivalent ways of practicing or implementing the disclosure under the claims.

[0222] While certain aspects of the disclosure are presented below in certain claim forms, the inventors contemplate the various aspects of the disclosure in any number of claim forms. For example, while only one aspect of the disclosure is recited as a means-plus-function claim under 35 U.S.C. §112, ¶6, other aspects may likewise be embodied as a means-plus-function claim, or in other forms, such as being embodied in a computer-readable medium. (Any claims intended to be treated under 35 U.S.C. §112, ¶6 will begin with the words "means for"). Accordingly, the applicant reserves the right to add additional

Hyper Ice, Inc. Ex. 1003-Page 963
Hyper Ice, Inc. v. Therabody, Inc.

claims after filing the application to pursue such additional claim forms for other aspects of the disclosure.

[00223] Accordingly, although exemplary embodiments of the invention have been shown and described, it is to be understood that all the terms used herein are descriptive rather than limiting, and that many changes, modifications, and substitutions may be made by one having ordinary skill in the art without departing from the spirit and scope of the invention.

Hyper Ice, Inc. Ex. 1003-Page 964
Hyper Ice, Inc. v. Therabody, Inc.

WHAT IS CLAIMED IS:

1. A percussive therapy system comprising:

a percussive therapy device comprising:

a housing;

a handle portion;

a motor positioned in the housing and configured to output torque about a motor axis;

an eccentric shaft configured to travel in a circle about the motor axis in response to activation of the motor; and

a push rod assembly operatively connected to the motor and configured to reciprocate in response to activation of the motor, wherein the push rod assembly comprises an output shaft configured to travel along a reciprocation axis when the push rod assembly reciprocates, the reciprocation axis extends transverse to the handle portion on a dividing plane normal to the motor axis, a proximal end of the push rod assembly is connected to the eccentric shaft at a location offset from the dividing plane in a first direction, the motor extends away from the handle portion and away from the dividing plane in a second direction opposite the first direction, and an interior angle defined between the handle portion and the output shaft is obtuse; and

an attachment configured to be operatively connected to the connector of the percussive therapy device.

2. A percussive therapy device comprising:

a motor configured to output torque about a motor axis;

a handle portion extending along a handle portion axis;

a housing; and

a push rod assembly comprising:

an output shaft configured to reciprocate along a reciprocation axis in response to activation of the motor and having a distal end that comprises a connector for an attachment, wherein the output shaft is centered on the reciprocation axis and the reciprocation axis extends on a dividing plane; and

a push rod having a proximal end operatively connected to the motor and a distal end connected to the output shaft;

wherein the dividing plane is normal to the motor axis, and

Hyper Ice, Inc. Ex. 1003-Page 965
Hyper Ice, Inc. v. Therabody, Inc.

wherein the handle portion axis extends at an oblique angle to the reciprocation axis and intersects the reciprocation axis and the motor axis.

Hyper Ice, Inc. Ex. 1003-Page 966
Hyper Ice, Inc. v. Therabody, Inc.

ABSTRACT

A percussive therapy system includes a percussive therapy device that includes a housing, an electrical source, a motor positioned in the housing, a switch for activating the motor, a push rod assembly operatively connected to the motor and configured to reciprocate in response to activation of the motor, and an attachment configured to be operatively connected to a distal end of the push rod assembly of the percussive massage device and to provide at least one therapeutic effect to a user. The attachment may include at least one of an actuator configured to provide the at least one therapeutic effect to the user and a sensor configured to obtain at least one of biometric data of the user and information regarding operation of the percussive therapy device.

Hyper Ice, Inc. Ex. 1003-Page 967
Hyper Ice, Inc. v. Therabody, Inc.

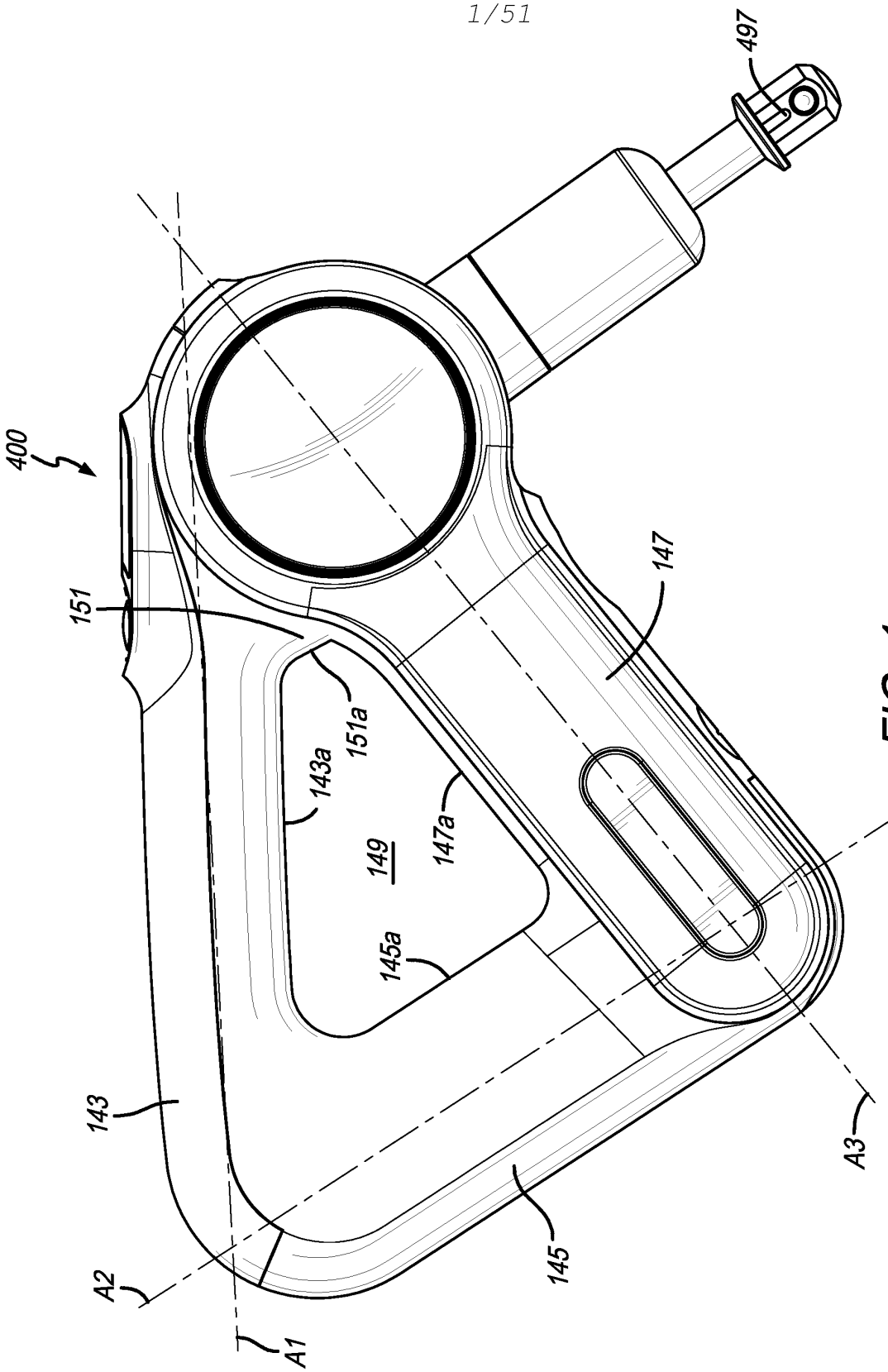


FIG. 1

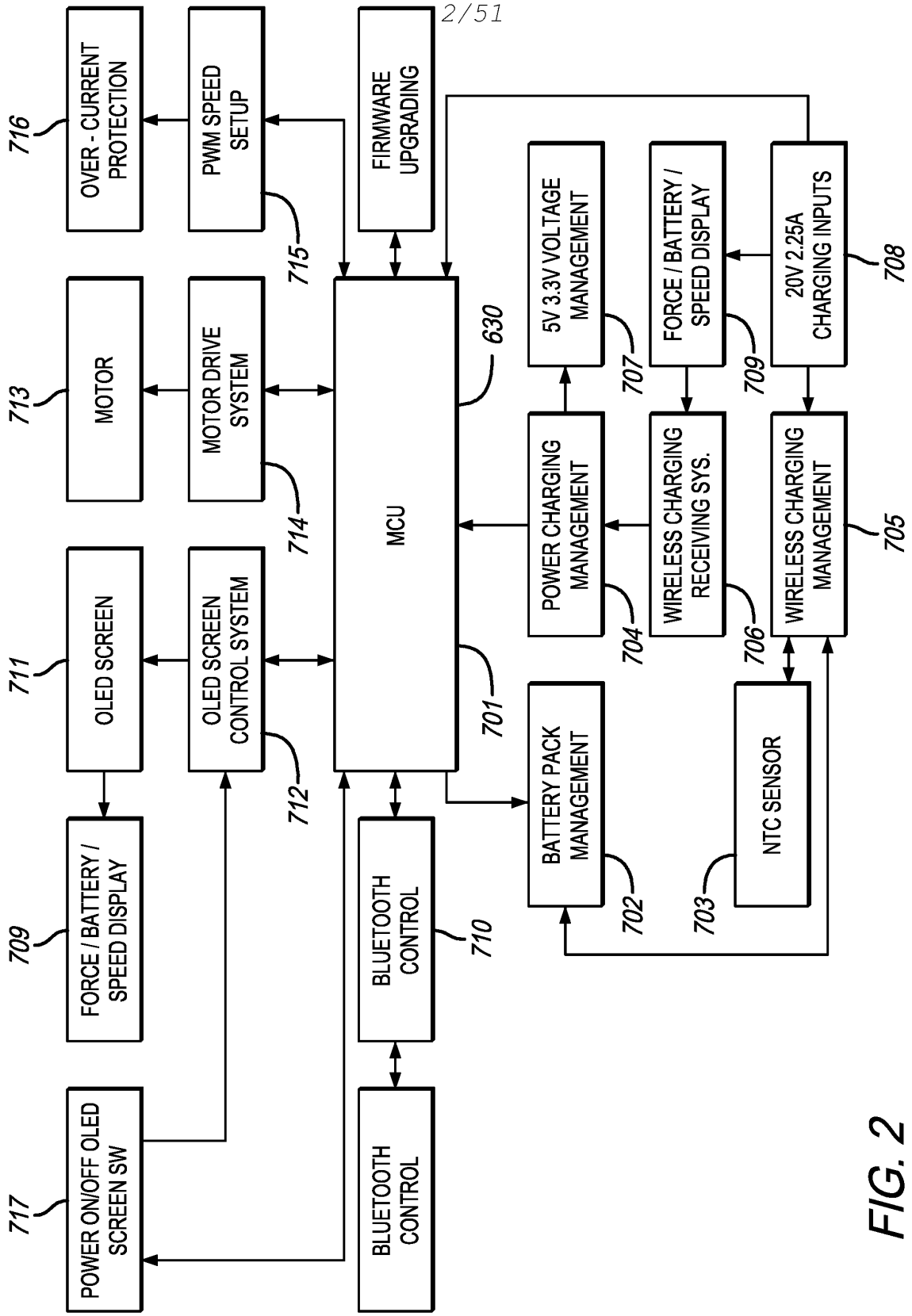

716
OVER - CURRENT PROTECTION
PWM SPEED SETUP
FIRMWARE UPGRADING
715
713
MOTOR
MOTOR DRIVE SYSTEM
714
MCU
630
711
OLED SCREEN
OLED SCREEN CONTROL SYSTEM
712
701
709
FORCE / BATTERY / SPEED DISPLAY
BLUETOOTH CONTROL
710
717
POWER ON/OFF OLED SCREEN SW
BLUETOOTH CONTROL
5V 3.3V VOLTAGE MANAGEMENT
707
FORCE / BATTERY / SPEED DISPLAY
709
20V 2.25A CHARGING INPUTS
708
POWER CHARGING MANAGEMENT
704
WIRELESS CHARGING RECEIVING SYS.
706
WIRELESS CHARGING MANAGEMENT
705
BATTERY PACK MANAGEMENT
702
703
NTC SENSOR

FIG. 2

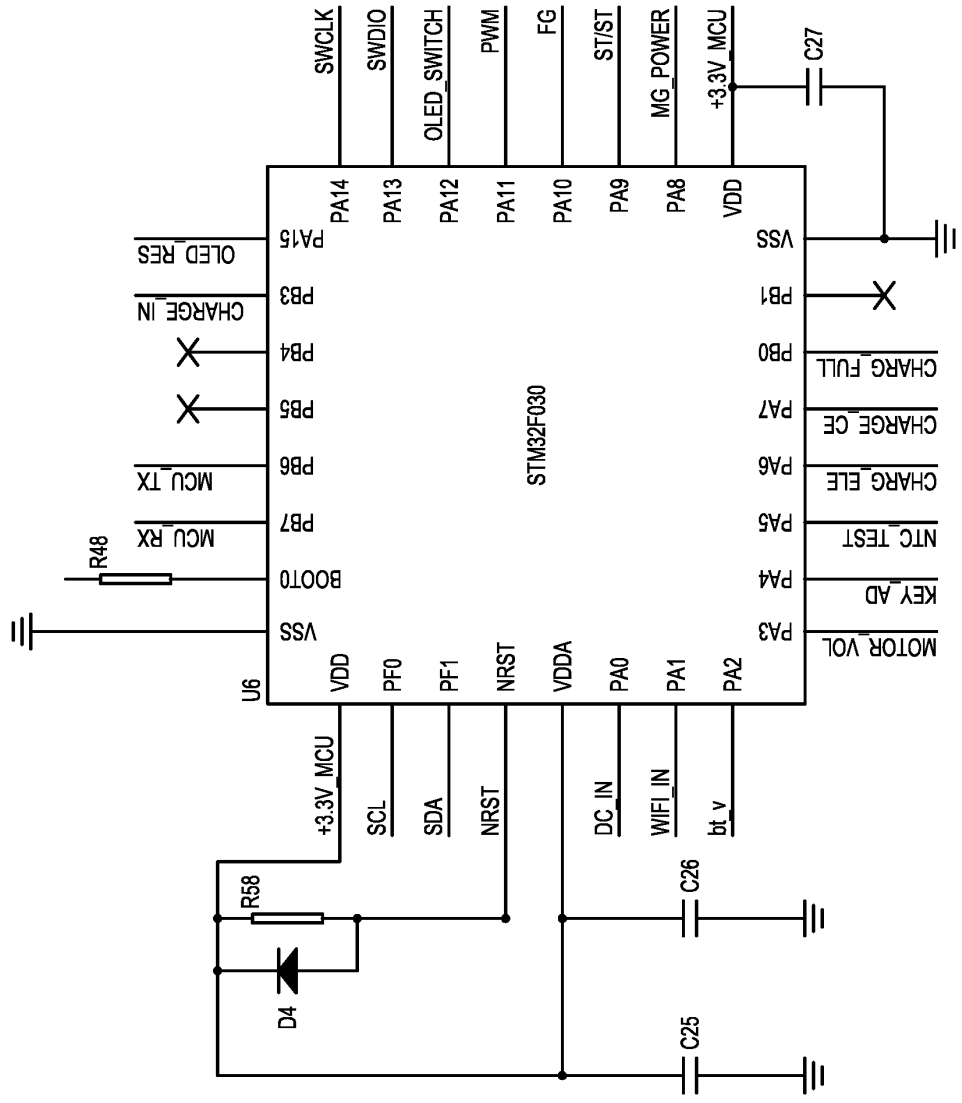

SWCLK
SWDIO
OLED_SWITCH
PWM
FG
ST/ST
MG_POWER
+3.3V_MCU
C27
PA14
PA13
PA12
PA11
PA10
PA9
PA8
VDD
PA15
PB3
PB4
PB5
PB6
PB7
BOOT0
VSS
VSS
PB1
PB0
PA7
PA6
PA5
PA4
PA3
OLED_RES
CHARGE_IN
MCU_TX
MCU_RX
R48
STM32F030
CHARG_FULL
CHARGE_CE
CHARG_ELE
NTC_TEST
KEY_AD
MOTOR_VOL
U6
VDD
PF0
PF1
NRST
VDDA
PA0
PA1
PA2
+3.3V_MCU
SCL
SDA
NRST
DC_IN
WIFI_IN
bt_v
R58
C26
D4
C25

FIG. 3

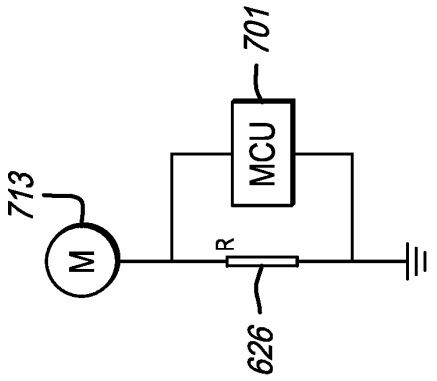

701
MCU
713
M
R
626

FIG. 5

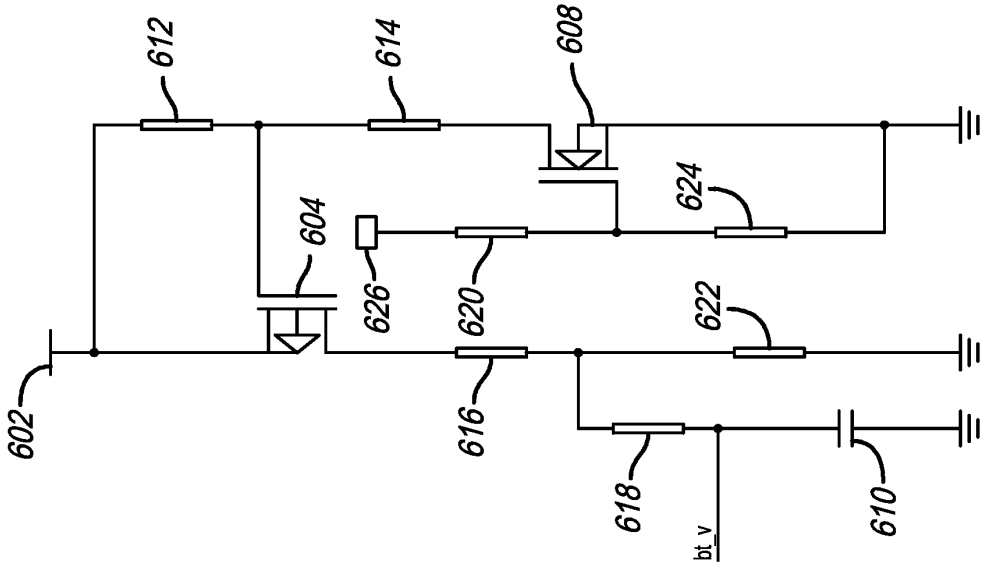

612
614
608
624
604
626
620
622
602
616
618
bt_v
610

FIG. 4

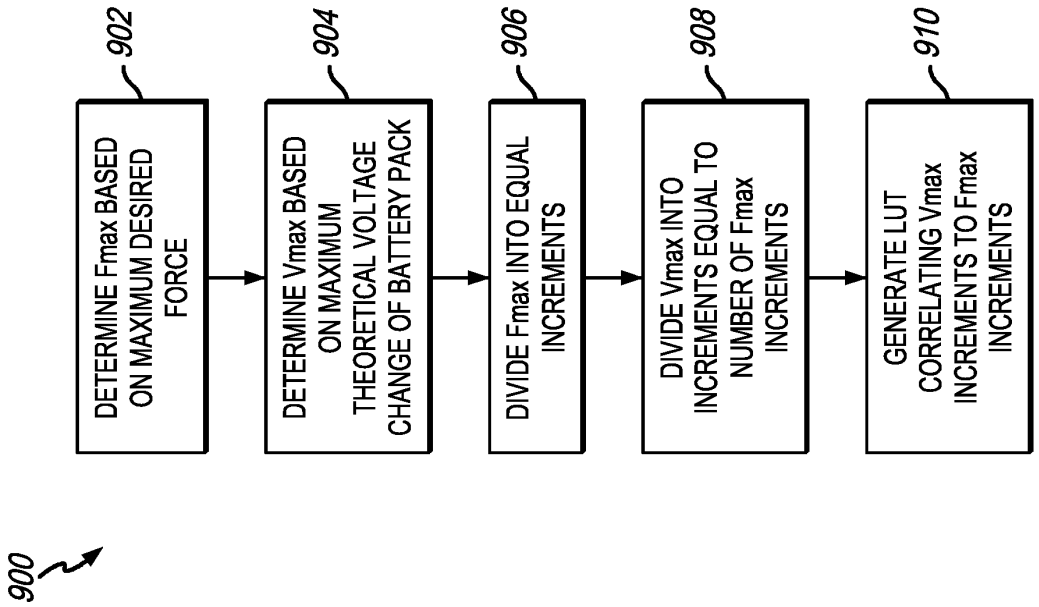

900
902
DETERMINE Fmax BASED ON MAXIMUM DESIRED FORCE
904
DETERMINE Vmax BASED ON MAXIMUM THEORETICAL VOLTAGE CHANGE OF BATTERY PACK
906
DIVIDE Fmax INTO EQUAL INCREMENTS
908
DIVIDE Vmax INTO INCREMENTS EQUAL TO NUMBER OF Fmax INCREMENTS
910
GENERATE LUT CORRELATING Vmax INCREMENTS TO Fmax INCREMENTS

FIG. 7

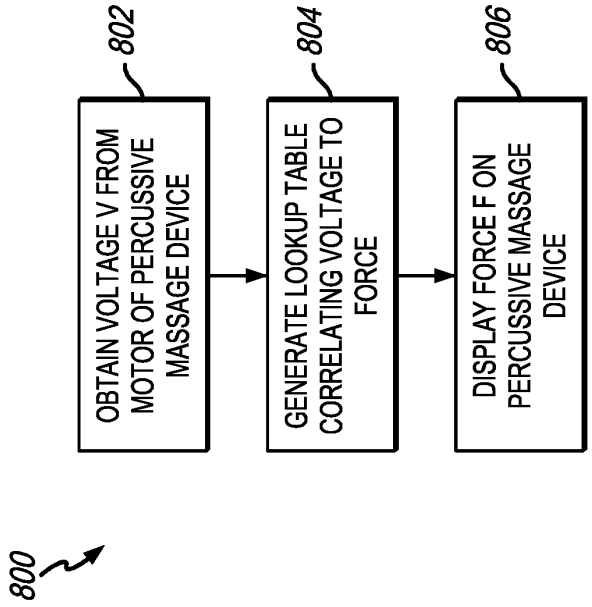

800
802
OBTAIN VOLTAGE V FROM MOTOR OF PERCUSSIVE MASSAGE DEVICE
804
GENERATE LOOKUP TABLE CORRELATING VOLTAGE TO FORCE
806
DISPLAY FORCE F ON PERCUSSIVE MASSAGE DEVICE

FIG. 6

POWER (W)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
FORCE (LB)	0.03	0.06	0.09	0.12	0.15	0.18	0.21	0.24	0.27	0.3	0.33	0.36	0.39	0.42	0.45	0.48	0.51	0.54	0.57	0.6	0.63	0.66	0.69	0.72	0.75	0.78	0.81	0.84	0.87	0.9	0.93	0.96	0.99	1.02	1.05	1.08	1.11	1.14	1.17	1.2	1.23	1.26	1.29	1.32	1.38	1.38	1.41	1.44	1.47

POWER (W)	50	51	52	53	54	55	56	57	58	59	60
FORCE (LB)	1.5	1.53	1.56	1.59	1.62	1.65	1.68	1.71	1.74	1.77	1.8

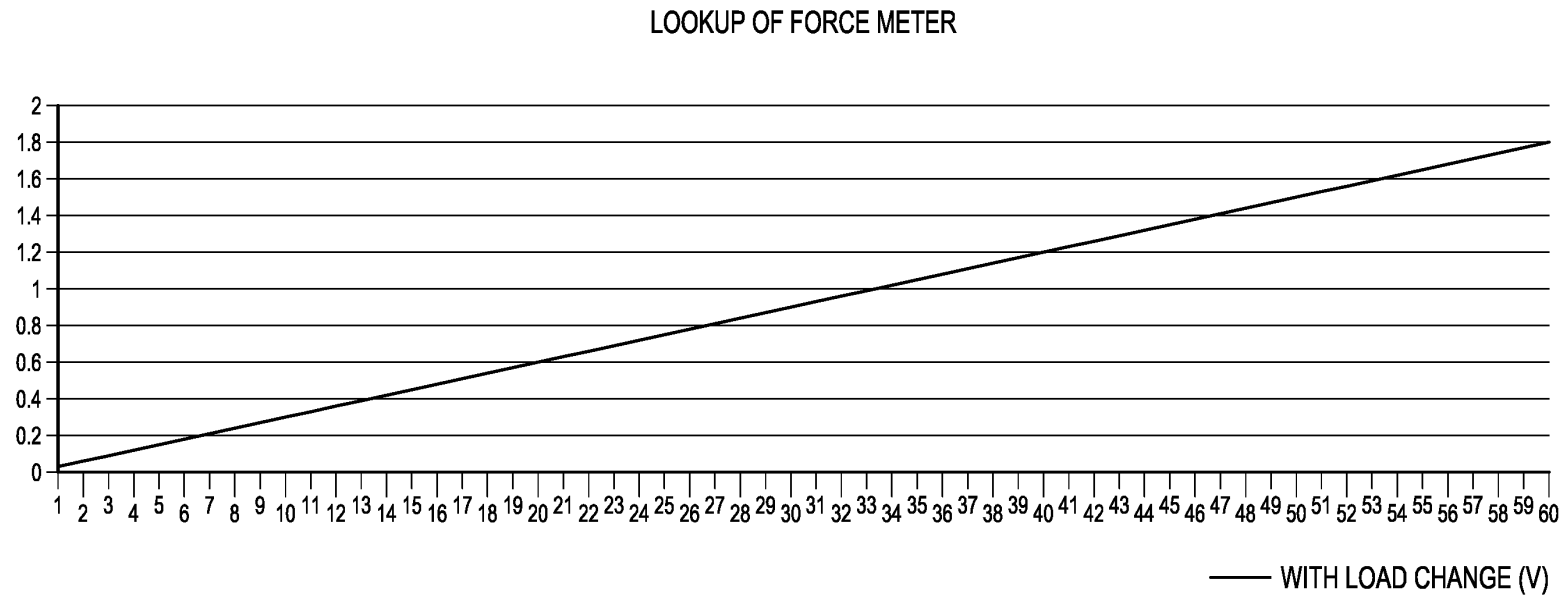


FIG. 8

Hyper Ice, Inc. Ex. 1003-Page 973
Hyper Ice, Inc. v. Therabody, Inc.

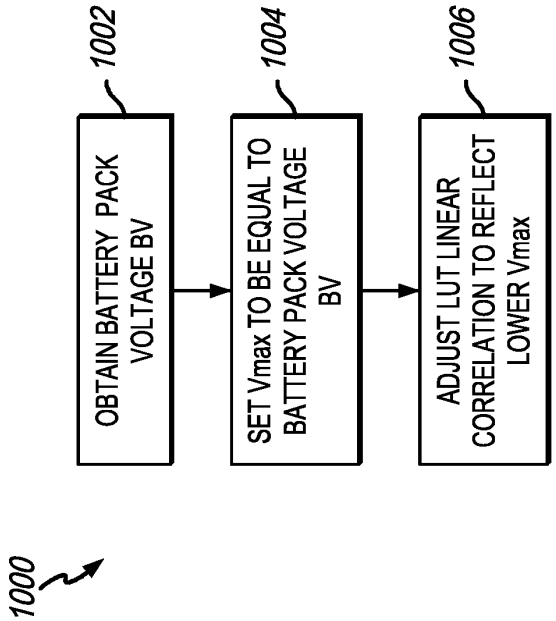

1000
1002
OBTAIN BATTERY PACK VOLTAGE BV
1004
SET Vmax TO BE EQUAL TO BATTERY PACK VOLTAGE BV
1006
ADJUST LUT LINEAR CORRELATION TO REFLECT LOWER Vmax

FIG. 9

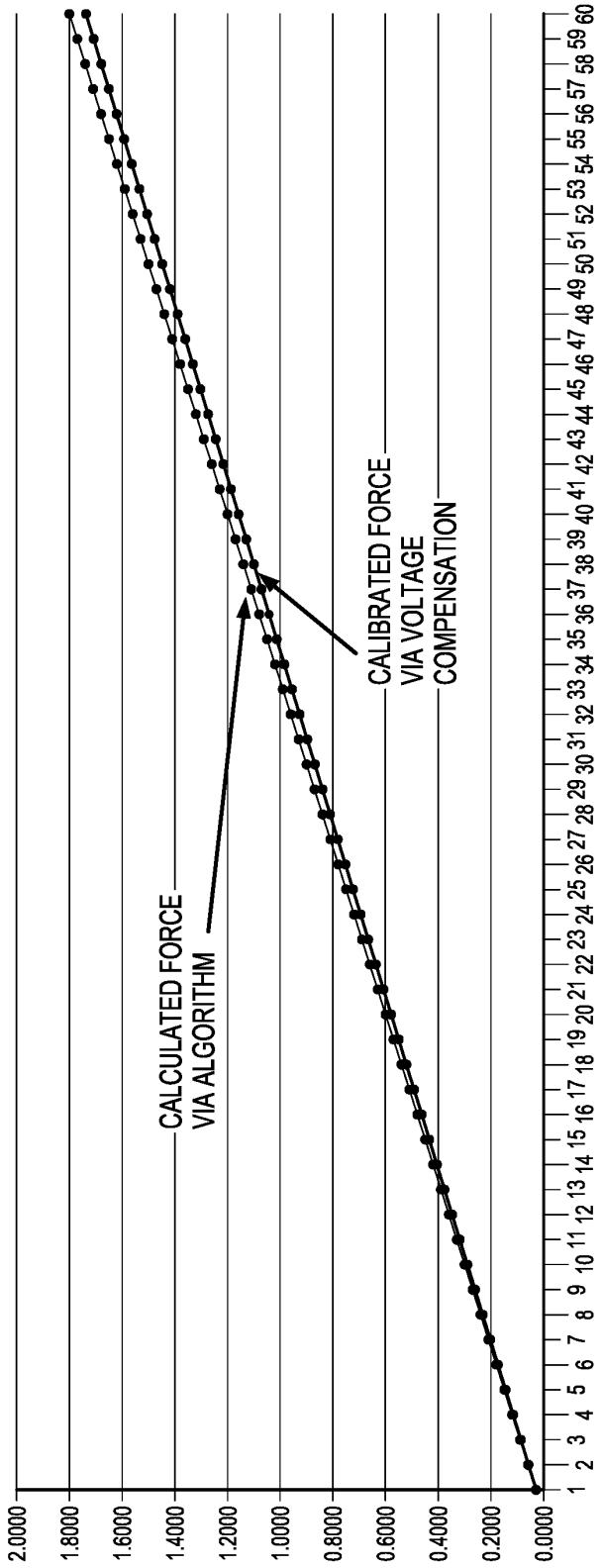

2.0000
1.8000
1.6000
1.4000
1.2000
1.0000
0.8000
0.6000
0.4000
0.2000
0.0000
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60
CALCULATED FORCE
VIA ALGORITHM
CALIBRATED FORCE
VIA VOLTAGE
COMPENSATION

FIG. 10

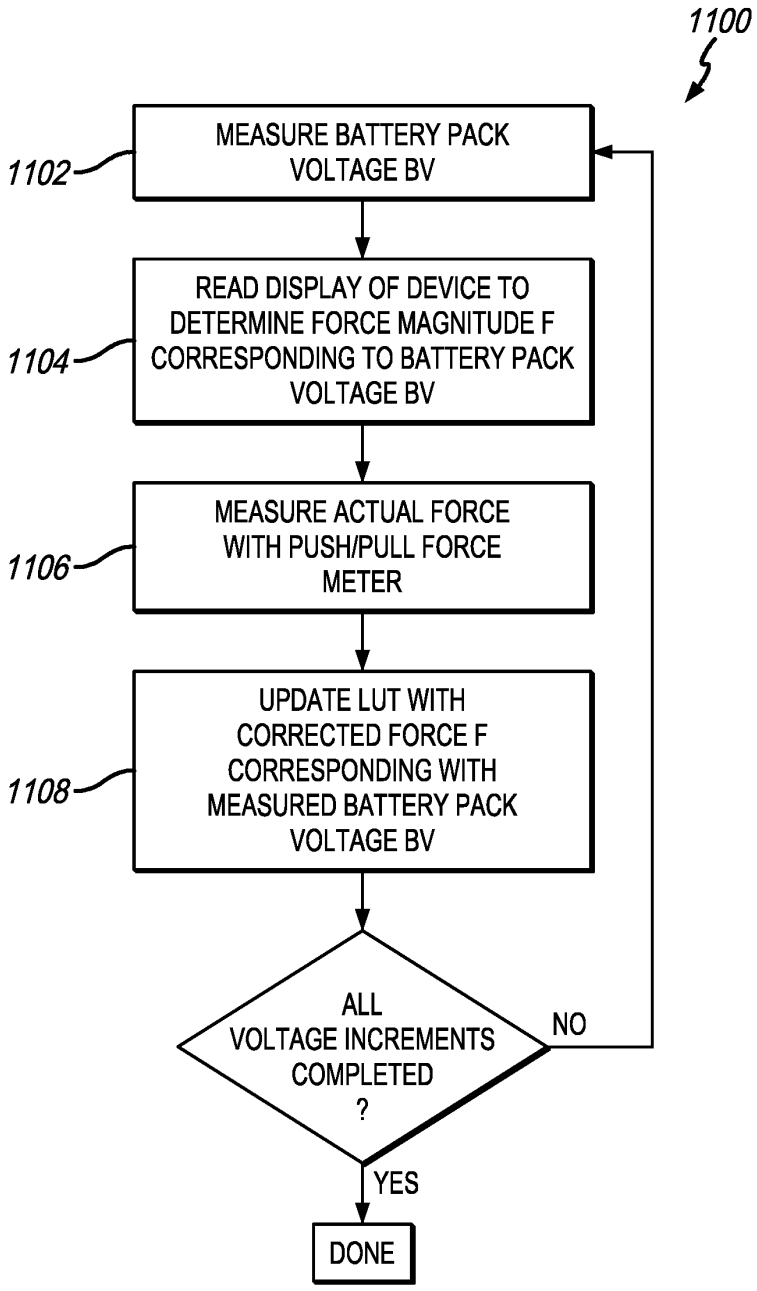

1100
1102
MEASURE BATTERY PACK VOLTAGE BV
1104
READ DISPLAY OF DEVICE TO DETERMINE FORCE MAGNITUDE F CORRESPONDING TO BATTERY PACK VOLTAGE BV
1106
MEASURE ACTUAL FORCE WITH PUSH/PULL FORCE METER
1108
UPDATE LUT WITH CORRECTED FORCE F CORRESPONDING WITH MEASURED BATTERY PACK VOLTAGE BV
ALL VOLTAGE INCREMENTS COMPLETED ?
NO
YES
DONE

FIG. 11

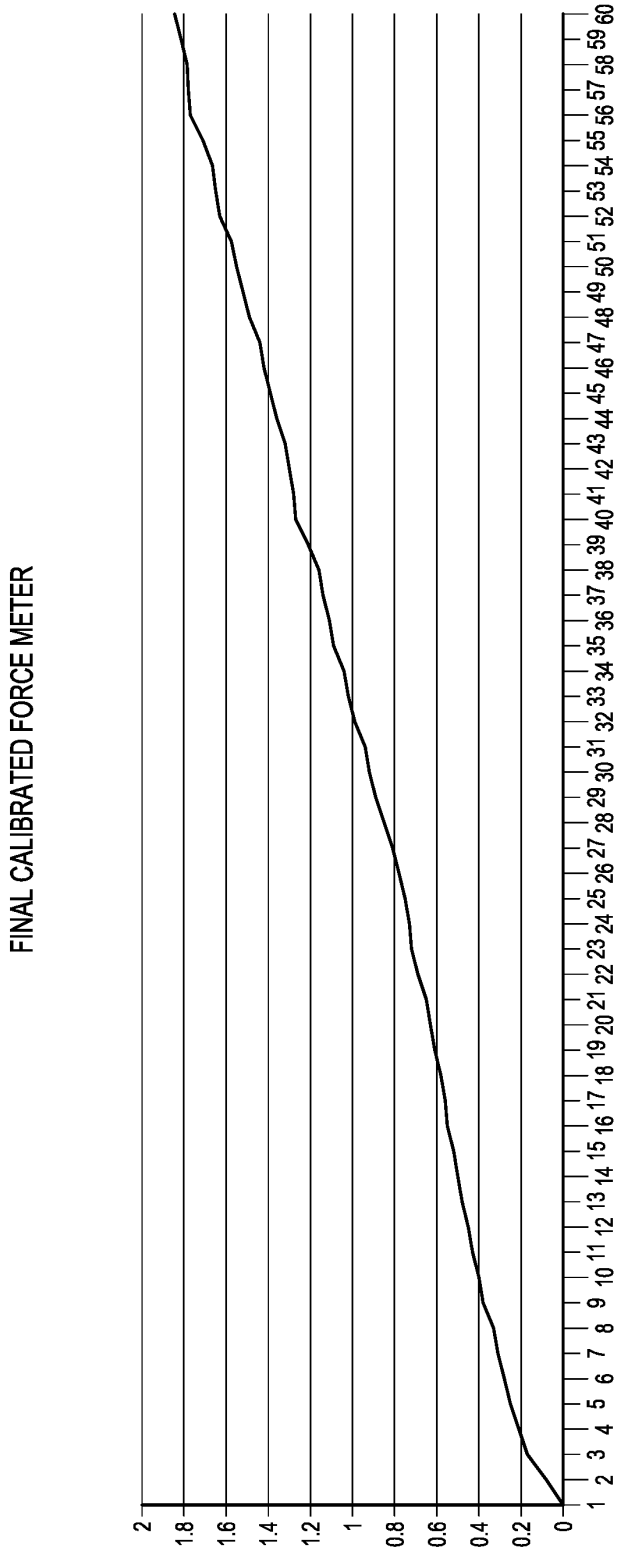

FINAL CALIBRATED FORCE METER
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60

FIG. 12

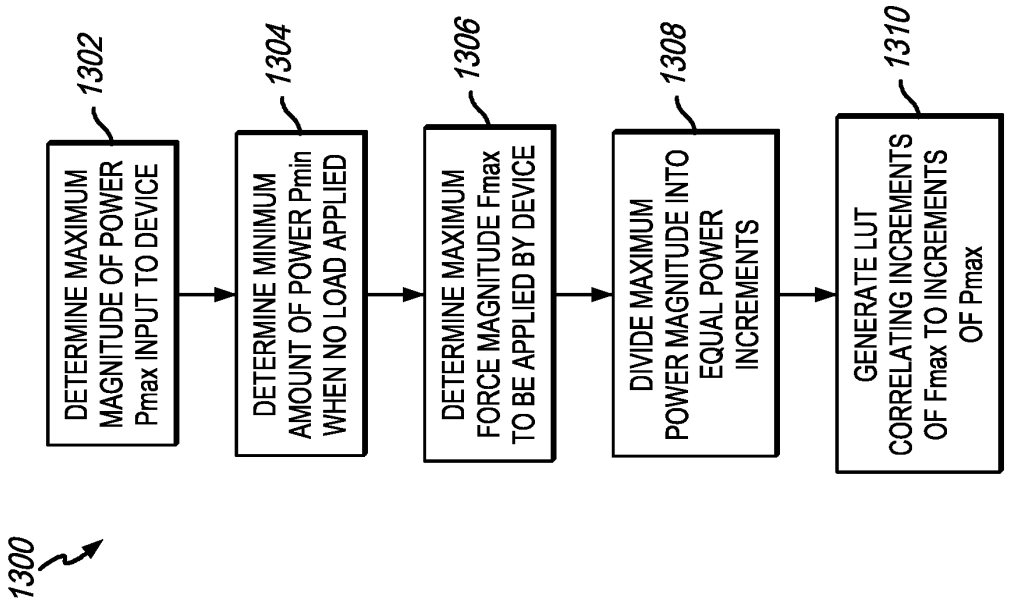

1300
1302
DETERMINE MAXIMUM MAGNITUDE OF POWER Pmax INPUT TO DEVICE
1304
DETERMINE MINIMUM AMOUNT OF POWER Pmin WHEN NO LOAD APPLIED
1306
DETERMINE MAXIMUM FORCE MAGNITUDE Fmax TO BE APPLIED BY DEVICE
1308
DIVIDE MAXIMUM POWER MAGNITUDE INTO EQUAL POWER INCREMENTS
1310
GENERATE LUT CORRELATING INCREMENTS OF Fmax TO INCREMENTS OF Pmax

FIG. 14

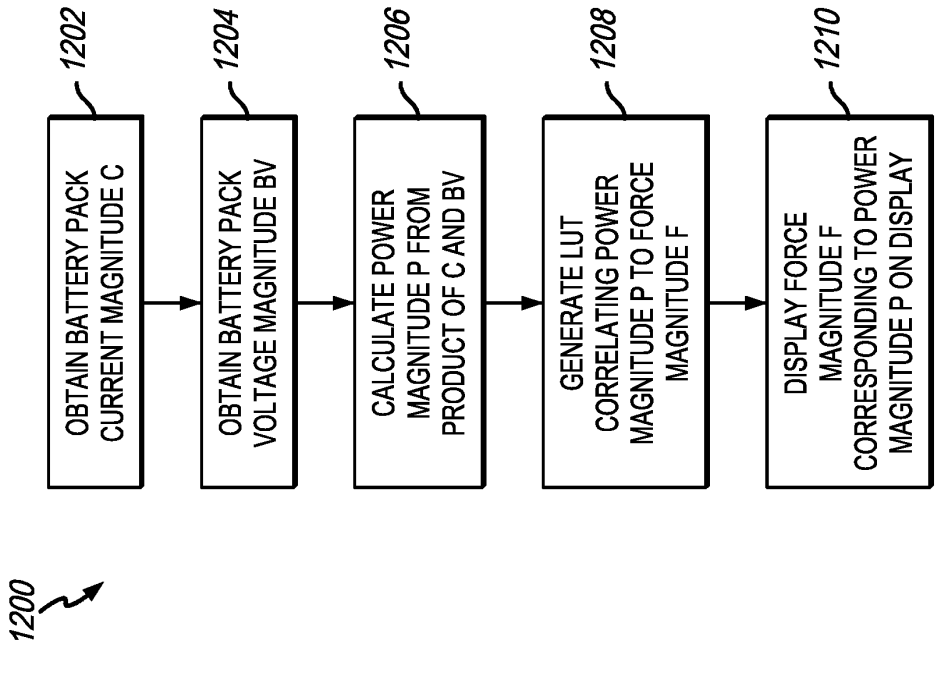

1200
1202
OBTAIN BATTERY PACK CURRENT MAGNITUDE C
1204
OBTAIN BATTERY PACK VOLTAGE MAGNITUDE BV
1206
CALCULATE POWER MAGNITUDE P FROM PRODUCT OF C AND BV
1208
GENERATE LUT CORRELATING POWER MAGNITUDE P TO FORCE MAGNITUDE F
1210
DISPLAY FORCE MAGNITUDE F CORRESPONDING TO POWER MAGNITUDE P ON DISPLAY

FIG. 13

POWER (W)	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72	75	78	81	84	87	90	93	96	99	102	105	108	111	114	117	120	123	126	129	132	135	138	141	144	147
FORCE (LB)	0	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46

POWER (W)	150	153	156	159	162	165	168	171	174	177	180
FORCE (LB)	47	48	49	50	51	52	53	54	55	56	57

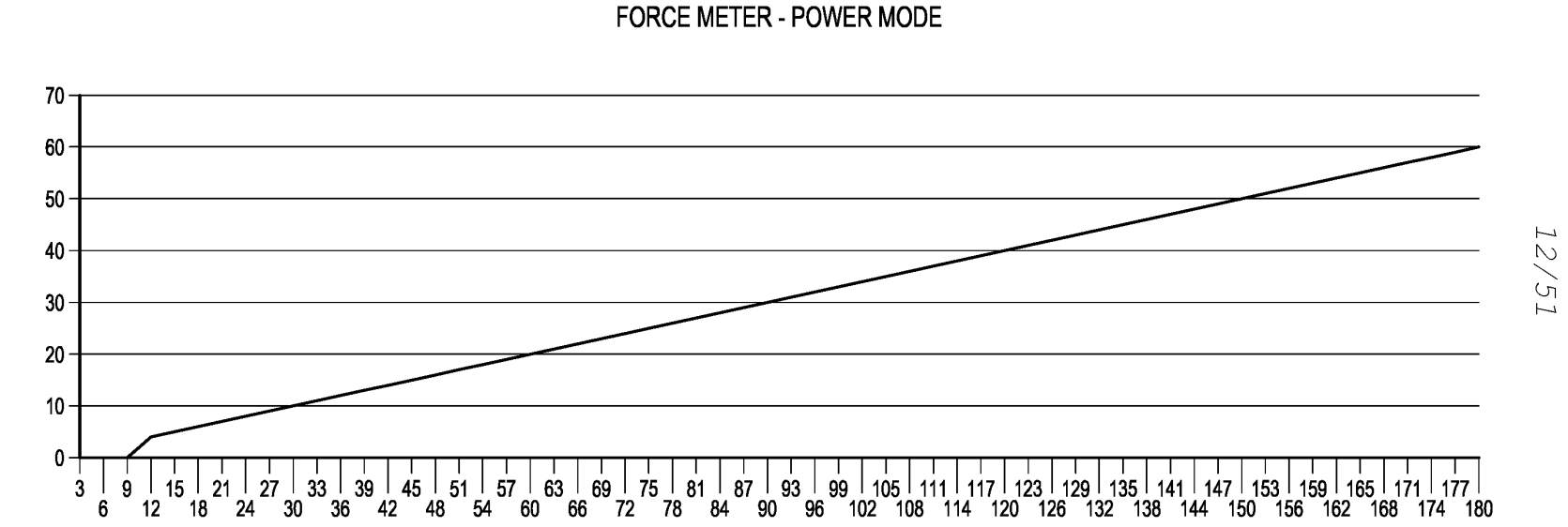


FIG. 15

Hyper Ice, Inc. Ex. 1003-Page 979
Hyper Ice, Inc. v. Therabody, Inc.

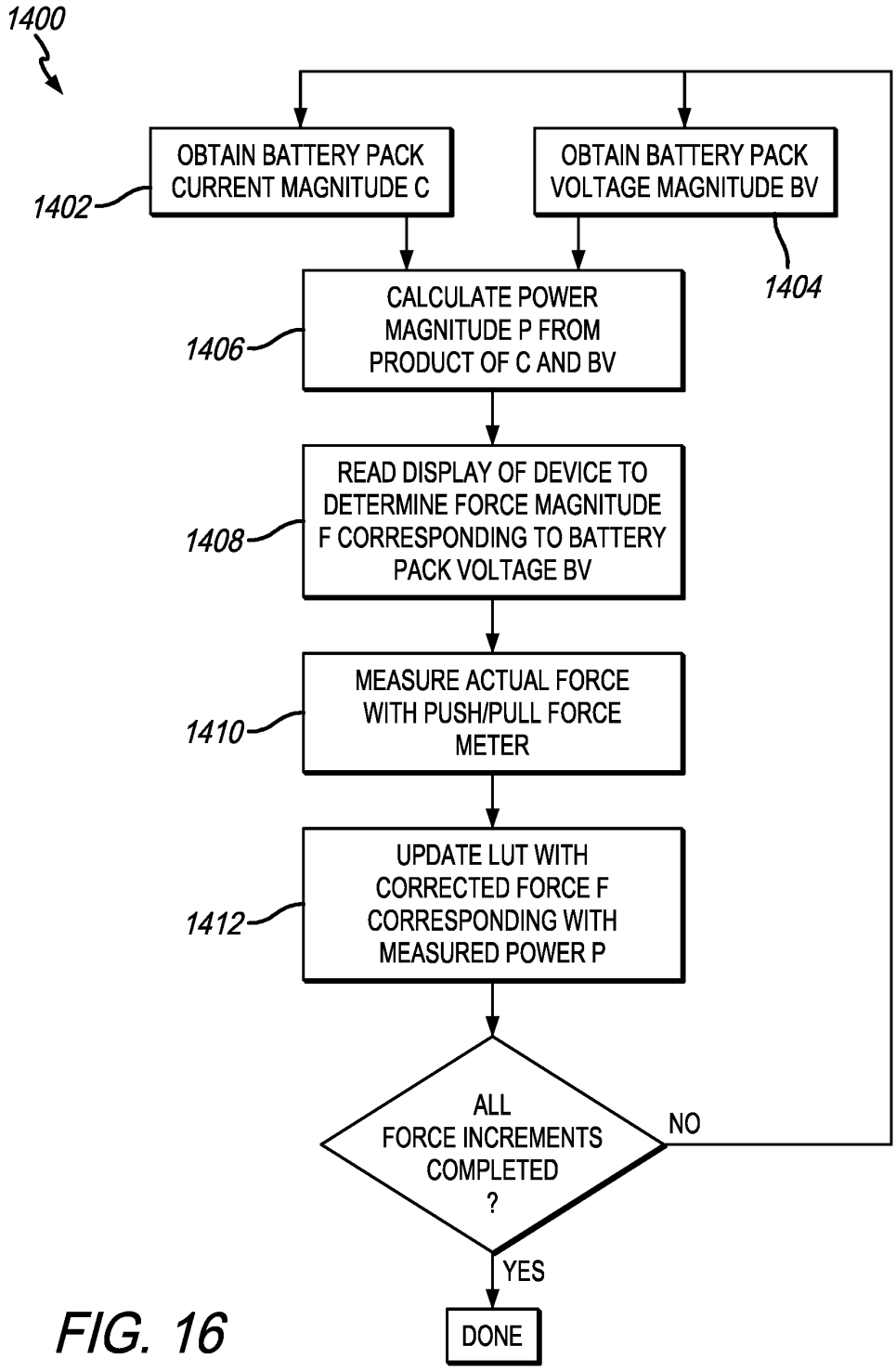

1400
OBTAIN BATTERY PACK CURRENT MAGNITUDE C
1402
OBTAIN BATTERY PACK VOLTAGE MAGNITUDE BV
1404
CALCULATE POWER MAGNITUDE P FROM PRODUCT OF C AND BV
1406
READ DISPLAY OF DEVICE TO DETERMINE FORCE MAGNITUDE F CORRESPONDING TO BATTERY PACK VOLTAGE BV
1408
MEASURE ACTUAL FORCE WITH PUSH/PULL FORCE METER
1410
UPDATE LUT WITH CORRECTED FORCE F CORRESPONDING WITH MEASURED POWER P
1412
ALL FORCE INCREMENTS COMPLETED ?
NO
YES
DONE

FIG. 16

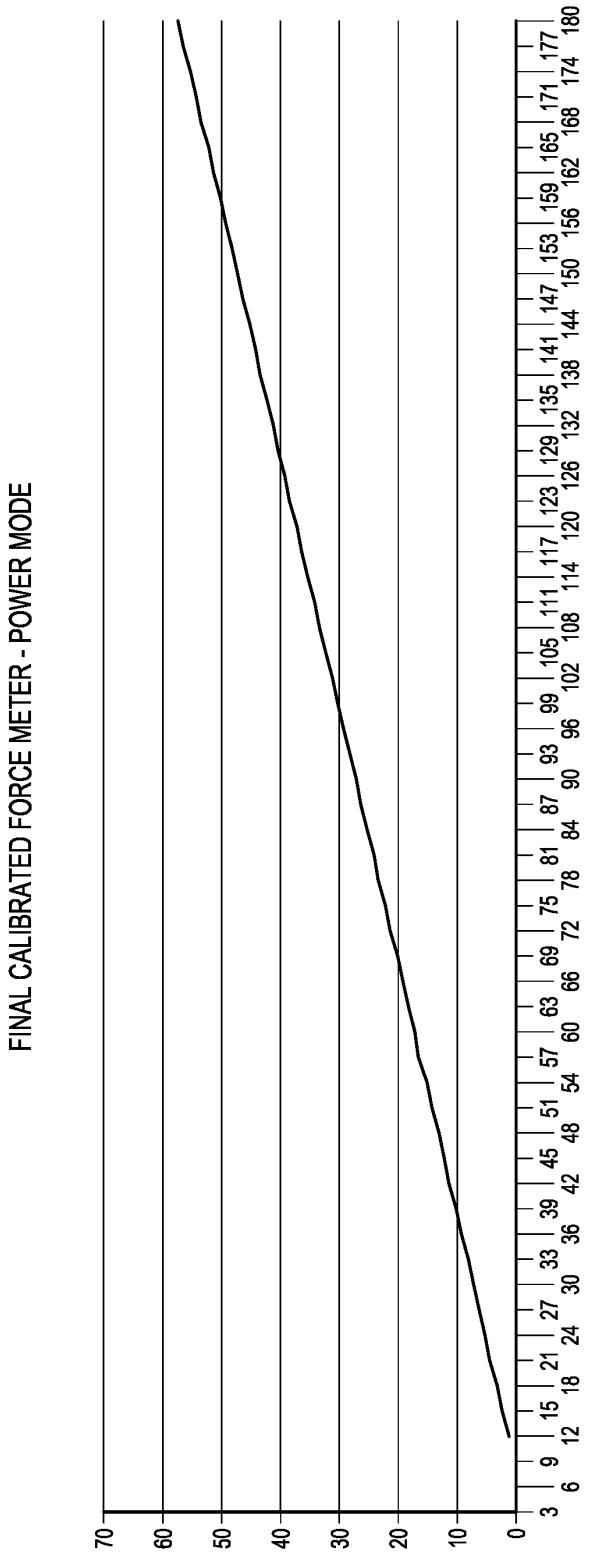

FINAL CALIBRATED FORCE METER - POWER MODE
70
60
50
40
30
20
10
0
3
6
9
12
15
18
21
24
27
30
33
36
39
42
45
48
51
54
57
60
63
66
69
72
75
78
81
84
87
90
93
96
99
102
105
108
111
114
117
120
123
126
129
132
135
138
141
144
147
150
153
156
159
162
165
168
171
174
177
180

FIG. 17

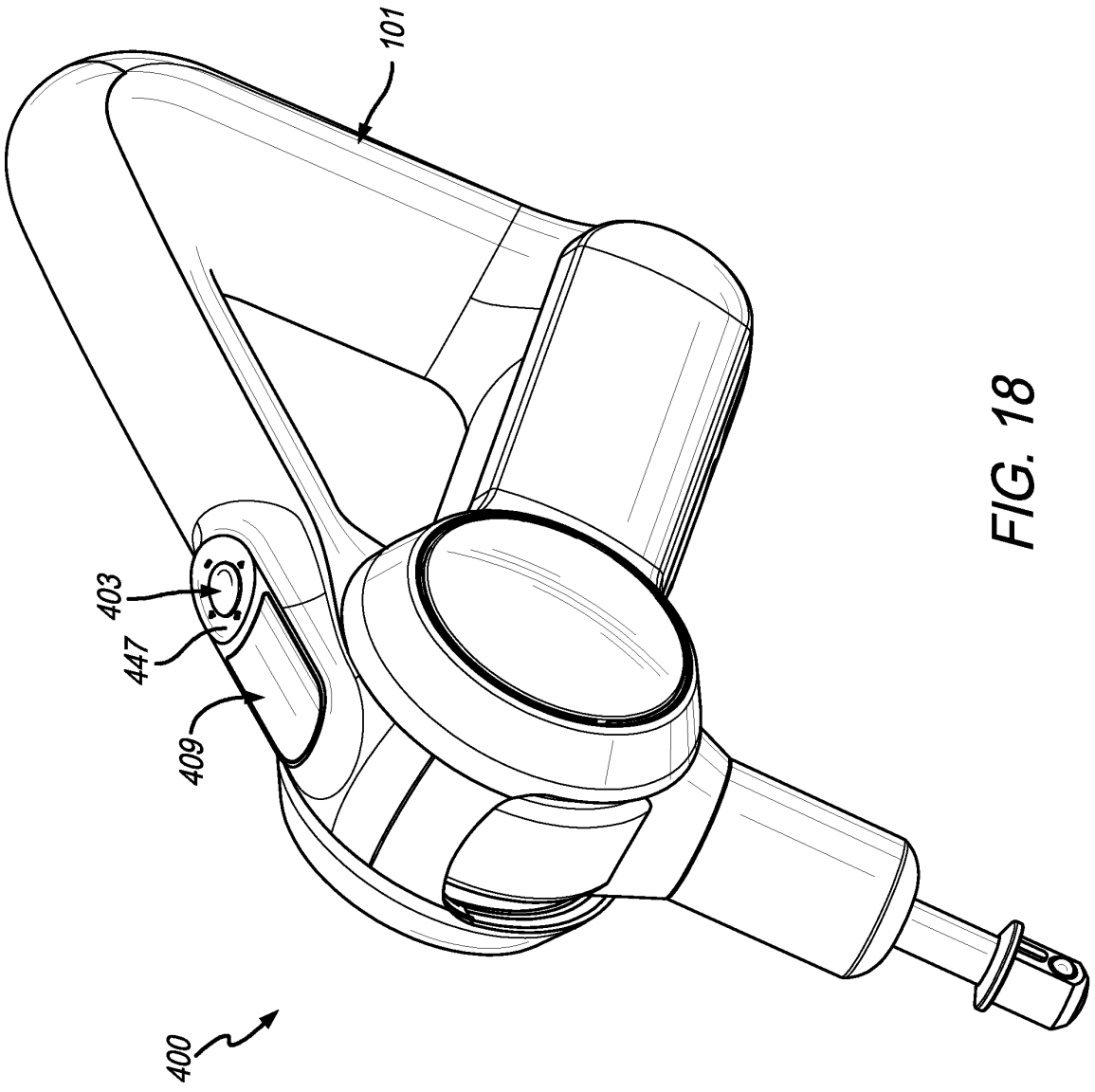


FIG. 18

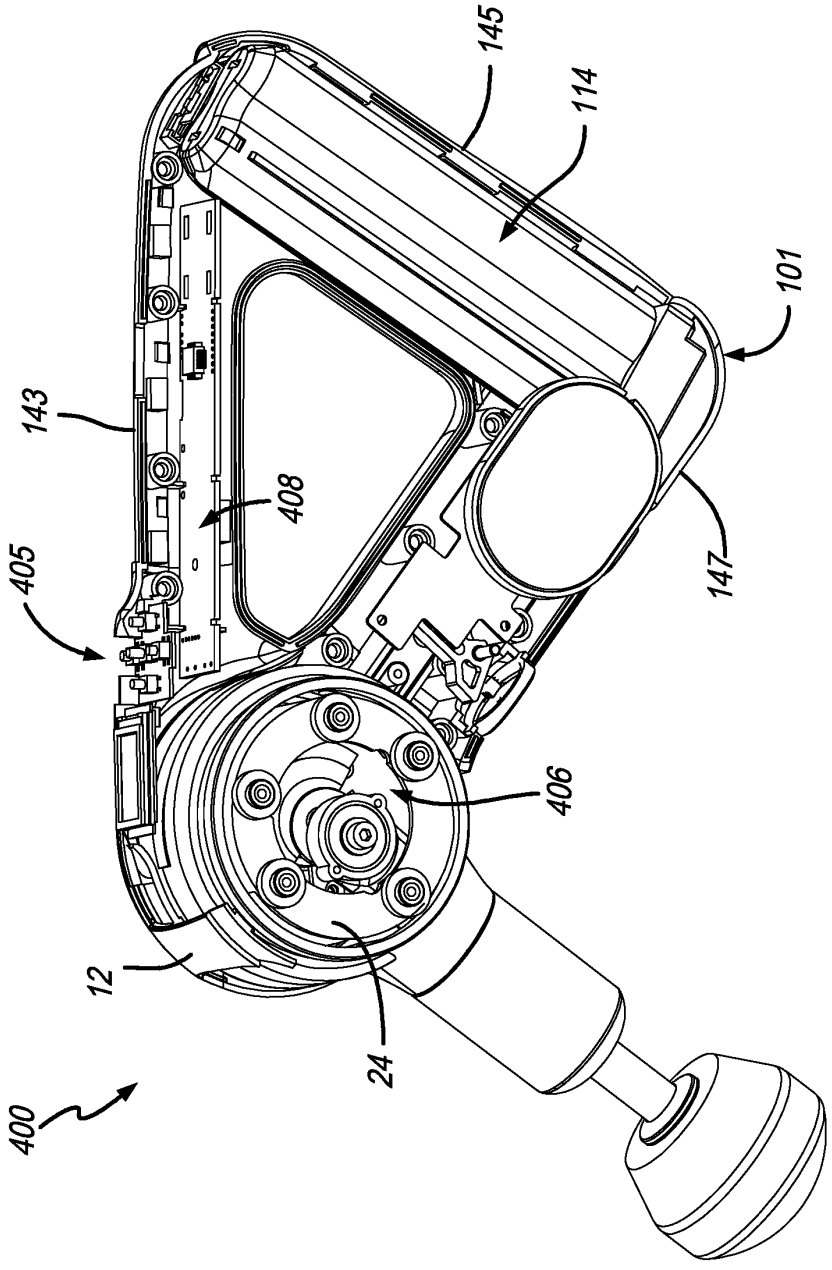


FIG. 19

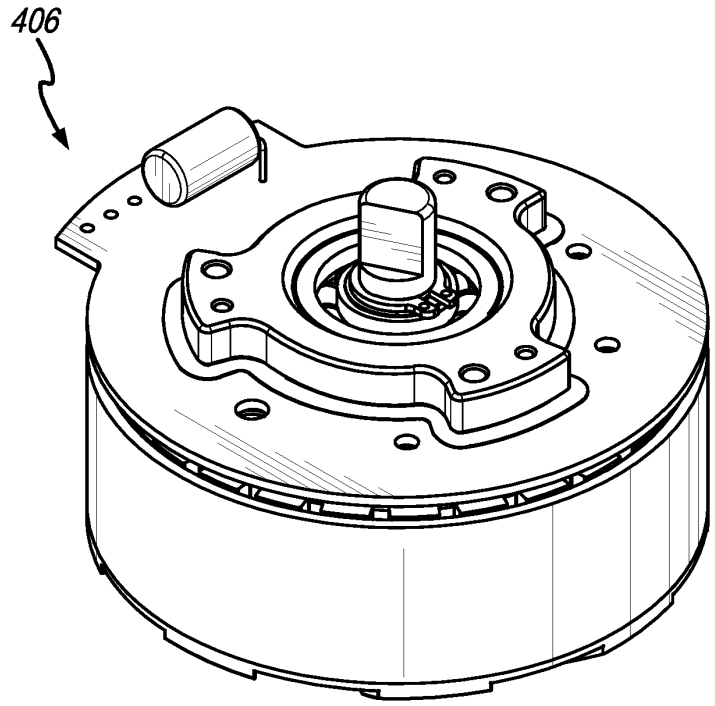


FIG. 20

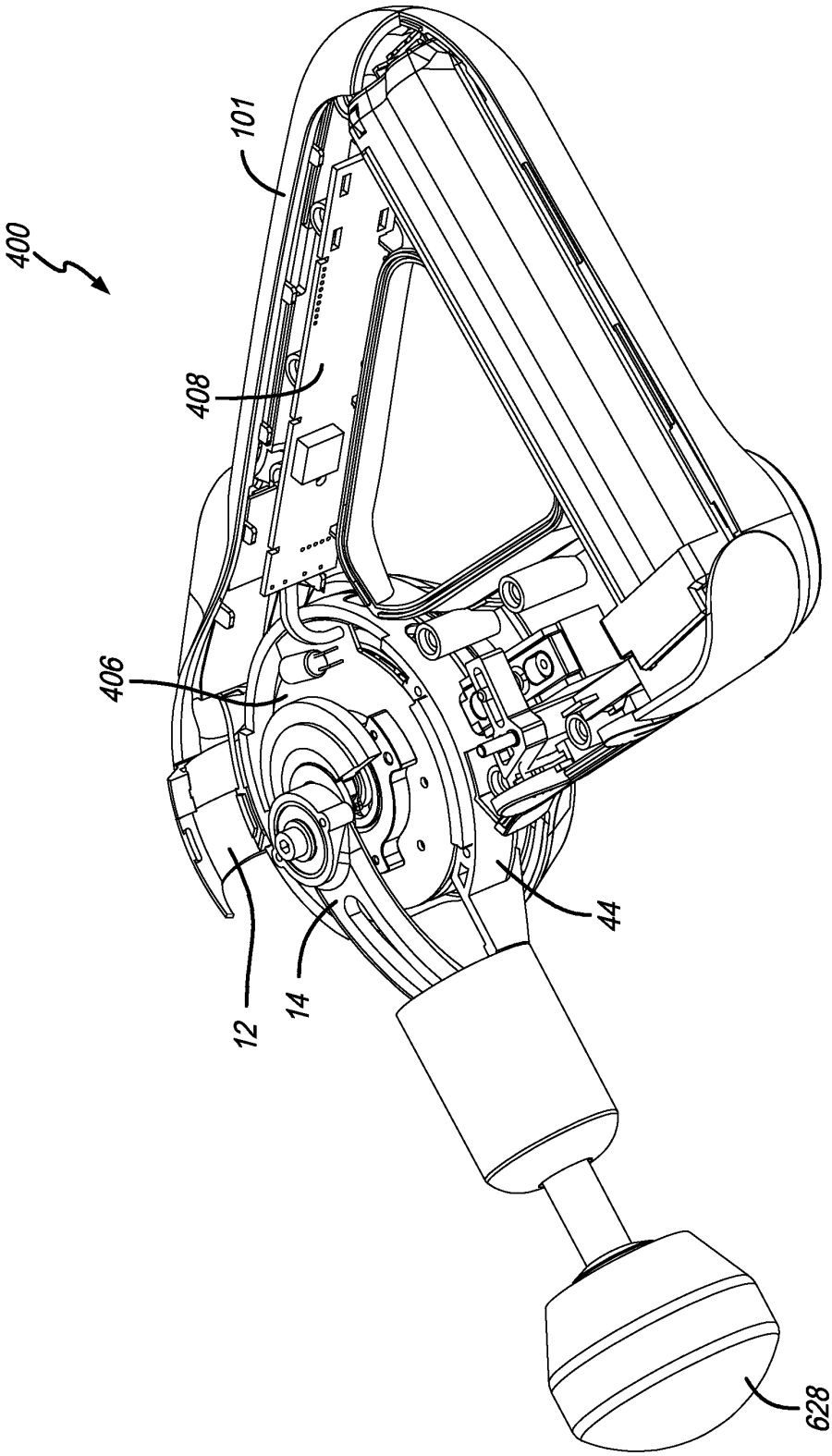


FIG. 21

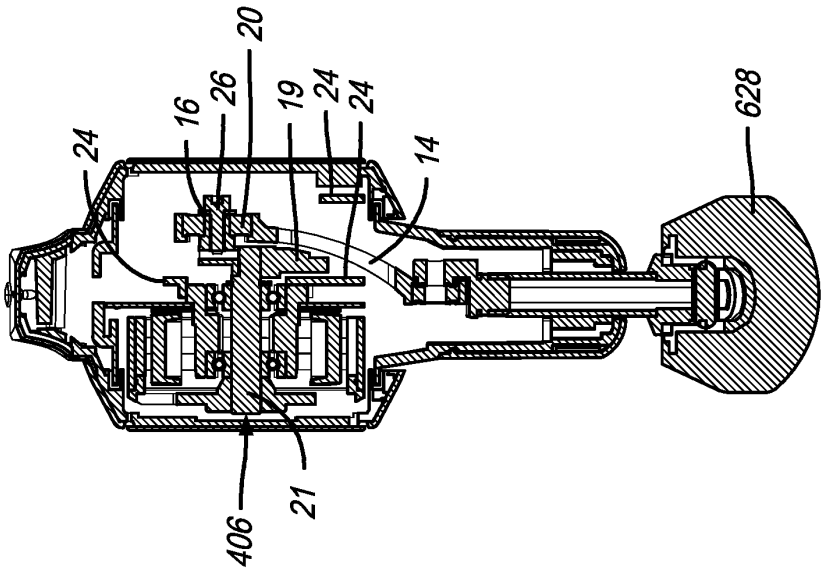


FIG. 22B

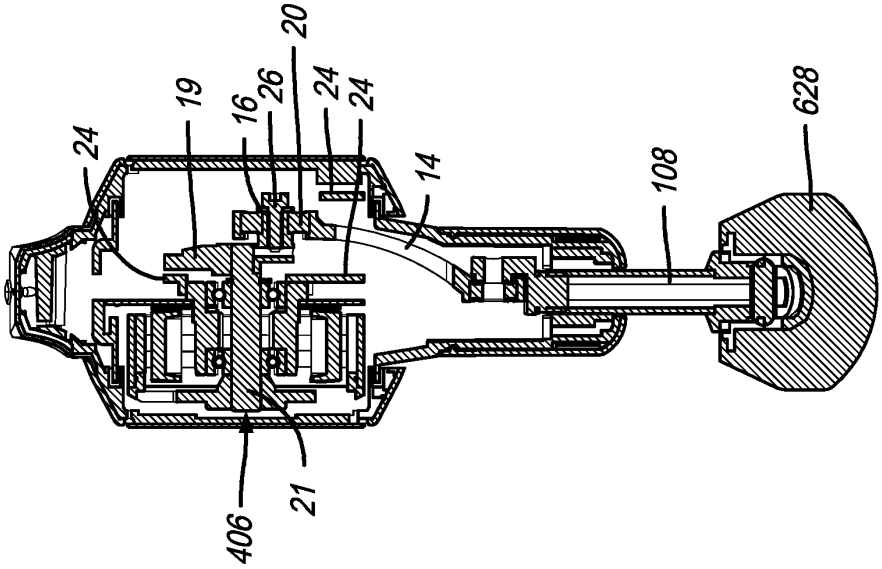


FIG. 22A

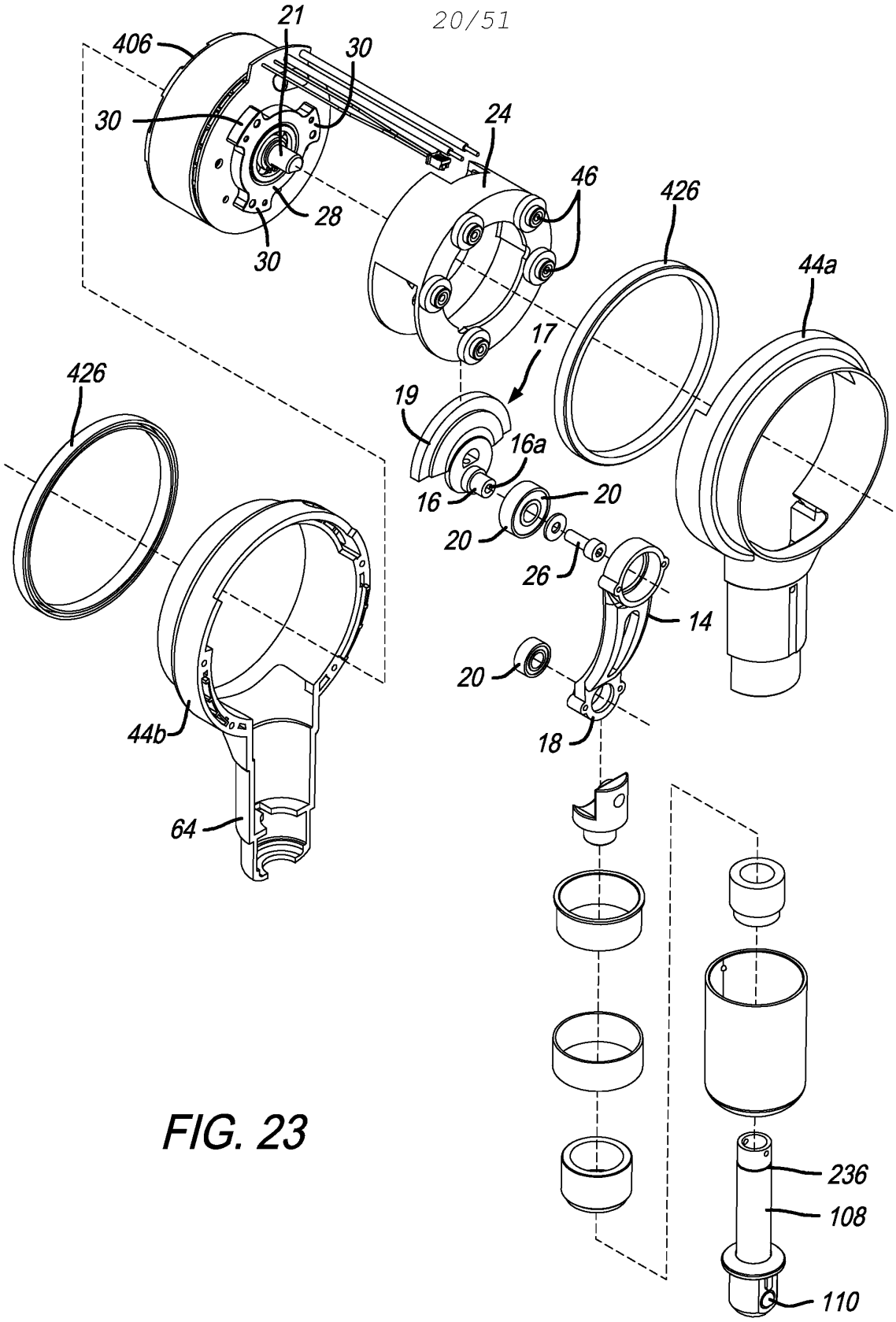

21
406
30
30
24
46
426
28
30
44a
17
426
19
16a
16
20
20
26
14
20
18
44b
64
236
108
110

FIG. 23

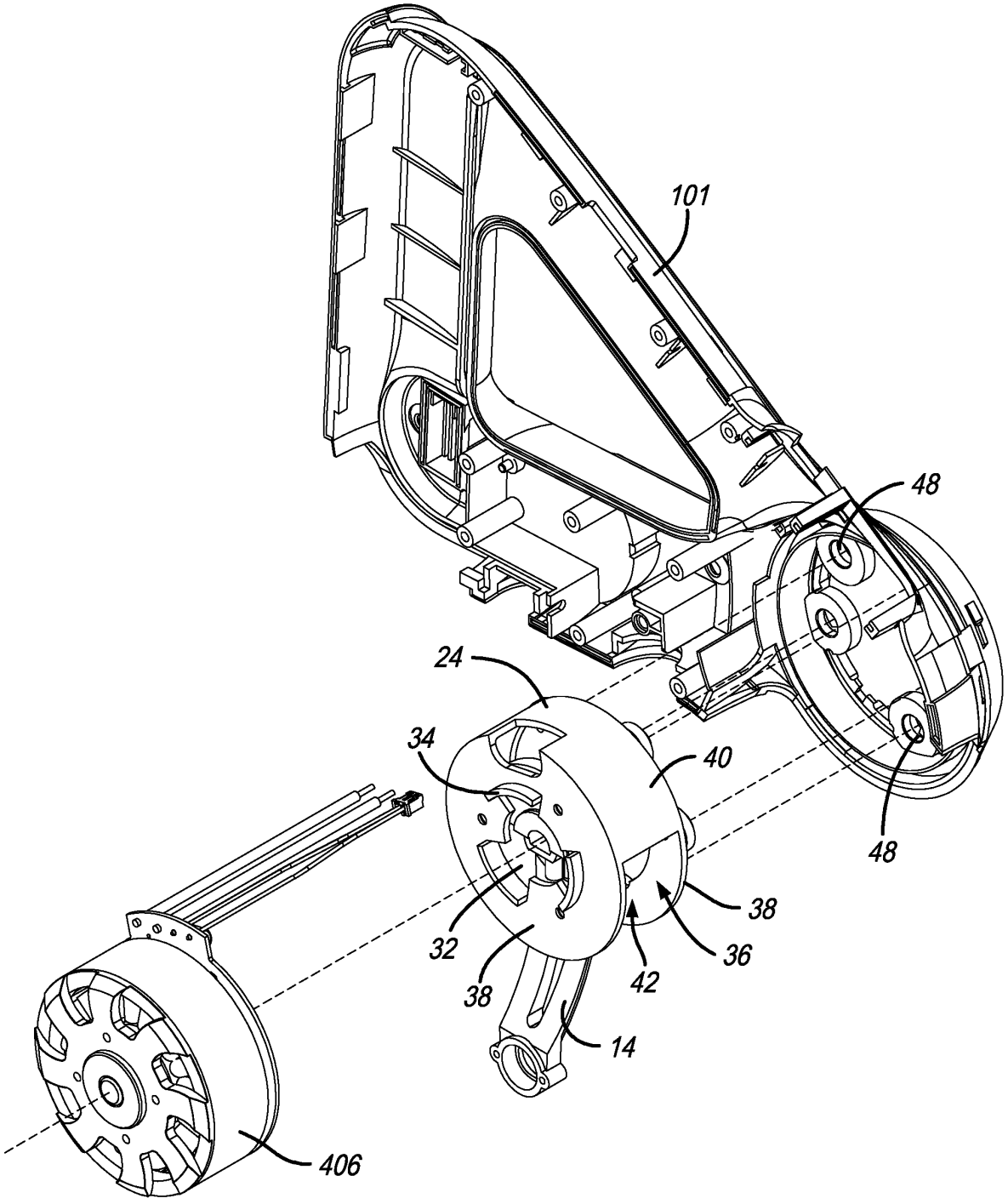


FIG. 23A

PROTOCOL 1

STEP	1	2	3	4
TIME(M)	0:30	0:15	0:30	0:45
SPEED (RPM)	1550	2100	2200	2400
AMPLITUDE	2	3	1	4
ATTACHMENT	DAMPENER	SMALL BALL	DAMPENER	LARGE BALL
FORCE	1	3	3	2
TEMPERATURE (°C)	21	26	29	32
GRIP	1	1	1	1

FIG. 24

PROTOCOL: SHIN SPLINTS

STEP	1	2	3	4
TIME(M)	1:00	1:00	1:00	1:00
SPEED (RPM)	1500	1500	2000	2000
AMPLITUDE	1	1	3	3
ATTACHMENT	DAMPENER	DAMPENER	DAMPENER	DAMPENER
FORCE	2	2	3	3
TEMPERATURE (°C)	21	21	24	24
GRIP	REVERSE	REVERSE	BASE	BASE
ARM POSITION	1	1	1	1
BODY PART	R. SHIN	L. SHIN	R. CALF	L. CALF

FIG. 25

Hyper Ice, Inc. Ex. 1003-Page 990
Hyper Ice, Inc. v. Therabody, Inc.

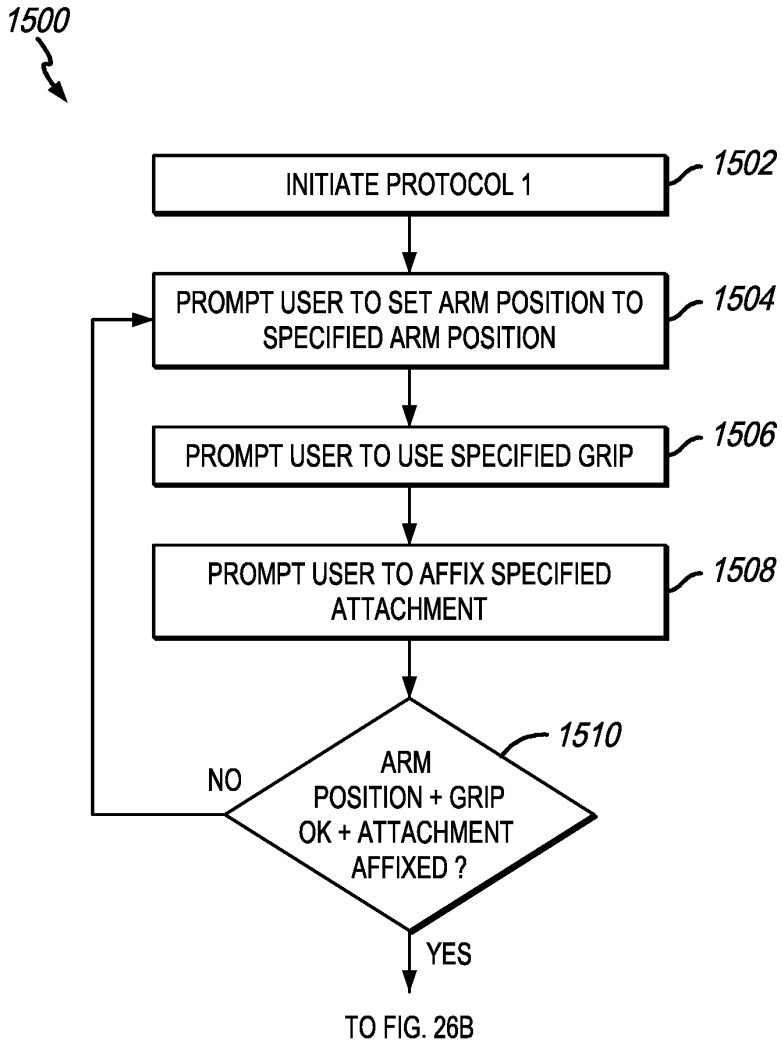

1500
INITIATE PROTOCOL 1
1502
PROMPT USER TO SET ARM POSITION TO SPECIFIED ARM POSITION
1504
PROMPT USER TO USE SPECIFIED GRIP
1506
PROMPT USER TO AFFIX SPECIFIED ATTACHMENT
1508
ARM POSITION + GRIP OK + ATTACHMENT AFFIXED ?
1510
NO
YES
TO FIG. 26B

FIG. 26A

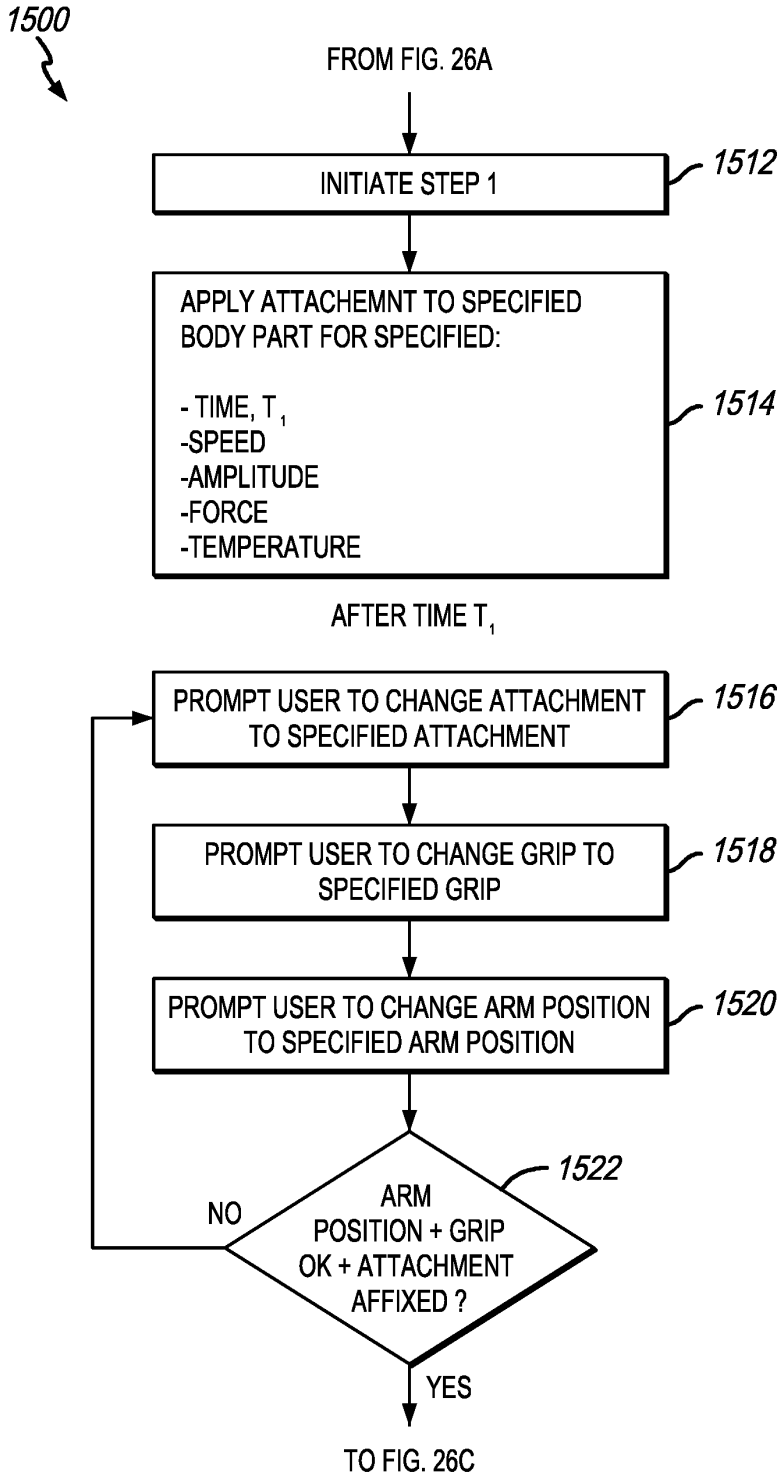

1500
FROM FIG. 26A
INITIATE STEP 1
1512
APPLY ATTACHEMNT TO SPECIFIED BODY PART FOR SPECIFIED:
- TIME, T_1
-SPEED
-AMPLITUDE
-FORCE
-TEMPERATURE
1514
AFTER TIME T_1
PROMPT USER TO CHANGE ATTACHMENT TO SPECIFIED ATTACHMENT
1516
PROMPT USER TO CHANGE GRIP TO SPECIFIED GRIP
1518
PROMPT USER TO CHANGE ARM POSITION TO SPECIFIED ARM POSITION
1520
ARM POSITION + GRIP OK + ATTACHMENT AFFIXED ?
1522
NO
YES
TO FIG. 26C

FIG. 26B

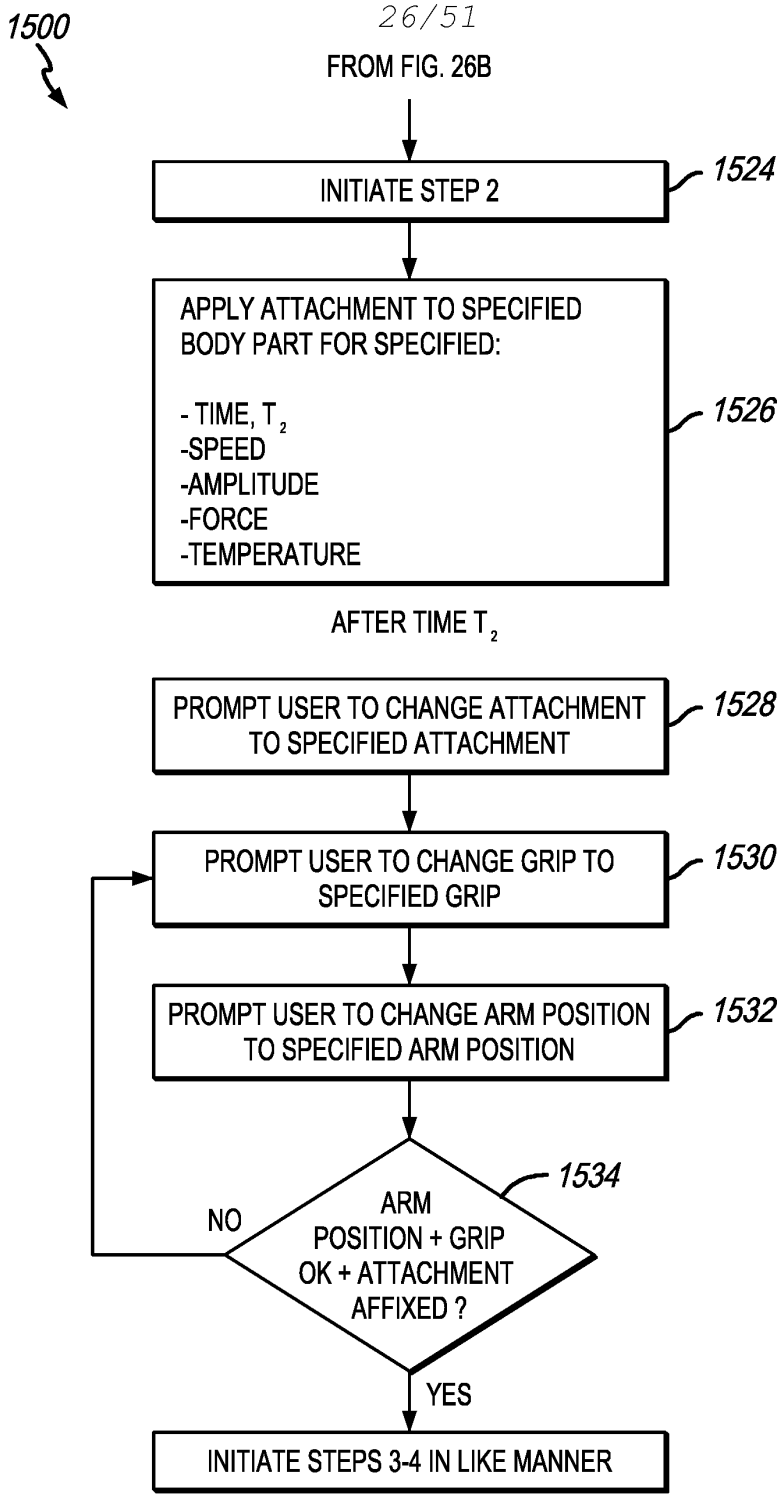

1500
FROM FIG. 26B
INITIATE STEP 2
1524
APPLY ATTACHMENT TO SPECIFIED BODY PART FOR SPECIFIED:
- TIME, T_2
-SPEED
-AMPLITUDE
-FORCE
-TEMPERATURE
1526
AFTER TIME T_2
PROMPT USER TO CHANGE ATTACHMENT TO SPECIFIED ATTACHMENT
1528
PROMPT USER TO CHANGE GRIP TO SPECIFIED GRIP
1530
PROMPT USER TO CHANGE ARM POSITION TO SPECIFIED ARM POSITION
1532
ARM POSITION + GRIP OK + ATTACHMENT AFFIXED ?
1534
NO
YES
INITIATE STEPS 3-4 IN LIKE MANNER

FIG. 26C

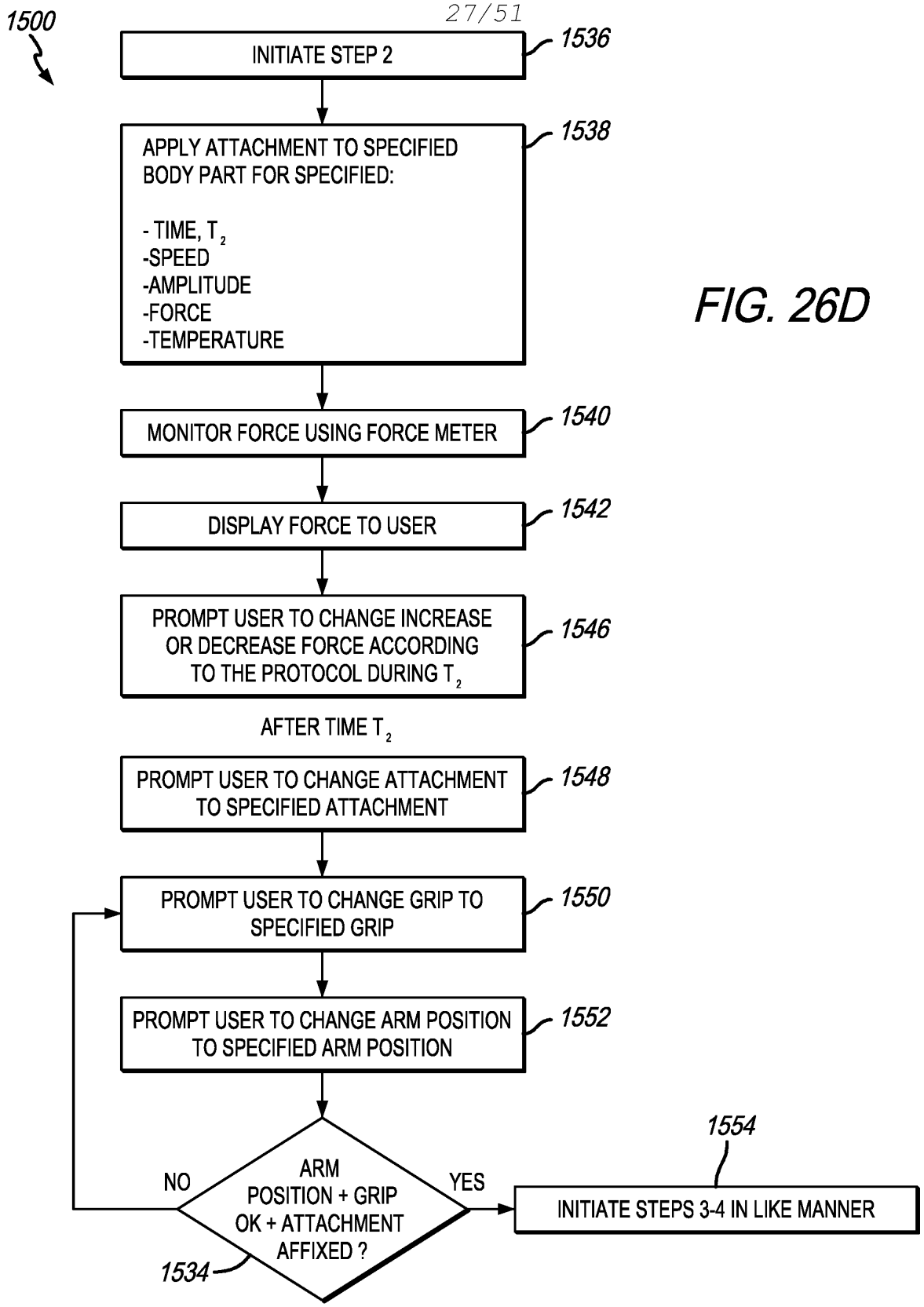

1500
INITIATE STEP 2
1536
APPLY ATTACHMENT TO SPECIFIED BODY PART FOR SPECIFIED:
- TIME, T2
-SPEED
-AMPLITUDE
-FORCE
-TEMPERATURE
1538
MONITOR FORCE USING FORCE METER
1540
DISPLAY FORCE TO USER
1542
PROMPT USER TO CHANGE INCREASE OR DECREASE FORCE ACCORDING TO THE PROTOCOL DURING T2
1546
AFTER TIME T2
PROMPT USER TO CHANGE ATTACHMENT TO SPECIFIED ATTACHMENT
1548
PROMPT USER TO CHANGE GRIP TO SPECIFIED GRIP
1550
PROMPT USER TO CHANGE ARM POSITION TO SPECIFIED ARM POSITION
1552
ARM POSITION + GRIP OK + ATTACHMENT AFFIXED ?
1534
NO
YES
1554
INITIATE STEPS 3-4 IN LIKE MANNER

FIG. 26D

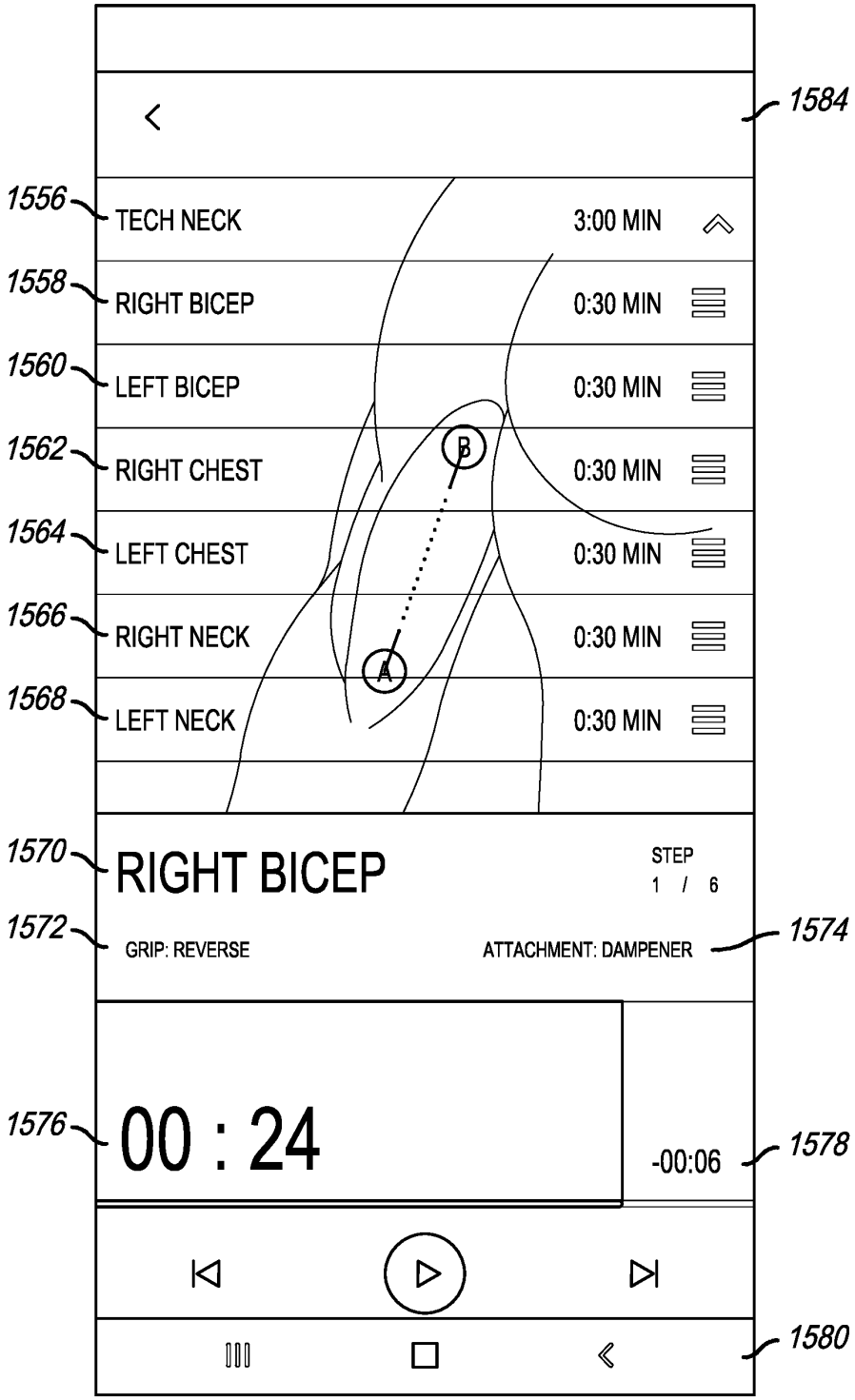

1584
1556
TECH NECK
3:00 MIN
1558
RIGHT BICEP
0:30 MIN
1560
LEFT BICEP
0:30 MIN
1562
RIGHT CHEST
0:30 MIN
1564
LEFT CHEST
0:30 MIN
1566
RIGHT NECK
0:30 MIN
1568
LEFT NECK
0:30 MIN
B
A
1570
RIGHT BICEP
STEP
1 / 6
1572
GRIP: REVERSE
ATTACHMENT: DAMPENER
1574
1576
00 : 24
-00:06
1578
1580

FIG. 27

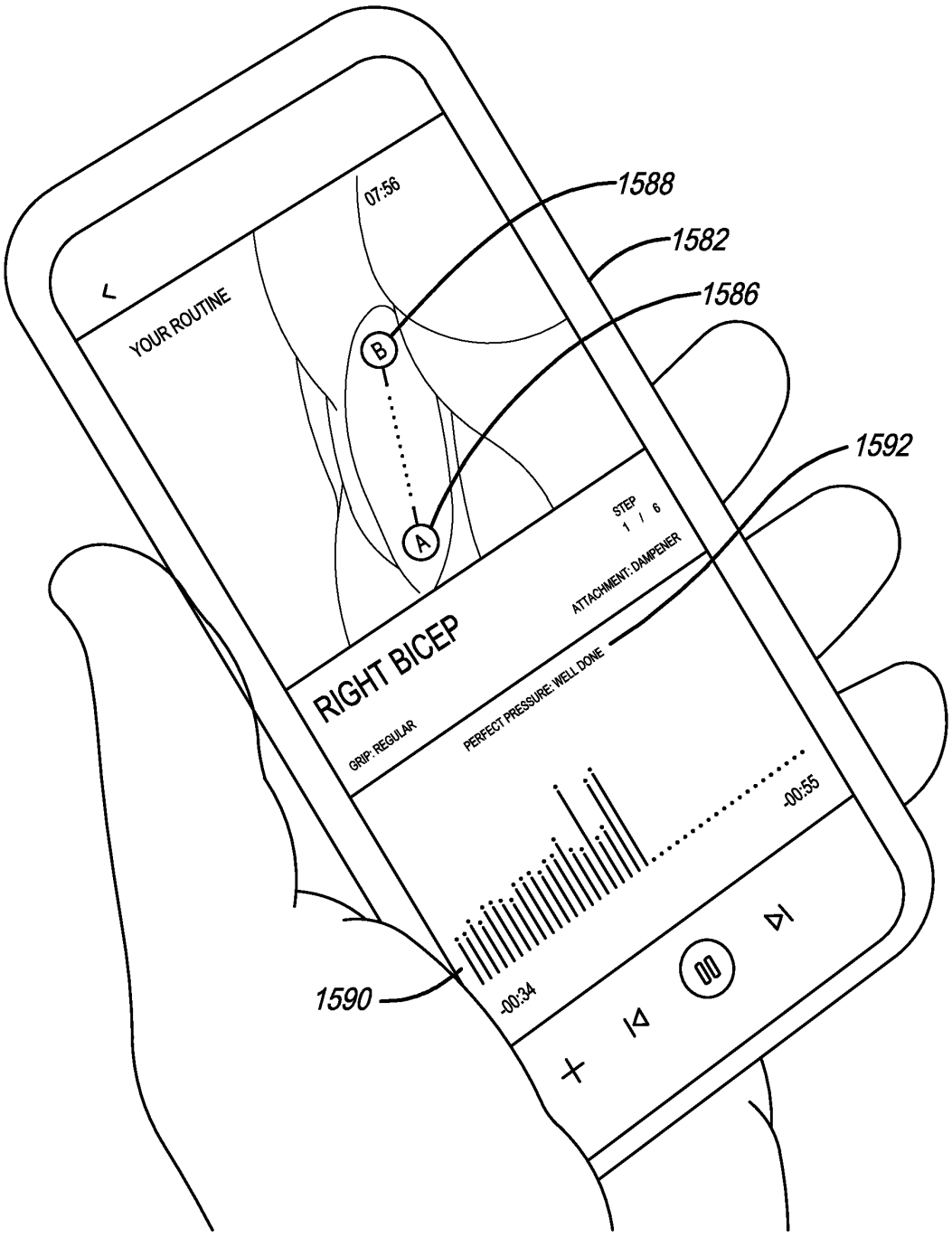

1588
1582
1586
1592
1590
07:56
YOUR ROUTINE
B
A
STEP
1 / 6
ATTACHMENT: DAMPENER
RIGHT BICEP
GRIP: REGULAR
PERFECT PRESSURE: WELL DONE
-00:55
-00:34

FIG. 28

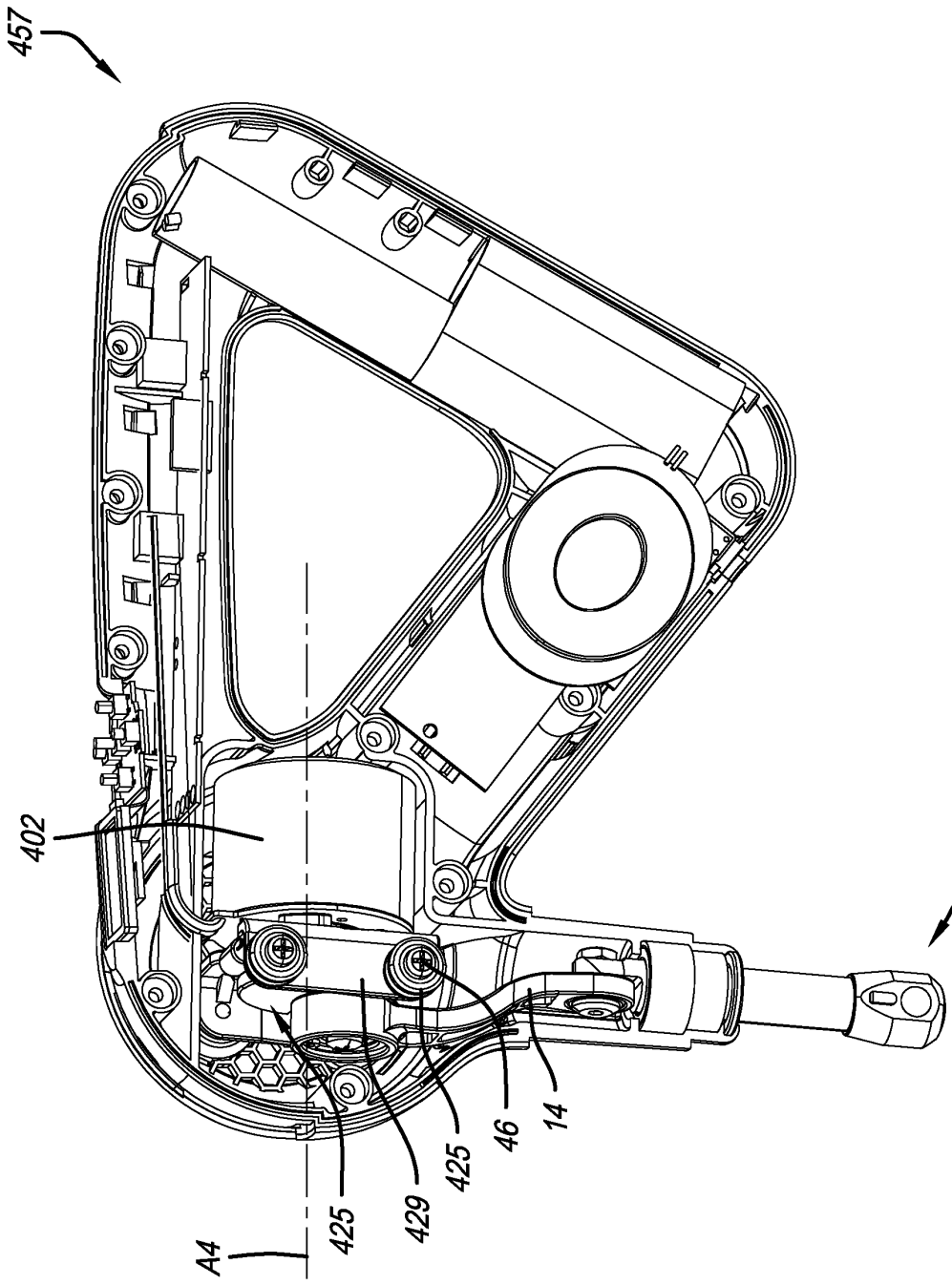


FIG. 29

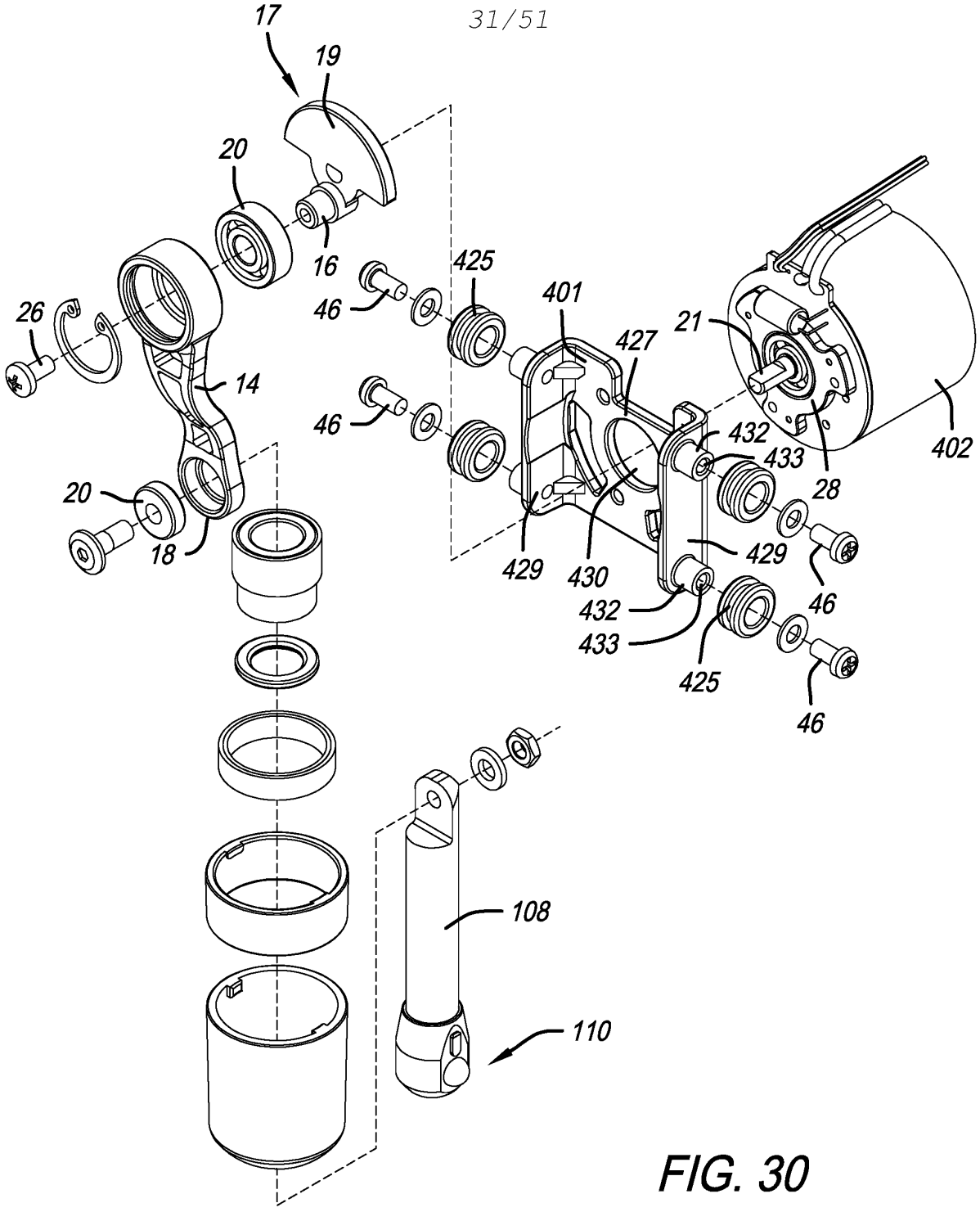

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FIG. 30

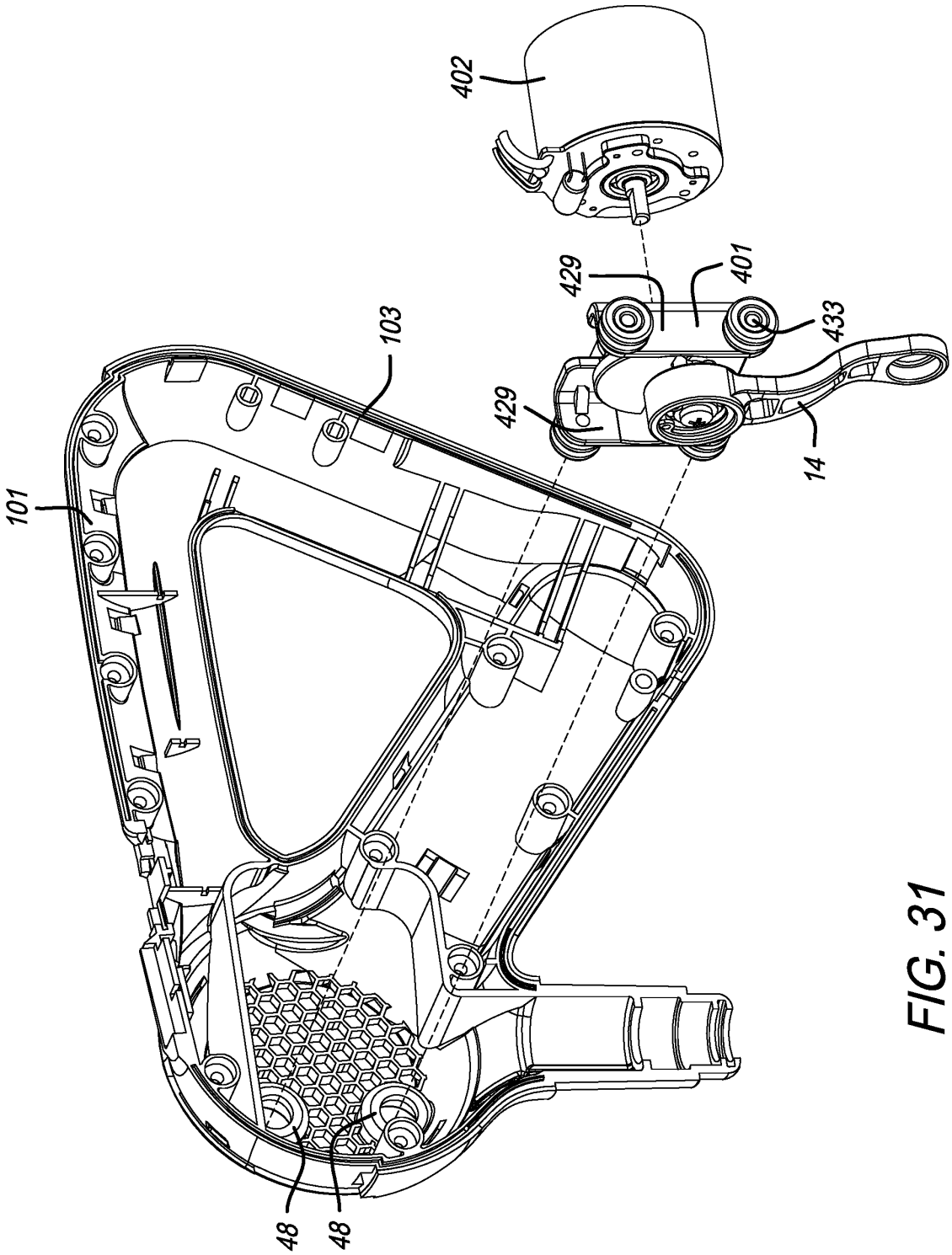


FIG. 31

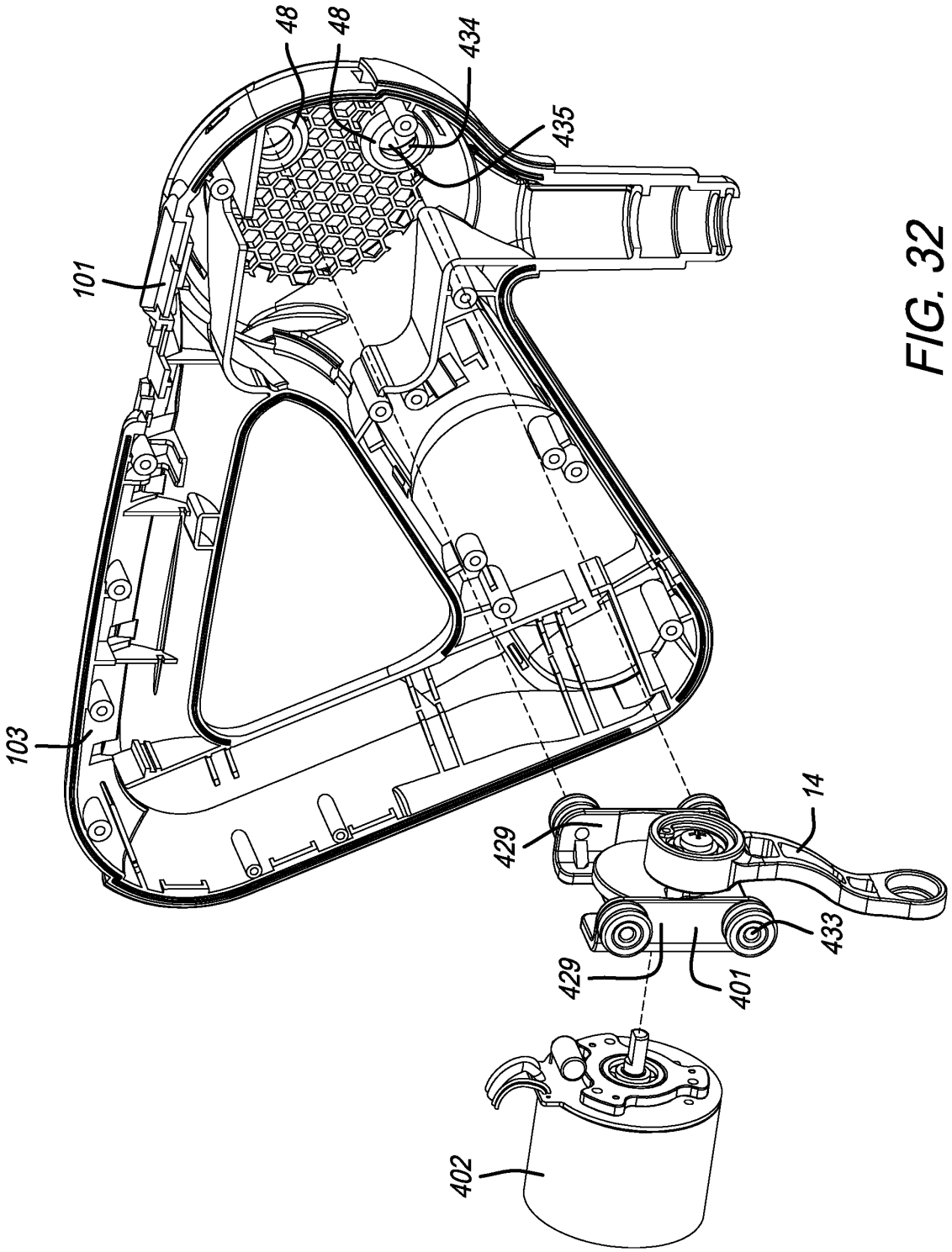


FIG. 32

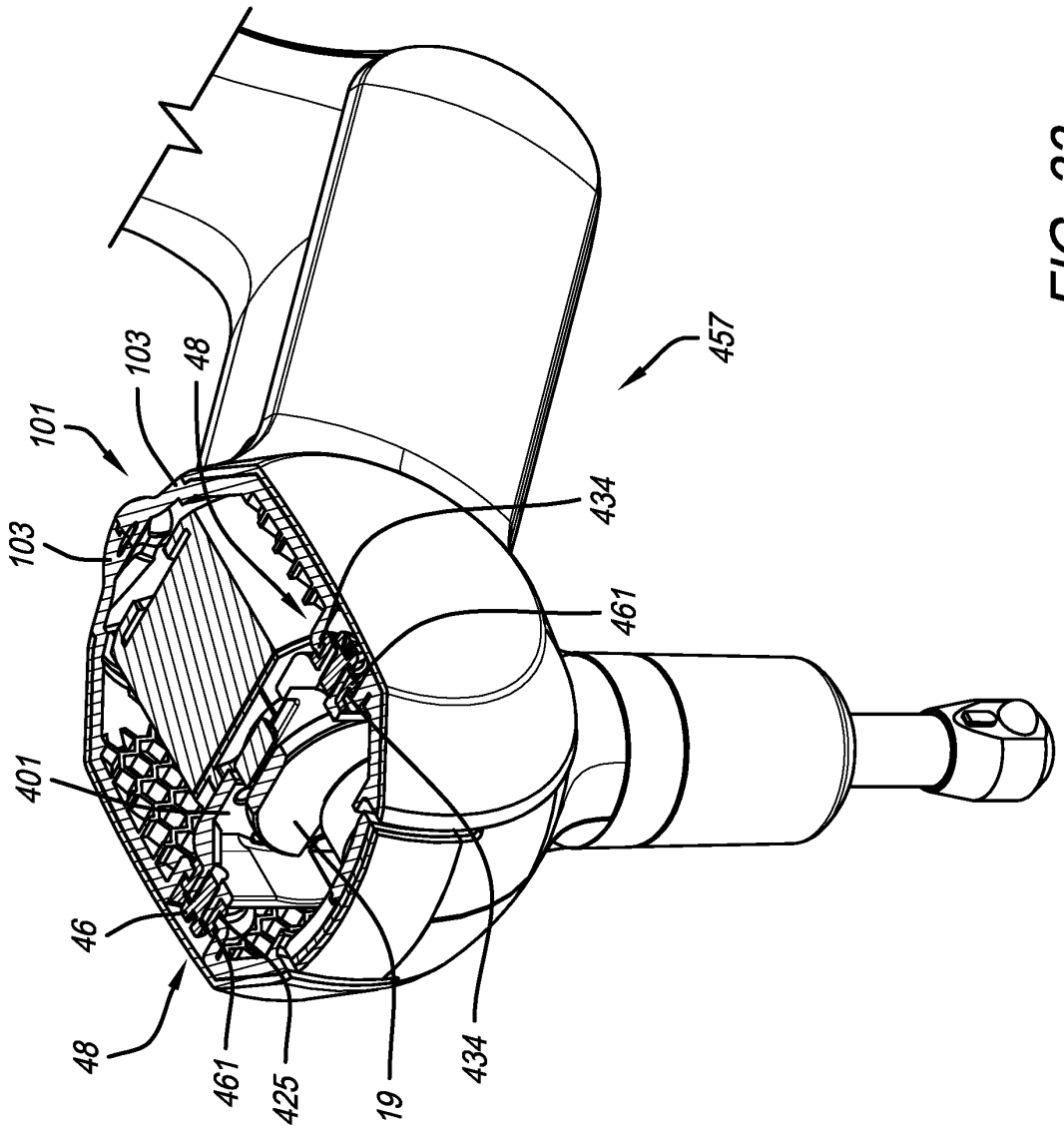


FIG. 33

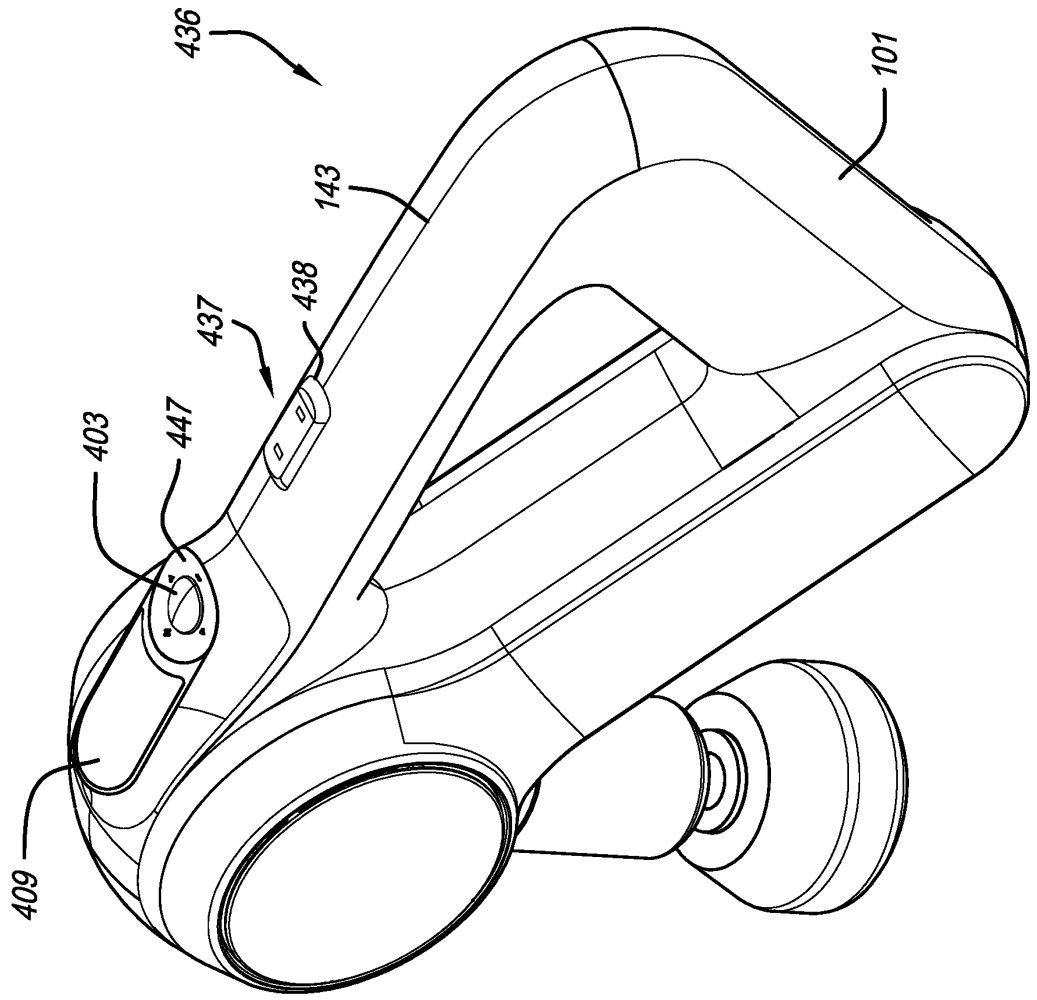


FIG. 34

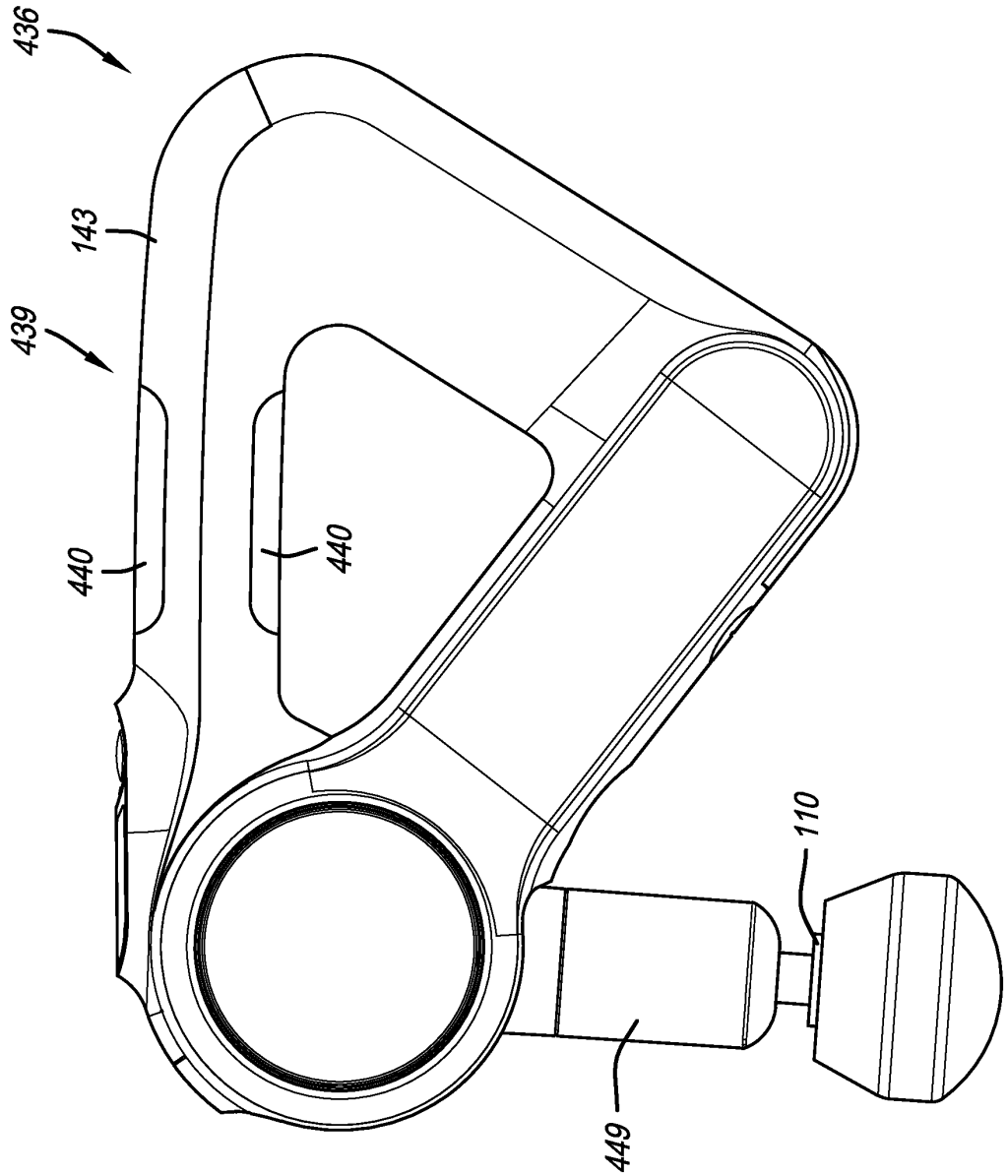


FIG. 35

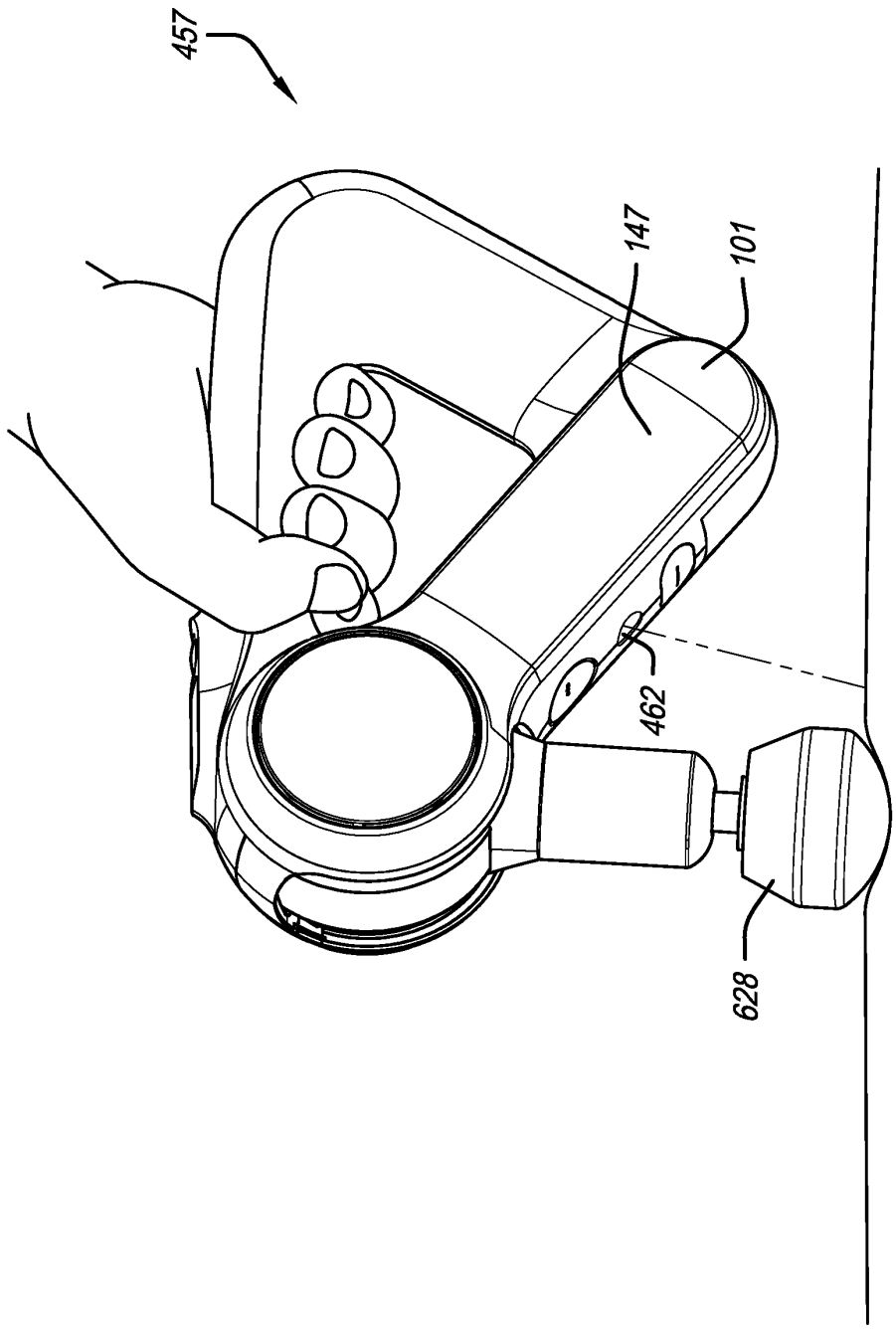


FIG. 36

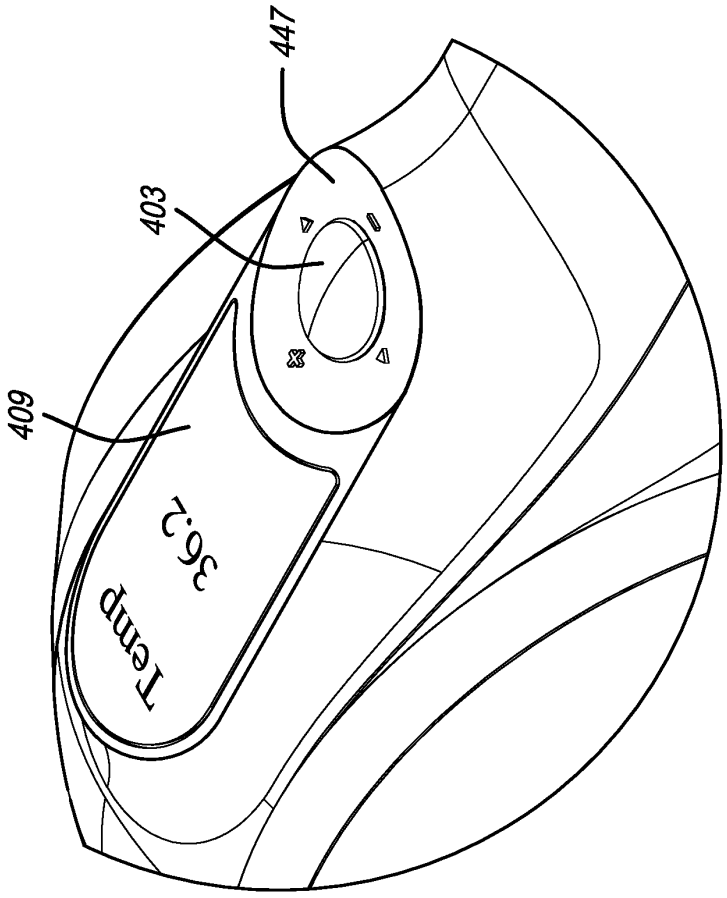


FIG. 36A

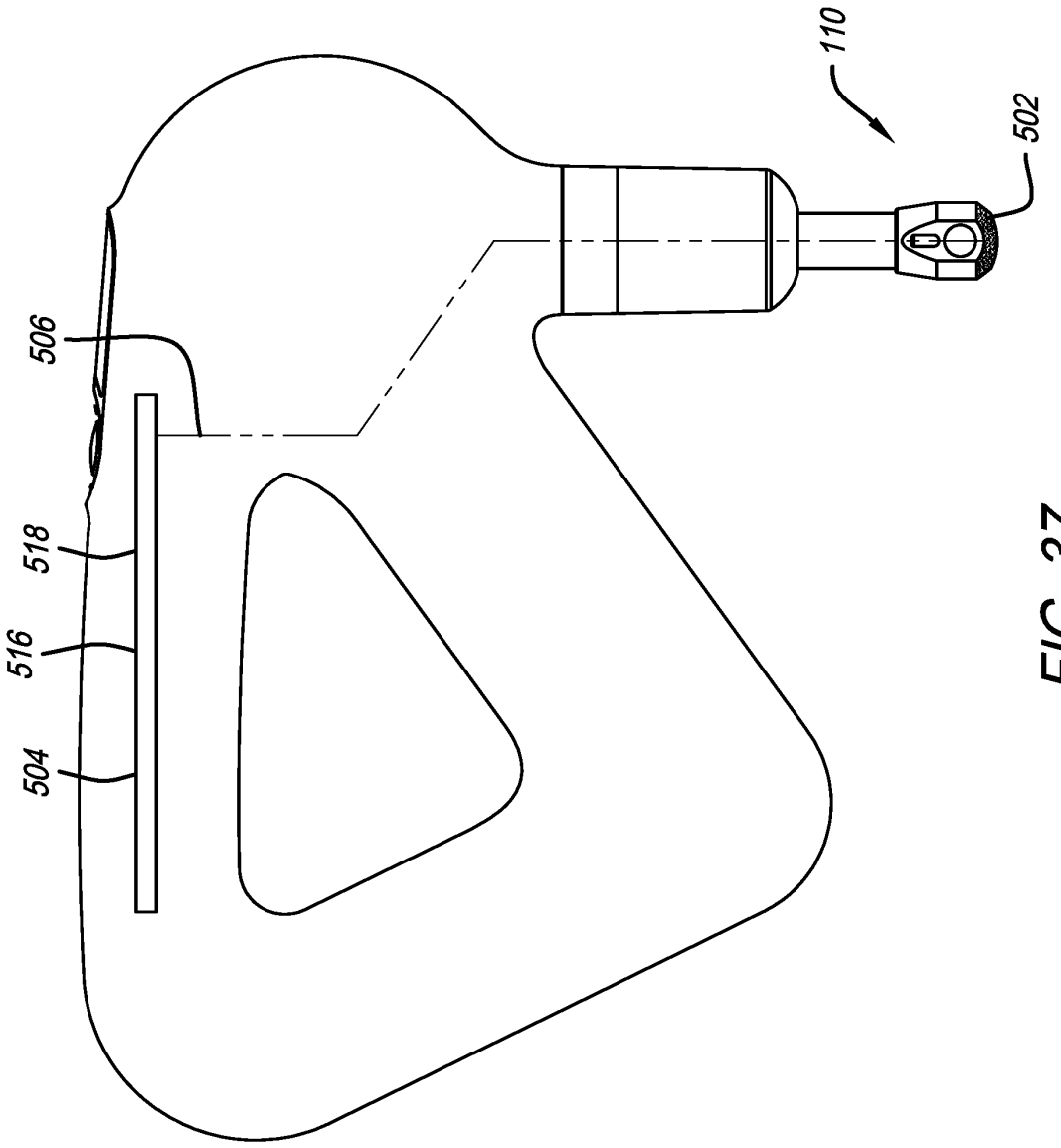


FIG. 37

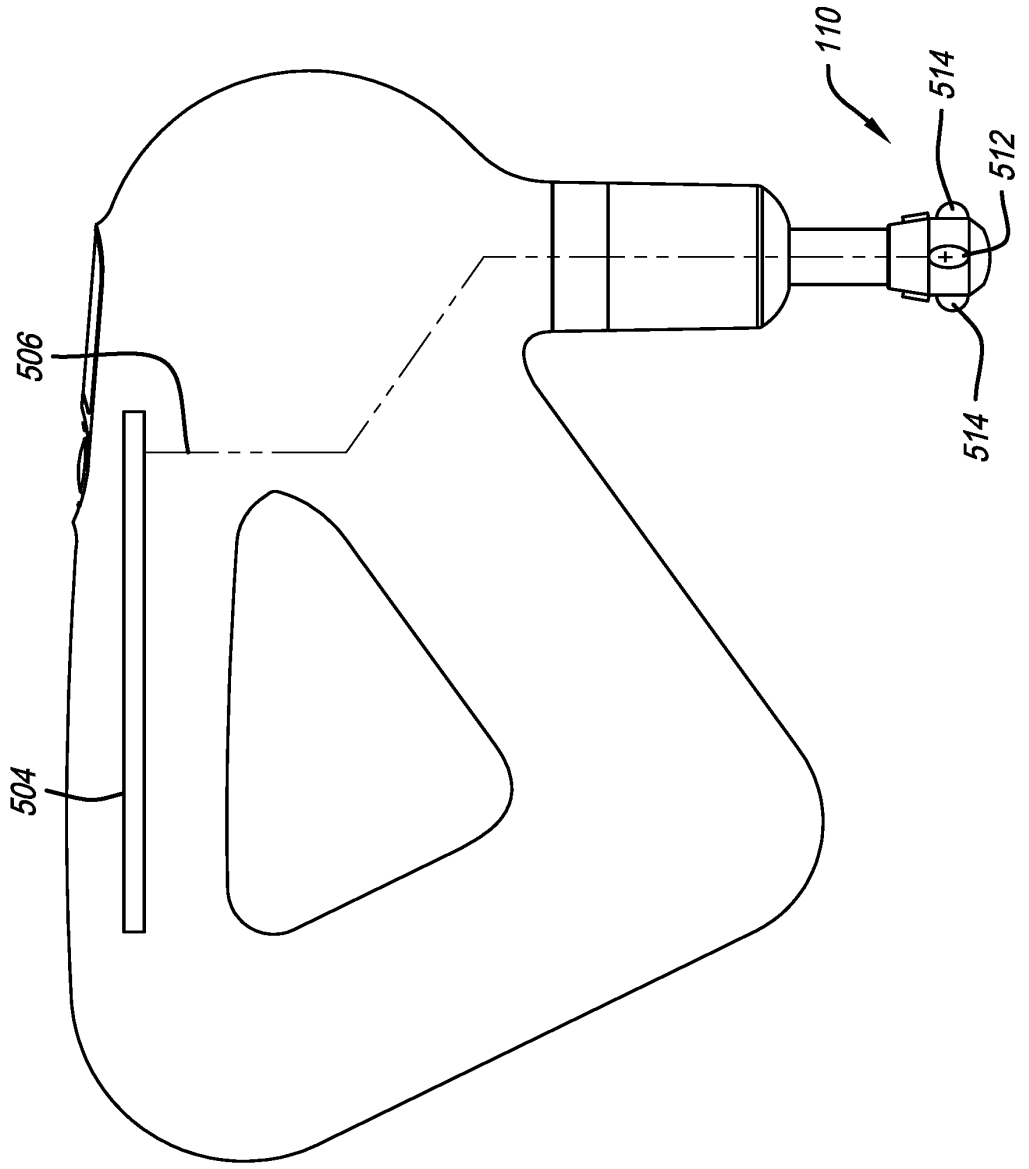


FIG. 38

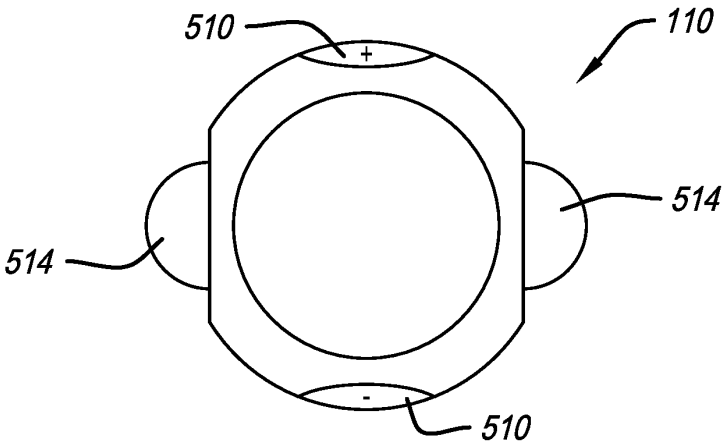


FIG. 39

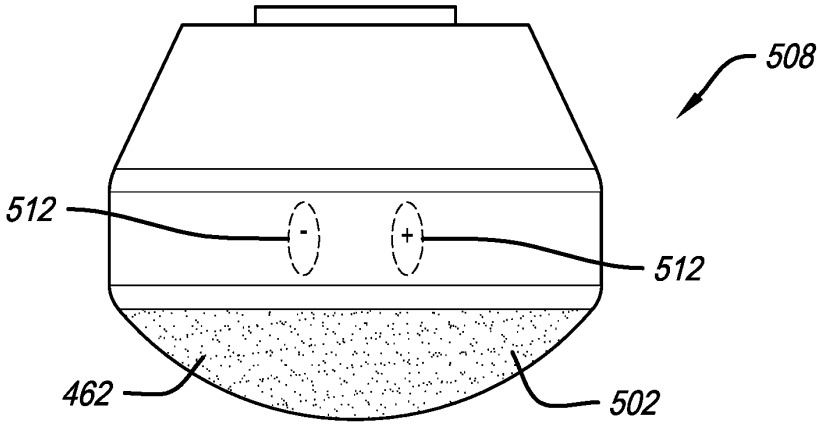


FIG. 40

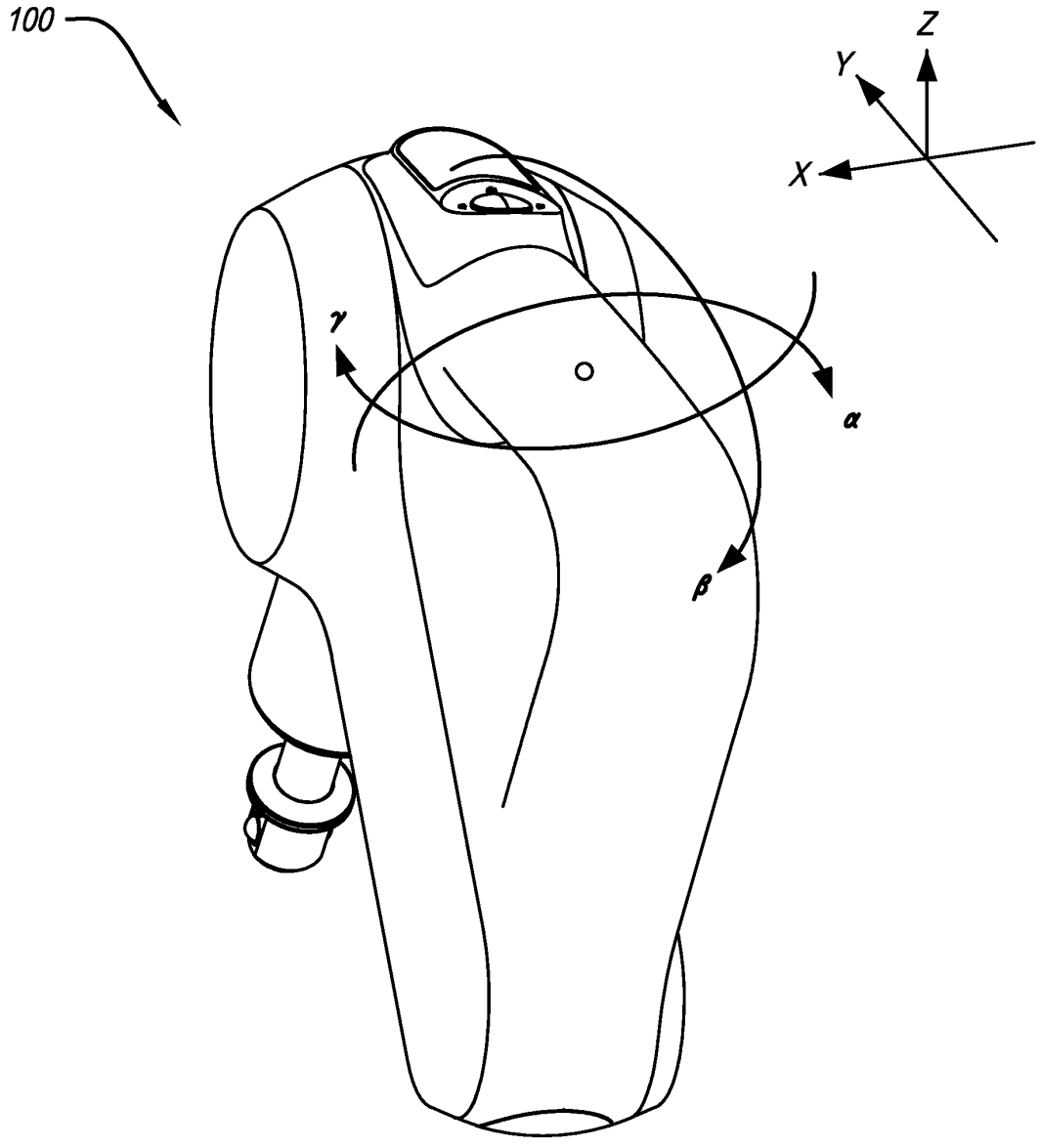


FIG. 41

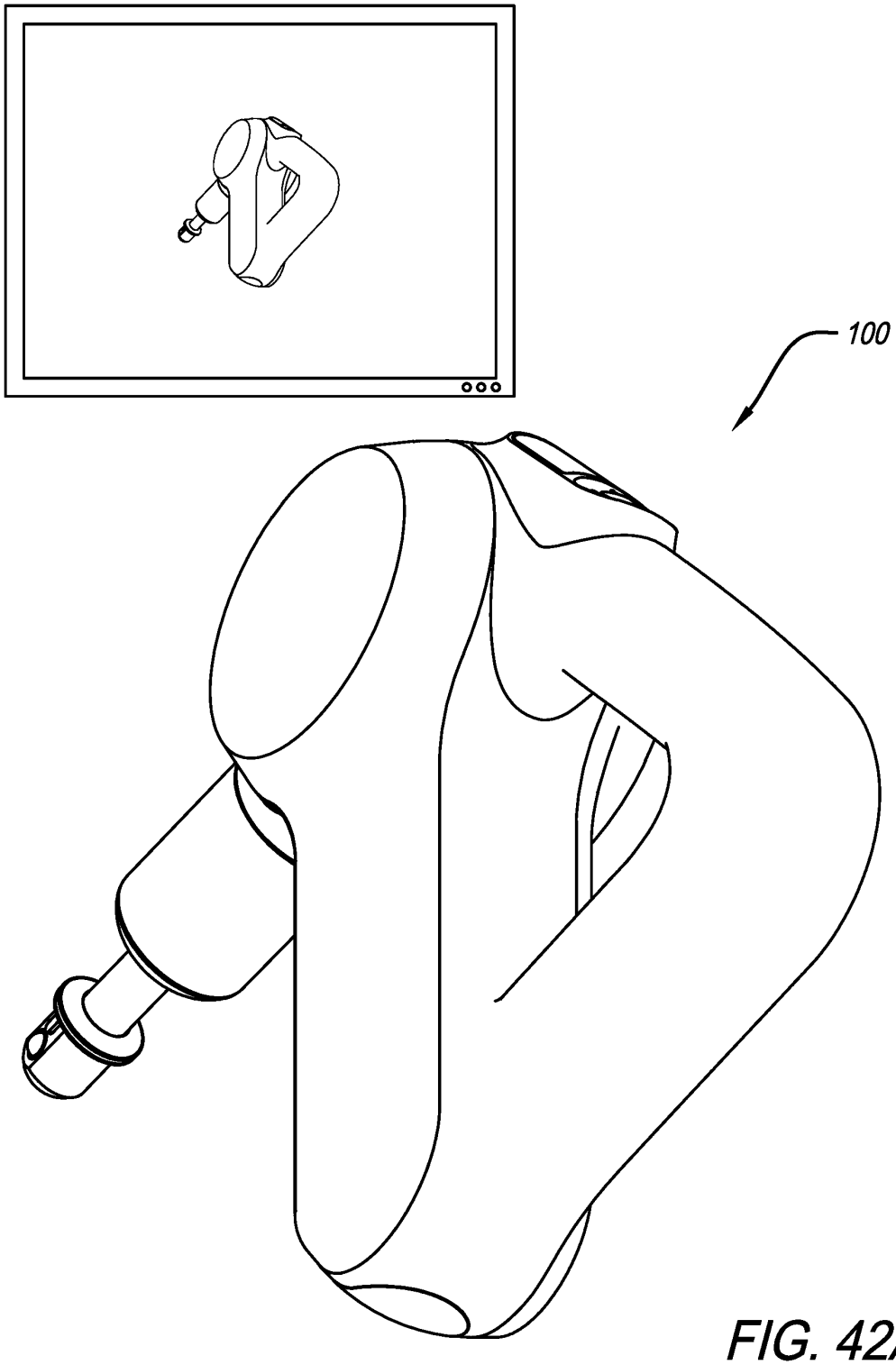


FIG. 42A

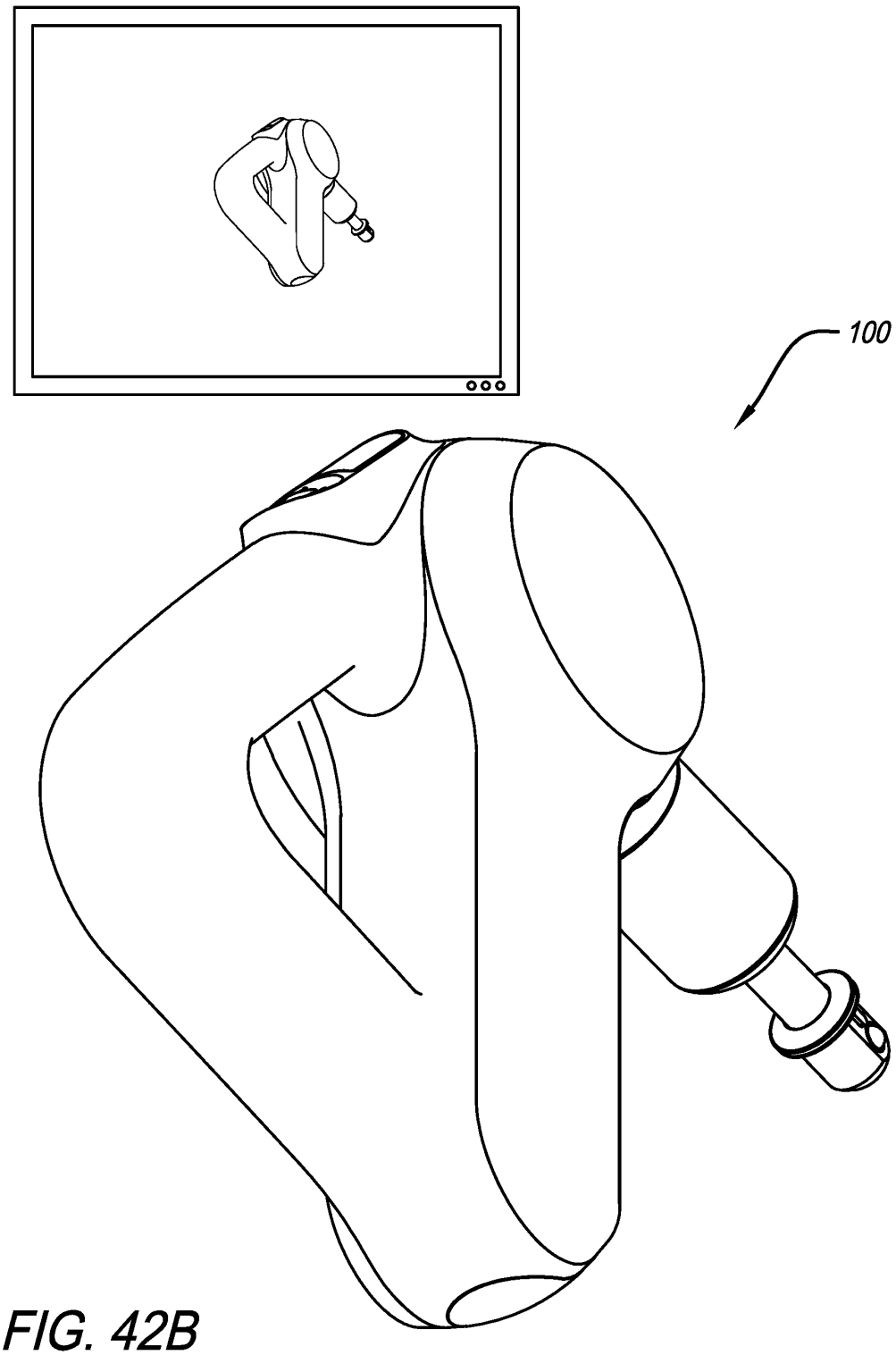


FIG. 42B

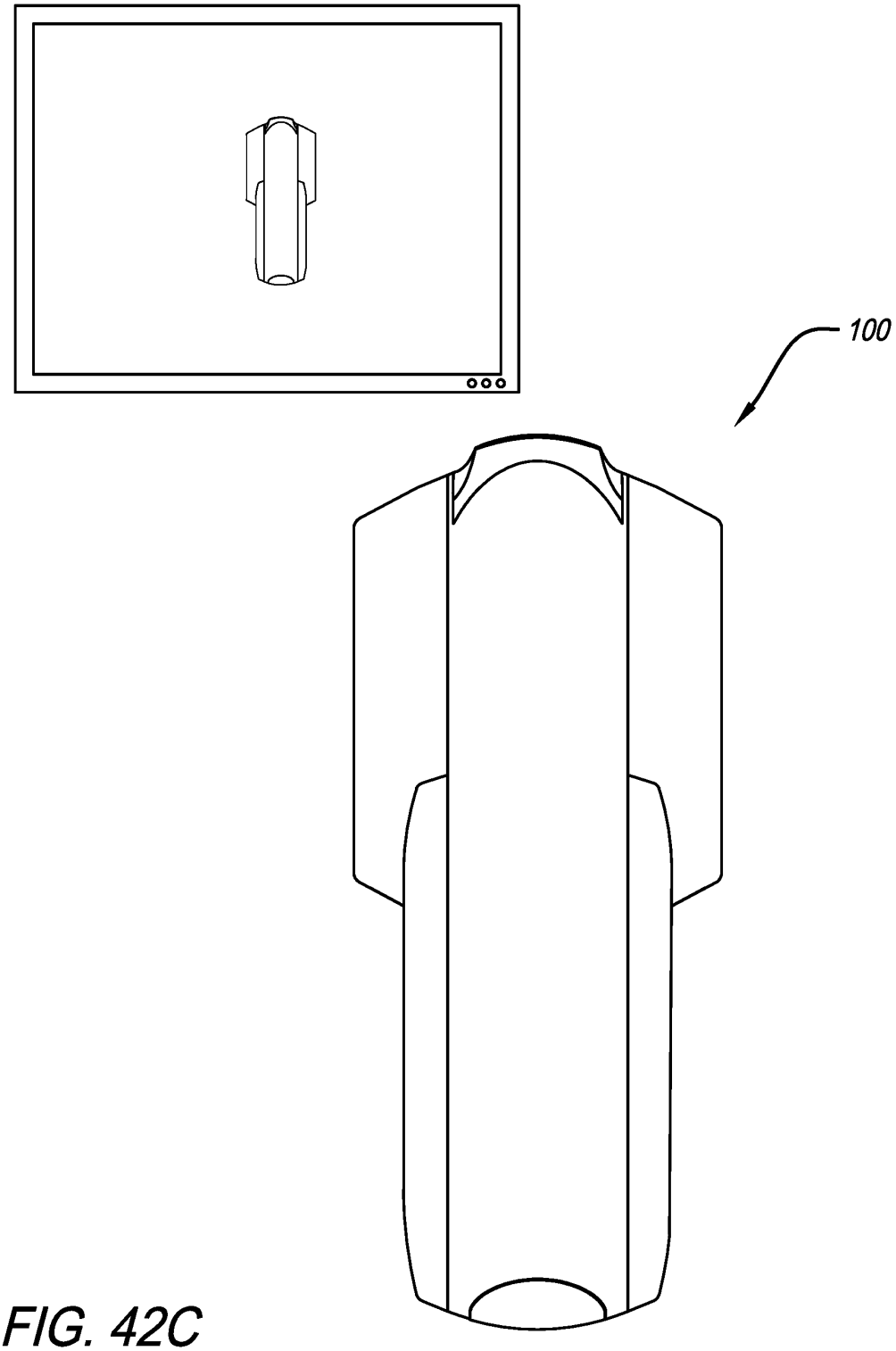


FIG. 42C

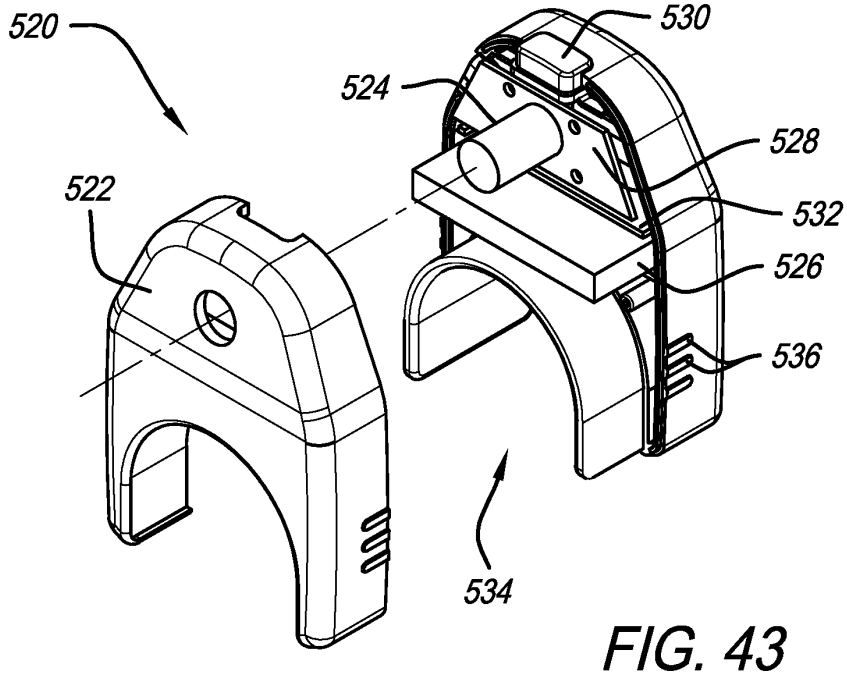

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FIG. 43

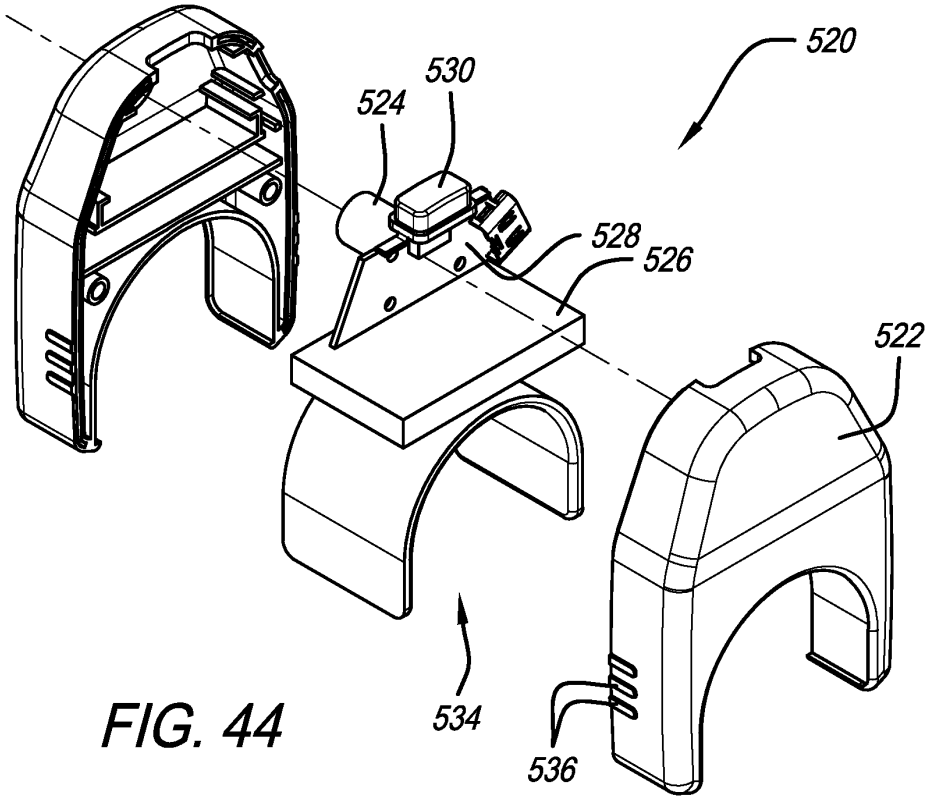

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FIG. 44

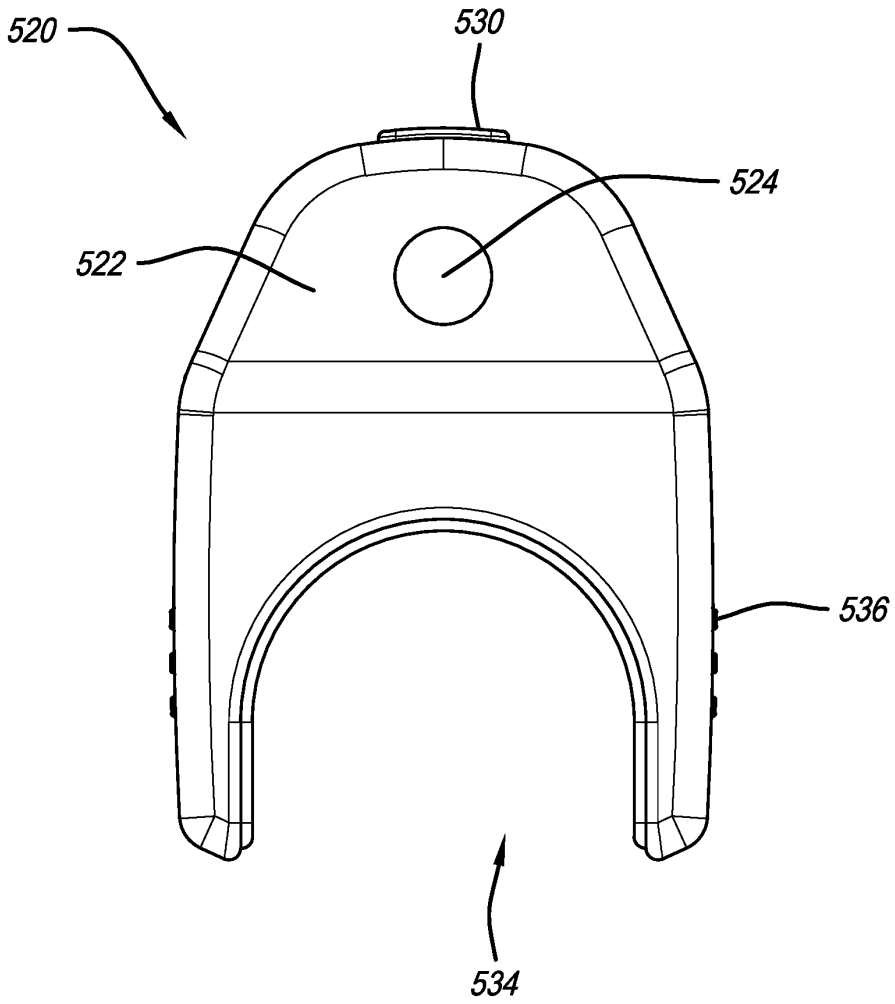


FIG. 45

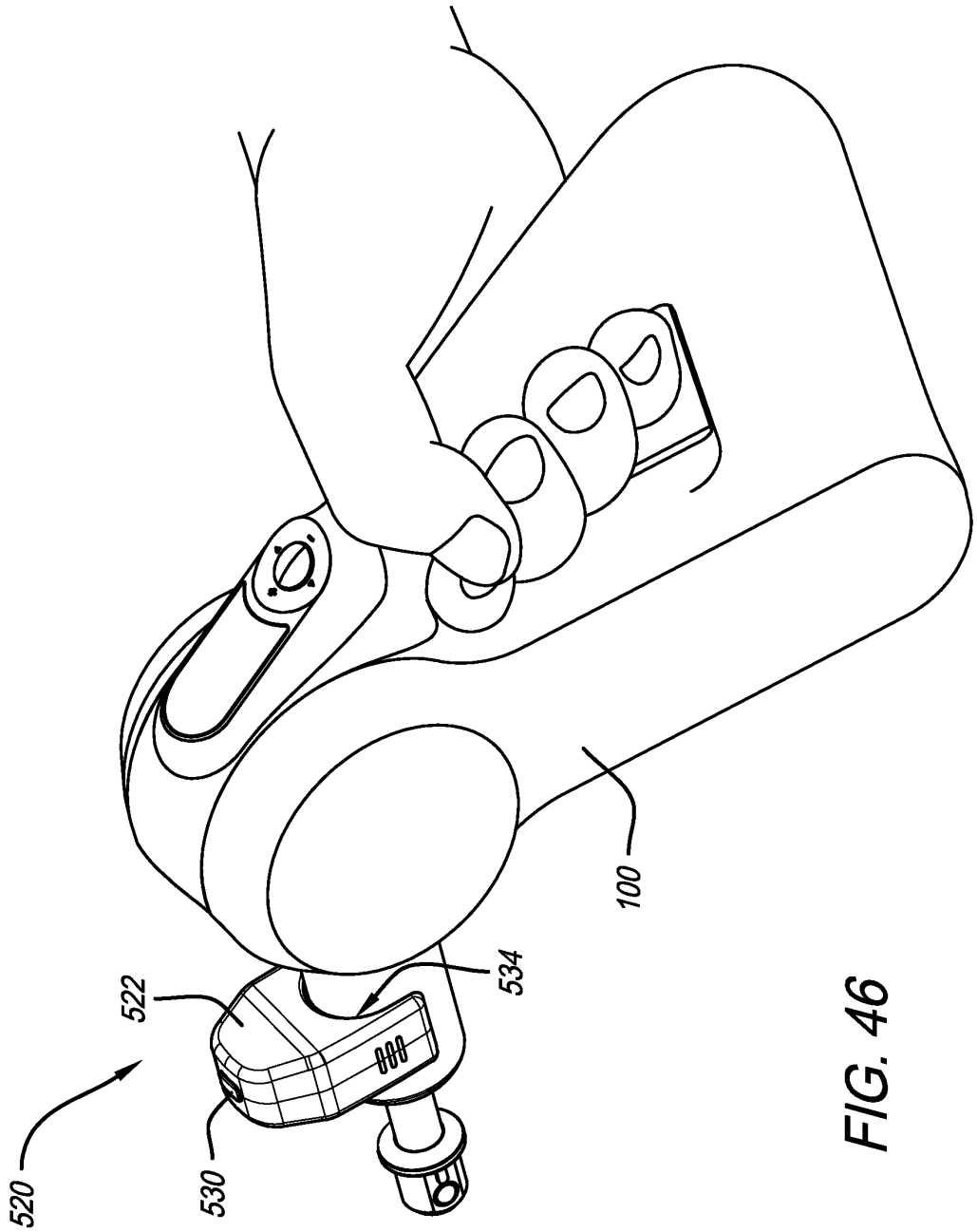


FIG. 46

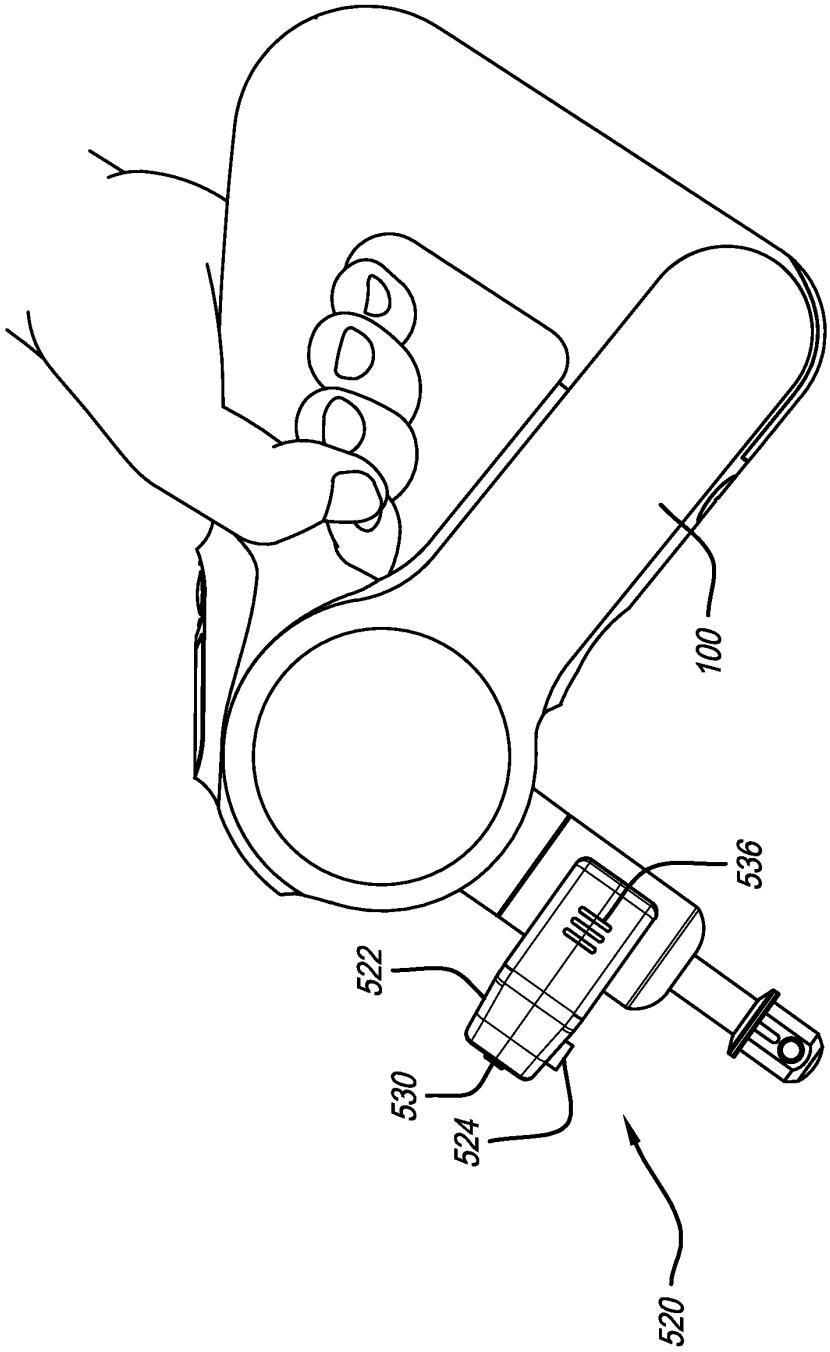


FIG. 47

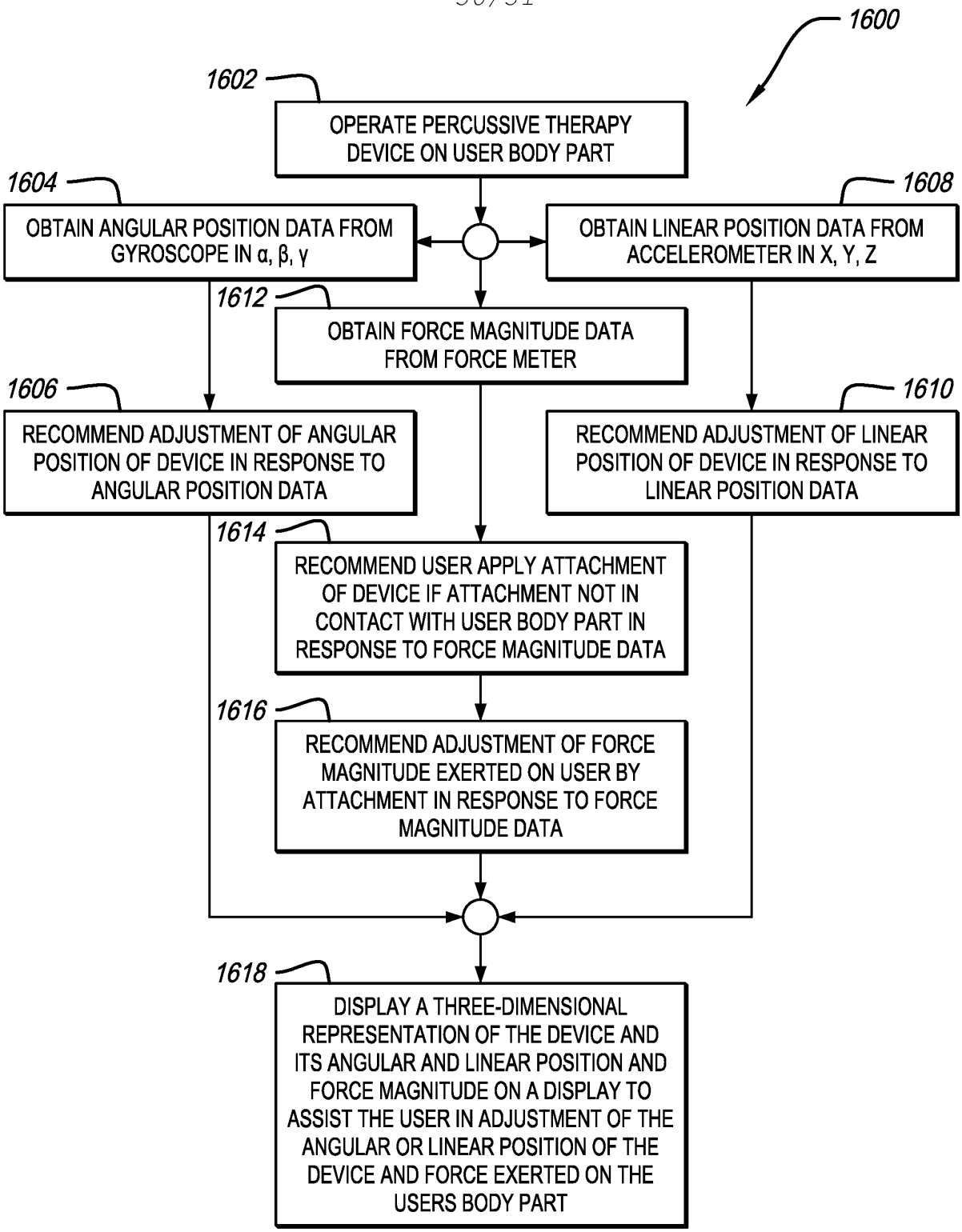

1600
1602
OPERATE PERCUSSIVE THERAPY DEVICE ON USER BODY PART
1604
OBTAIN ANGULAR POSITION DATA FROM GYROSCOPE IN α, β, γ
1608
OBTAIN LINEAR POSITION DATA FROM ACCELEROMETER IN X, Y, Z
1612
OBTAIN FORCE MAGNITUDE DATA FROM FORCE METER
1606
RECOMMEND ADJUSTMENT OF ANGULAR POSITION OF DEVICE IN RESPONSE TO ANGULAR POSITION DATA
1610
RECOMMEND ADJUSTMENT OF LINEAR POSITION OF DEVICE IN RESPONSE TO LINEAR POSITION DATA
1614
RECOMMEND USER APPLY ATTACHMENT OF DEVICE IF ATTACHMENT NOT IN CONTACT WITH USER BODY PART IN RESPONSE TO FORCE MAGNITUDE DATA
1616
RECOMMEND ADJUSTMENT OF FORCE MAGNITUDE EXERTED ON USER BY ATTACHMENT IN RESPONSE TO FORCE MAGNITUDE DATA
1618
DISPLAY A THREE-DIMENSIONAL REPRESENTATION OF THE DEVICE AND ITS ANGULAR AND LINEAR POSITION AND FORCE MAGNITUDE ON A DISPLAY TO ASSIST THE USER IN ADJUSTMENT OF THE ANGULAR OR LINEAR POSITION OF THE DEVICE AND FORCE EXERTED ON THE USERS BODY PART

FIG. 48

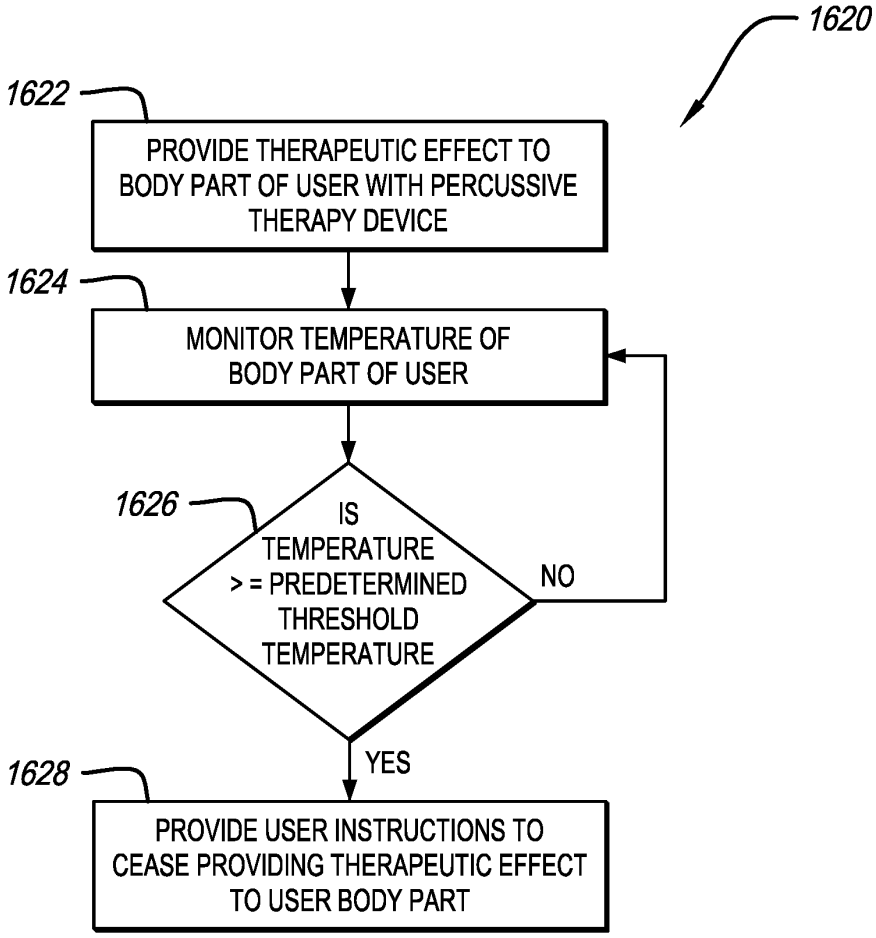

1620
1622
PROVIDE THERAPEUTIC EFFECT TO BODY PART OF USER WITH PERCUSSIVE THERAPY DEVICE
1624
MONITOR TEMPERATURE OF BODY PART OF USER
1626
IS TEMPERATURE > = PREDETERMINED THRESHOLD TEMPERATURE
NO
YES
1628
PROVIDE USER INSTRUCTIONS TO CEASE PROVIDING THERAPEUTIC EFFECT TO USER BODY PART

FIG. 49

UNITED STATES
PATENT AND TRADEMARK OFFICE

P.O. Box 1450
Alexandria, VA 22313 - 1450
www.uspto.gov

ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
18/809,073	**08/19/2024 06:31:33 PM Z ET**	**5015.039000J**

Title of Invention

PERCUSSIVE THERAPY DEVICE WITH ELECTRICALLY CONNECTED ATTACHMENT

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	6015	FILED BY	Kim Perry
PATENT CENTER #	66842364	FILING DATE	-
CUSTOMER #	186370	FIRST NAMED INVENTOR	Jason WERSLAND
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	Joseph Venier

Documents

TOTAL DOCUMENTS: 13

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
2024-08-19-ADS-5015-039000J.pdf	11	Application Data Sheet	1228 KB
2024-08-19-Utility-Transmittal-039000J.pdf	1	Transmittal of New Application	349 KB
2024-08-19-Request-TrackOne-5015-039000J.pdf	2	Track One Request	137 KB
2024-08-19-EOT-Authorization-5015-039000J.pdf	1	Authorization for Extension of Time all replies	127 KB
2024-08-19-Drawings-5015-039000J.pdf	51	Drawings-only black and white line drawings	978 KB
2024-08-19-Declarations-5015-039000J.pdf	5	Oath or Declaration filed	316 KB

2024-08-19-IDS-Pleading-5015-039000J.pdf		2	Transmittal Letter	122 KB
2024-08-19-IDS-SB08-5015-039000J.pdf		38	Information Disclosure Statement (IDS) Form (SB08)	711 KB
Warning: This is not a USPTO supplied IDS fillable form. Data in the form cannot be automatically loaded to other USPTO systems.				
2024-08-19-POA-82A-5015-039000J.pdf		1	Power of Attorney	261 KB
2024-08-19-POA-82B-5015-039000J.pdf		1	Power of Attorney	1252 KB
2024-08-19-Utility-Application-5015-039000J.pdf		64	-	1063 KB
2024-08-19-Utility-Application-5015-039000J-SPEC.pdf	(1-61)	61	Specification	1120 KB
2024-08-19-Utility-Application-5015-039000J-CLM.pdf	(62-63)	2	Claims	35 KB
2024-08-19-Utility-Application-5015-039000J-ABST.pdf	(64-64)	1	Abstract	12 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
2024-08-19-ADS-5015-039000J.pdf	7910F9FEDB4D09E170FCD2CC11F0C84D4EEE232E0B0775907B6E703EC05C92F002EB67F7EAC00917C56A7D99D212BD77E94CD7BC2CAFEA003657325DFDFFF9D8
2024-08-19-Utility-Transmittal-039000J.pdf	94D2BC41E88DADEAFC30A43045A4EF869AEA64CD93A57D01BBC657A6EFEEDF843297B7DDC2A0A7E705D462B5D2FC413FD3377B5F1862E1BEDEAA5670E7499D55
2024-08-19-Request-TrackOne-5015-039000J.pdf	BB25ACB500E4A31EE4D8F92FA8519FB5812D6E4ACAF47E13809992884D12ED49B4D8E7152A694B7D8D3C5C788FAC61A881CD4821ABE4B202C58212571210620F
2024-08-19-EOT-Authorization-5015-039000J.pdf	CE6F9522270B12DCDD048E68C7689E6176463095084AD6D1C45F2D0081233EEFE0FB14E2871275026EE53B6C9F71C44D37E9BE48877B2EF874E39E9898A8AFFF
2024-08-19-Drawings-5015-	2B1F73C3304F54ABFDC67106EDB368CEAE76E997A7EC1CA9

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2024-08-19-Declarations-5015-039000J.pdf	4139CC1ECECC63ED0E89C293BCAE65A5DF8E717A2D13034E18DFAA7522B22F3C87B7F0D482357CE3D38E3FDD2AED328218054BE8BA79B023AAEAB2E455911888
2024-08-19-IDS-Pleading-5015-039000J.pdf	EE03CB0C572622C3435F80E18412AB20DA4F94A68FD2B7614A659558F2FA8D43A4A13506342F081D9697E5D3DFCD0173C43D266BA8EA9B70F919922623E43559
2024-08-19-IDS-SB08-5015-039000J.pdf	30B79951AC13788FC7A89FCB1AFC5FD4163B74E6553A4E1DD0927F1BEC4F461313F34B3458ADC2CFA7D408AA0EE3CDA338F723FCB875B3A34D639D52CD14519A
2024-08-19-POA-82A-5015-039000J.pdf	BD7A20326A52EA293841EE77F1E2F695C25646CA78DB790537963A5AFA7B9B1744B3AFDDD7CB82278376E3234AF97FADE56AED4BAE44D38FEC9B41FB019ECDD5
2024-08-19-POA-82B-5015-039000J.pdf	7DAFEC4266F0CFF3C48E7FF252CFA6F4FA283A08F69A2A0BA271D5E72C2A2FB5C8D36461B4FA3FD2A6911F5D4AAE3F29973545C9D7AB61F7E370C5E706E43634
2024-08-19-Utility-Application-5015-039000J.pdf	FDC3D49922DDEE6AA28A955E9D1B58301BBE5F35B652BAC27B3F593D851D78B438585E9671C4D3BC624EC132BF1E68E6F021248441EC480DF533E391CFCEEA25
2024-08-19-Utility-Application-5015-039000J-SPEC.pdf	82449BE874303260647C2A7FBDD5EAF48CE5667BCE90D9B1DC5DAC23CF35307EF1FFF79B1B02F4BA09226918CB1476DD9EBA9E091CABD85607EB29BC493EEB35
2024-08-19-Utility-Application-5015-039000J-CLM.pdf	58412C6C54EF2174F3AE063ABD5625EE74F483A69F55FE12200E9472E55BAF85BB17C05EB22C268AC397DABCC1DE23A06E9F16C7ED900525556B20ABE0679727
2024-08-19-Utility-Application-5015-039000J-ABST.pdf	F4AB8FC8D43638E416AA4A1F19ACCC6C4F6991BB5D244F33350C7423487EB626A2DA7918F31F5857346E11EE28670E2BB92B9DA55386D92297823775478EA2F6

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an

international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 38

Complete if Known	
Application Number	To Be Assigned
Filing Date	Herewith
First Named Inventor	WERSLAND; Jason
Art Unit	To Be Assigned
Examiner Name	To Be Assigned
Attorney Docket Number	5015.039000J

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	001	US-D91454-S	02-06-1934	A.G.DECKER	
	002	US-D93943-S	11-27-1934	HARRY; M. Rand	
	003	US-D118980-S	02-13-1940	GILBERT; B. Larson	
	004	US-D129045-S	08-19-1941	GLENN; C. Wilhide	
	005	US-D161484-S	01-02-1951	CURTIS; Y. Mcquown	
	006	US-D163324	05-15-1951	CHARLES; Rittenhouse	
	007	US-D180923-S	09-10-1957	NICHOLAS; Anton	
	008	US-D181742-S	12-17-1957	ALFRED; W. Madl Milwaukee	
	009	US-D195145-S	04-30-1963	ROBERT; O. Ernest	
	010	US-D197142-S	12-17-1963	JAMES; H. Godfrey	
	011	US-D207505-S	04-25-1967	SHE; Louis Whitman	
	012	US-D230522-S	02-26-1974	NORMAN; Rothman	
	013	US-D237454-S	11-04-1975	JAMES; R. Adams	
	014	US-D237455	11-04-1975	BUFORD; J. Schramm	
	015	US-D265985-S	08-31-1982	HOUSE, II; Lawrence E.	
	016	US-D287814-S	01-20-1987	HIRAISHI; Etsuo et al.	
	017	US-D292368-S	10-20-1987	MIKIYA; Toshio	
	018	US-D300132-S	03-07-1989	CULBERTSON; Richard et al.	
	019	US-D303373-S	09-12-1989	CHING, Jr.; Larry K. W.	
	020	US-D310005-S	08-21-1990	PRECHT; Hans J.	
	021	US-D314320-S	02-05-1991	BROSIUS; James R. et al.	
	022	US-D320379-S	10-01-1991	CULBERTSON; Richard	
	023	US-D321338-S	11-05-1991	SAKAMOTO; Masakazu et al.	
	024	US-D329166-S	09-08-1992	DOGGETT; Lawrence A.	
	025	US-D329291-S	09-08-1992	WOLLMAN; Howard	
	026	US-D329292-S	09-08-1992	WOLLMAN; Howard	

Examiner Signature		Date Considered	

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Sheet 2 of 38

Complete if Known	
Application Number	To Be Assigned
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First Named Inventor	WERSLAND; Jason
Art Unit	To Be Assigned
Examiner Name	To Be Assigned
Attorney Docket Number	5015.039000J

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Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
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	028	US-D334012-S	03-16-1993	CHEN; Benjamin	
	029	US-D338802-S	08-31-1993	MAASS; Rudolf	
	030	US-D345077-S	03-15-1994	MAASS; Rudolf	
	031	US-D345727-S	04-05-1994	FLOWERS; Dale M. et al.	
	032	US-D345888-S	04-12-1994	JOSS; Michael S. et al.	
	033	US-D349029-S	07-26-1994	MATSUNAGA; Naoki et al.	
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	038	US-D383435-S	09-09-1997	SVETLIK; Kenneth N.	
	039	US-D384639-S	10-07-1997	KAWAKAMI; Takahide et al.	
	040	US-D387728-S	12-16-1997	KAWAKAMI; Takahide et al.	
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	042	US-D397991-S	09-08-1998	KAWAKAMI; Takahide et al.	
	043	US-D400161-S	10-27-1998	NAGELE; Albert L. et al.	
	044	US-D400758-S	11-10-1998	HIPPEN; Jan et al.	
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	050	US-D430938-S	09-12-2000	LEE; Jae A.	
	051	US-D432077-S	10-17-2000	ZURWELLE; Donald W. et al.	
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Sheet 3 of 38

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	054	US-D440136-S	04-10-2001	BUCK; John E.	
	055	US-D448852-S	10-02-2001	ENGELEN; Helena Gerarda Gertruida Josephina	
	056	US-D474445-S	05-13-2003	MATSUOKA; Takeshi et al.	
	057	US-D475595-S	06-10-2003	HATCH; Paul D. et al.	
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Substitute for form 1449/PTO

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(Use as many sheets as necessary)

Sheet 4 of 38

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Examiner Name	To Be Assigned
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	081	US-D631315-S	01-25-2011	XUE; Ben et al.	
	082	US-D649657-S	11-29-2011	PETERSEN; Christopher M. et al.	
	083	US-657765-A	09-11-1900	GIBBS; George Jamesgb	
	084	US-D658759-S	05-01-2012	MARESCAUX; Jacques et al.	
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	097	US-D740222-S	10-06-2015	TANG; Yin	
	098	US-D756180-S	05-17-2016	CHEN; Chao-Ming	
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Sheet 5 of 38

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Art Unit	To Be Assigned
Examiner Name	To Be Assigned
Attorney Docket Number	5015.039000J

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	107	US-D823478-S	07-17-2018	PARK; Kun Woo	
	108	US-D826418-S	08-21-2018	LAD; Sanjay Harikrishna	
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	110	US-D838378-S	01-15-2019	CAO; Ruyi	
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Sheet 6 of 38

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Sheet 7 of 38

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Sheet 8 of 38

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	185	US-5656017-A	08-12-1997	KELLER; Tony S. et al.	
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	187	US-5860669-A	01-19-1999	WASS; Lloyd G. et al.	
	188	US-5910197-A	06-08-1999	CHACONAS; Peter Constantine	
	189	US-5925002-A	07-20-1999	WOLLMAN; Matt J.	
	190	US-5935089-A	08-10-1999	SHIMIZU; Nobuzo	
	191	US-5951501-A	09-14-1999	GRINER; Thomas Edward	
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Sheet 9 of 38

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Attorney Docket Number	5015.039000J

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Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
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