

Serial No.: 13/724,287
Filing Date: 12/21/2012
Confirmation No.: 8891
GAU:1629

1.-3. (CANCELED)

I claim

4.(CURRENTLY AMENDED) An intrinsic transduction system comprising:

a piezoelectric impact-spin polymeric electro-disc sole plate device(s) for energy harvesting; a polymeric piezoelectric electro-thermal element provides a stress-strain-impact-spin-sensing; a prosthetic comprising: a controller distributes power and recharges an electro-spun battery; a lithium battery including a spin dynamo for charging capacitated electro-chemical ferro fluids; an electro-thermal torus comprising a transistor and electrodes for an ion fluid spherical tokamak; and a spark cleat comprising: a force-static potential plates provides an electromagnetic energy.

5.(CURRENTLY AMENDED) An intrinsic transduction system method comprising:

regulating a piezoelectric impact spin polymeric energy harvester for electronic circuit device(s); providing an electro-thermal disc comprising electrode, fluid reservoir and catheter for therapy; transporting a transistors positive negative ions and bio-molecules for a chemical charge carrier; and capacitating a circuit comprising a electro-spun plates and leads for a distributing of an ions.

6.(CURRENTLY AMENDED) An intrinsic transduction system method comprising:
grounding a piezoelectric polymeric disks and leads for a Negative/Positive ion polar synthesis;
combining electrolytes with piezoelectric kinetics for a magneto-electro-hydrodynamics therapy;
controlling an electrochemical circuit to regulate signal paths of cells for an electrokinetic body;
and regenerating nerves by an electrochemical particle acceleration for a plasma fusion energy.

Serial No.: 13/724,287
Filing Date: 12/21/2012
Confirmation No.: 8891
GAU:3766

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: JENNINGS, James Edward

SERIAL NO.: 13/724,287

FILING DATE: 12/21/ 2012

TITLE: INTRINSIC TRANSDUCTION SYSTEM

GROUP ART UNIT: 3766

EXAMINER: Porter, Jr. Gary A.

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

RESPONSE TO CORRESPONDENCE

Dear Examiner Porter:

This correspondence is being filed as a Response to the Office Action Summary issued on Dec. 7, 2015. Applicant request entry of the amendments indicated below and consideration of the appended remarks. No new matter has been entered by way of these amendments, less burden.

Previously, the examiner stated the opposition of prior art by the presentation of claims and today no novel opposition exists within the entire system, Remarks and/or Arguments begin on page 2.

AMENDMENT TO CLAIMS: (CURRENTLY AMENDED) 4-6

Applicant has currently amended and annotated 12/13/15 submission claims for allowance.

AMENDMENT TO SPECIFICATION

This is a Continuation of Application Serial No. 13/572,679, filed October 25, 2012, now patent No. 8,894,514, granted November 25, 2014. Precedence of an applicant can not be held against.

REMARKS/ARGUMENTS

APPLICANT HAS NOT BROADEN THE CLAIMS BUT FOCUSED ON THE UTILITY.

The examiner insists on a continuation of Application for allowance, similar thought pattern-path

Applicant respectfully requests reconsideration of the application and its passage to allowance.

Should any impediments to allowance remain, Applicant requests that the Examiner contact the undersigned at the indicated phone number. No new matter has been entered by amendments.

Respectfully submitted, James Jennings

/JAMES EDWARD JENNINGS/

Date: 04/06/2017

By: _____
PO Box 270081 Louisville, CO 80027
303.664.1829

Electronic Acknowledgement Receipt

EFS ID:	28836312
Application Number:	13724287
International Application Number:	
Confirmation Number:	8891
Title of Invention:	INTRINSIC TRANSDUCTION SYSTEM
First Named Inventor/Applicant Name:	JAMES EDWARD JENNINGS
Customer Number:	82669
Filer:	James Edward Jennings
Filer Authorized By:	
Attorney Docket Number:	
Receipt Date:	05-APR-2017
Filing Date:	21-DEC-2012
Time Stamp:	11:11:04
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Claims	MHD_CLAIMS.pdf	25087 <small>5cc1a8e802be7118ce5dee09c88a7aee27e cf993</small>	no	2

Warnings:

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Information:					
2	Applicant Arguments/Remarks Made in an Amendment	MHD_LETTER.pdf	30206	no	2
			5867d4a36f84ce2c587e700c54e19aa0db622b00		
Warnings:					
Information:					
Total Files Size (in bytes):				55293	
<p>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.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a 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.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> 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.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> 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.</p>					



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/724,287	12/21/2012	JAMES EDWARD JENNINGS		8891

82669 7590 12/23/2016
James Edward Jennings
P.O. Box 270081
Louisville, CO 80027

EXAMINER

PORTER, JR, GARY A

ART UNIT	PAPER NUMBER
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3766

MAIL DATE	DELIVERY MODE
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12/23/2016

PAPER

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.



UNITED STATES PATENT AND TRADEMARK OFFICE

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In re Application of :
Jennings :
Application No. 13/724,287 : DECISION ON PETITION UNDER
Filed: December 21, 2012 : 37 C.F.R. § 1.181(a)
Attorney Docket No. None :
Title: INTRINSIC TRANSDUCTION :
SYSTEM :

This is a decision on the petition pursuant to 37 C.F.R. § 1.181, filed on June 7, 2016, requesting that the holding of abandonment in the above-identified application be withdrawn. A supplement to this petition pursuant to 37 C.F.R. § 1.181 was filed on October 5, 2016.

As a preliminary matter, it is noted similar petitions have been filed in the following nine applications: 12/903,322, 13/572,672, 13/724,287, 13/724,287, 13/778,476, 13/844,999, 13/970,616, 29/461,909, and 29/477,572.

The petition pursuant to 37 C.F.R. § 1.181(a) is **DISMISSED**.

BACKGROUND

The above-identified application became abandoned for failure to reply within the meaning of 37 C.F.R § 1.113 in a timely manner to the final Office action mailed May 28, 2015, which set a shortened statutory period for reply of three months. A one-month extension of time was requested on June 3, 2015. A first after-final amendment was received on June 9, 2015 and an advisory action was mailed on June 22, 2015. A second after-final amendment was received on June 30, 2015 and an advisory action was mailed on August 10, 2015. A third after-final amendment was received on August 12, 2015 along with a certification and request for consideration under the after final consideration pilot program 2.0 and an advisory action was mailed on August 18, 2015 along with an AFCP 2.0 decision which indicates the "after final amendment would not overcome all of the rejections in the most recent final Office action. See attached interview summary for further details." A fourth after-final amendment was received on October 23, 2015, however a two-month extension of time was required to have made timely the response. A fifth after-final amendment was received on November 3, 2015, however a two-month extension of time was required to have made timely the response. A second one-month extension of time was requested on November 12, 2015, and a

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three-month extension of time was obtained on November 13, 2015. A sixth after-final amendment was received on November 23, 2015. A certification and request for consideration under the after final consideration pilot program 2.0 was received on November 18, 2015, and the Office mailed a "notice requiring extension of time fee - no new time period is provided" on November 19, 2015. An advisory action was mailed on December 7, 2015, concerning the fifth after-final amendment of November 3, 2015 and an AFCP 2.0 decision was mailed concurrently therewith, which indicates the request was improper. A four-month extension of time was requested on December 9, 2015, subsequent to the maximum extendable period for response. On December 13, 2015, subsequent to the maximum extendable period for response, a seventh after-final amendment was received. No further response was received, and no additional extensions of time under the provisions of 37 C.F.R § 1.136(a) were available. Accordingly, the above-identified application became abandoned on November 29, 2015. A notice of abandonment was mailed on March 1, 2016.

Office records show the one-month extension of time requested on June 3, 2015, the one-month extension of time requested on November 12, 2015, and the four-month extension of time requested on December 9, 2015 were each refunded to the appropriate credit card on December 19, 2016.

RELEVANT STATUTE AND PORTIONS OF THE C.F.R.

35 U.S.C. § 133 sets forth, *in toto*:

Time for prosecuting application

Upon failure of the applicant to prosecute the application within six months after any action therein, of which notice has been given or mailed to the applicant, or within such shorter time, not less than thirty days, as fixed by the Director in such action, the application shall be regarded as abandoned by the parties thereto.

37 C.F.R. § 1.134 sets forth, *in toto*:

Time period for reply to an Office action.

An Office action will notify the applicant of any non-statutory or shortened statutory time period set for reply to an Office action. Unless the applicant is notified in writing that a reply is required in less than six months, a maximum period of six months is allowed.

37 C.F.R. § 1.135 sets forth, *in toto*:

Abandonment for failure to reply within time period.

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(a) If an applicant of a patent application fails to reply within the time period provided under §1.134 and §1.136, the application will become abandoned unless an Office action indicates otherwise.

(b) Prosecution of an application to save it from abandonment pursuant to paragraph (a) of this section must include such complete and proper reply as the condition of the application may require. The admission of, or refusal to admit, any amendment after final rejection or any amendment not responsive to the last action, or any related proceedings, will not operate to save the application from abandonment.

(c) When reply by the applicant is a bona fide attempt to advance the application to final action, and is substantially a complete reply to the non-final Office action, but consideration of some matter or compliance with some requirement has been inadvertently omitted, applicant may be given a new time period for reply under §1.134 to supply the omission.

PROCEDURAL HISTORY AND ANALYSIS

With this petition pursuant to 37 C.F.R. § 1.181, Petitioner has requested the withdrawal of the holding of abandonment and has presented arguments directed towards the propriety of the examination of this application. **The propriety of a rejection, objection, or other requirement set forth in an Office action is not relevant to an applicant's burden to timely prosecute the application to avoid abandonment.**¹ Put another way, this application went abandoned due to Petitioner's failure to place the claims in condition for allowance, and Petitioner's contention that the "last claims"² should have been entered by the Examiner is not relevant to the abandonment of this application.

It is clear from rules 37 C.F.R. §§ 1.116 and 1.135 that abandonment of an application is risked when the applicant proffers an amendment after the mailing of a final Office action. The rule clearly indicates that the mere filing of an amendment does not relieve applicant of the duty to take appropriate action to save the application from abandonment.

1 See 35 U.S.C. § 133 and 37 C.F.R. §§ 1.134 and 1.135(a) and (b), reproduced above.

2 Supplement to the petition received on October 5, 2016, page 1. This appears to be a reference to the seventh after-final amendment, received on December 13, 2015.

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If steps are not taken after final to maintain pendency prior to the expiration of the maximum extendable period for reply, the application will go abandoned. Put another way, the submission of an after final amendment which fails to place the application in condition for allowance will result in the abandonment of the application, unless one of the following four items is filed prior to the maximum extendable period for reply:

- a subsequent amendment which prima facie places the application in condition for allowance;
- a Notice of Appeal;
- a Request for a Continuation Application pursuant to 37 C.F.R. § 1.53(b), if applicable;
- a Request for Continued Examination pursuant to 37 C.F.R. § 1.114, or;
- a Terminal Disclaimer, if applicable.

None of these items was submitted prior to the expiration of the maximum extendable period for reply to the final Office action.

As such, this petition must be dismissed.

Any response to this decision must be submitted within **TWO MONTHS** from the mail date of this decision. Extensions of time under 37 C.F.R. § 1.136(a) are permitted. **The reply should include a cover letter entitled "renewed petition pursuant to 37 C.F.R. § 1.181(a)" and should be signed by either a registered practitioner or the sole inventor.** This is not a final agency action within the meaning of 5 U.S.C § 704.

Alternatively, Petitioner may wish to consider filing a petition pursuant to 37 C.F.R. § 1.137(a) along with the associated fee.^{3, 4} See MPEP § 711.03(c)(II), a copy of which has been included with this decision. Moreover, Petitioner should include the required reply which consists of either an amendment which prima facie places the application in condition for

3 The fee that is currently associated with the filing of a petition pursuant to 37 C.F.R. § 1.137(a) is currently set at \$1700 at the non-discounted rate and \$850 for entities having small entity status, with no additional reduction for entities having micro entity status.

4 A form Petitioner might find useful may be downloaded here: <https://www.uspto.gov/sites/default/files/forms/sb0064.pdf>.

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allowance, a Notice of Appeal along with the associated fee⁵,⁶, or a Request for a Continuation Application (RCE) along with the associated fee.^{7, 8}

Any response to this decision should indicate in a prominent manner that the attorney handling this matter is Paul Shanoski, and may be submitted by mail,⁹ hand-delivery,¹⁰ or facsimile.¹¹ Registered users of EFS-Web may alternatively submit a response to this decision via EFS-Web.¹²

Telephone inquiries regarding *this decision* should be directed to the undersigned at (571) 272-3225.¹³

/Paul Shanoski/
Paul Shanoski
Attorney Advisor
Office of Petitions

Encl. courtesy copy of MPEP § 711.03(c) (II)

5 The fee that is currently associated with the filing of a notice of appeal is currently set at \$800 at the non-discounted rate, \$400 for entities having small entity status, and \$200 for entities having micro entity status.

6 A form Petitioner might find useful may be downloaded here:
<https://www.uspto.gov/sites/default/files/forms/aia0031.pdf>.

7 The fee that is currently associated with the filing of a RCE, first request, is currently set at \$1200 at the non-discounted rate, \$600 for entities having small entity status, and \$300 for entities having micro entity status.

8 A form Petitioner might find useful may be downloaded here:
<https://www.uspto.gov/sites/default/files/documents/sb0030.pdf>.

9 Mail Stop Petition, Commissioner for Patents, United States Patent and Trademark Office, P.O. Box 1450, Alexandria, VA, 22313-1450.

10 Customer Window, Randolph Building, 401 Dulany Street, Alexandria, VA, 22314.

11 (571) 273-8300: please note this is a central facsimile number.

12 <https://sportal.uspto.gov/authenticate/authenticateuserlocalepf.html>

13 Petitioner will note that all practice before the Office should be in writing, and the action of the Office will be based exclusively on the written record in the Office. See 37 C.F.R. § 1.2. As such, Petitioner is reminded that no telephone discussion may be controlling or considered authority for Petitioner's further action(s).

automatically reduced under the provisions of 37 CFR 1.704(c)(4) in applications subject to the patent term adjustment provisions of the American Inventors Protection Act of 1999 (AIPA) if a petition to withdraw a holding of abandonment is not filed within two months from the mailing date of the notice of abandonment, and if applicant does not receive the notice of abandonment, any patent term adjustment is reduced under the provisions of 37 CFR 1.704(a) by a period equal to the period of time during which the applicant “failed to engage in reasonable efforts to conclude prosecution” (processing or examination) of the application.

II. PETITIONS TO REVIVE AN ABANDONED APPLICATION, OR ACCEPT LATE PAYMENT OF ISSUE FEE

Effective December 18, 2013, the Patent Law Treaties Implementation Act of 2012 (PLTIA), Public Law 112-211, amended the patent laws to implement the provisions of the Patent Law Treaty (PLT) in title II. Notable changes to the law included the restoration of patent rights via the revival of abandoned applications and acceptance of delayed maintenance fee payments. Section 201(b) of the PLTIA specifically added new 35 U.S.C. 27, providing that the Director may establish procedures to revive an unintentionally abandoned application for patent, accept an unintentionally delayed payment of the fee for issuing a patent, or accept an unintentionally delayed response by the patent owner in a reexamination proceeding, upon petition by the applicant for patent or patent owner. The PLTIA eliminated the provisions of the patent statutes relating to revival of abandoned applications or acceptance of delayed maintenance fee payments on the basis of a showing of “unavoidable” delay.

35 U.S.C. 27 Revival of applications; reinstatement of reexamination proceedings.

The Director may establish procedures, including the requirement for payment of the fee specified in section 41(a)(7), to revive an unintentionally abandoned application for patent, accept an unintentionally delayed payment of the fee for issuing each patent, or accept an unintentionally delayed response by the patent owner in a reexamination proceeding, upon petition by the applicant for patent or patent owner.

37 CFR 1.137 provides for the revival of abandoned applications, or terminated or limited reexamination

prosecution on the basis of unintentional delay for the failure:

- (A) to timely reply to an Office requirement in a provisional application;
- (B) to timely prosecute in a nonprovisional application;
- (C) to timely pay the issue fee for a design application;
- (D) to timely pay the issue fee for a utility or plant application; and
- (E) to provide copendency between the abandoned application and a subsequently filed application.

A petition under 37 CFR 1.137(a) requires:

- (A) the required reply, unless previously filed;
- (B) the petition fee as set forth in 37 CFR 1.17(m);
- (C) any terminal disclaimer (and fee as set forth in 37 CFR 1.20(d)) required pursuant to 37 CFR 1.137(d); and
- (D) a statement that the entire delay in filing the required reply from the due date for the reply until the filing of a grantable petition pursuant to 37 CFR 1.137 was unintentional.

The Director of the USPTO may require additional information where there is a question whether the delay was unintentional.

A. *Reply Requirement*

Unlike a petition to withdraw the holding of abandonment, a petition to revive under 37 CFR 1.137 must be accompanied by, *inter alia*, the required reply. Generally, the required reply is the reply sufficient to have avoided abandonment, had such reply been timely filed. A petition for an extension of time under 37 CFR 1.136 and a fee for such an extension of time are not required to be included with the reply.

37 CFR 1.137(c) applies to the reply requirement for a petition under 37 CFR 1.137(a). In an application abandoned under 37 CFR 1.57(a), the reply must include a copy of the specification and

any drawings of the previously filed application. In an application or patent abandoned for failure to pay the issue fee or any portion thereof, the required reply must include payment of the issue fee or any outstanding balance. In an application abandoned for failure to pay the publication fee, the required reply must include payment of the publication fee. In a nonprovisional application abandoned for failure to prosecute, the required reply may be met by the filing of a continuing application. In a nonprovisional utility or plant application filed on or after June 8, 1995, abandoned after the close of prosecution as defined in 37 CFR 1.114(b), the required reply may also be met by the filing of a request for continued examination (RCE) in compliance with 37 CFR 1.114. See below for more details on the reply requirement in specific situations of abandonment.

1. Abandonment for Failure To Timely Submit A Copy of the Specification and Any Drawings In An Application Filed By Reference Under 35 U.S.C. 111(c) and 37 CFR 1.57(a)

In an application abandoned under 37 CFR 1.57(a), the required reply must include a copy of the specification and any drawings of the previously filed application. Although not required as a condition for revival, a certified copy of the previously filed application may be required for an application filed by reference. If the certified copy is required and is not filed within the later of four months from the filing date of the application or sixteen months from the filing date of the previously filed application, a petition including a showing of good and sufficient cause for the delay and the petition fee set forth in 37 CFR 1.117 are required. For more details regarding an application filed by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a), see MPEP § 601.01(a), subsection III.

2. Abandonment for Failure To Pay the Issue Fee or Publication Fee

In an application abandoned for failure to timely pay the issue fee, the required reply must include the issue fee (and any required publication fee).

Section 202(b)(6) of the PLTIA amended 35 U.S.C. 151 to provide that: (1) if it appears that an applicant is entitled to a patent under the law, a written notice

of allowance of the application shall be given or mailed to the applicant; (2) the notice of allowance shall specify a sum, constituting the issue fee and any required publication fee, which shall be paid within three months thereafter; and (3) upon payment of this sum, the patent may issue, but if payment is not timely made, the application shall be regarded as abandoned. Under the changes to 35 U.S.C. 151 in the PLTIA, the sum specified in the notice of allowance will constitute the issue fee and any required publication fee, and the Office will proceed to issue a patent when the applicant pays the sum specified in the notice of allowance, regardless of the issue fee and/or publication fee in effect on the date the sum specified in the notice of allowance is paid.

Section 201(b) of the PLTIA specifically added new 35 U.S.C. 27, providing that the Director may establish procedures to revive an unintentionally abandoned application for a patent, accept an unintentionally delayed payment of the fee for issuing a patent, or accept an unintentionally delayed response by the patent owner in a reexamination proceeding, upon petition by the applicant for patent or patent owner.

35 U.S.C. 41(a)(7) authorizes the acceptance of an “unintentionally delayed payment of the fee for issuing each patent.” Thus, 35 U.S.C. 41(a)(7) requires payment of the issue fee as a condition of reviving an application abandoned for failure to pay the issue fee. Therefore, the filing of a continuing application without payment of the issue fee is not an acceptable reply in an application abandoned for failure to pay the issue fee.

The issue fee due with the petition to revive is the issue fee specified in the notice of allowance. If the notice of allowance also specified a publication fee, then the publication fee must also be paid in the amount specified on the notice of allowance. An applicant may change the entity status with the filing of the petition to revive, if appropriate, and pay the petition fee in the new entity status amount, but the issue fee (and any publication fee) must be paid in the amount specified in the notice of allowance.

In an application abandoned for failure to pay the publication fee, the required reply must include

payment of the publication fee. Even if an application abandoned for failure to pay the publication fee is being revived solely for purposes of continuity with a continuing application, the petition to revive under 37 CFR 1.137 must include payment of the publication fee.

3. Abandonment for Failure To Provide Required Drawings

In an application abandoned for failure to provide required drawings, a petition to revive the application will be dismissed unless the required drawings are filed before or with the petition to revive the application.

4. Abandonment for Failure To Reply in a Nonprovisional Application

(a) Abandonment for Failure To Reply to a Non-Final Action

The required reply to a non-final action in a nonprovisional application abandoned for failure to prosecute may be either:

(A) an argument or an amendment under 37 CFR 1.111;

(B) the filing of a continuing application under 37 CFR 1.53(b) (or a continued prosecution application (CPA) under 37 CFR 1.53(d) if the application is a design application).

The grant of a petition under 37 CFR 1.137 is not a determination that any reply under 37 CFR 1.111 is complete. Where the proposed reply is to a non-final Office action, the petition may be granted if the reply appears to be *bona fide*. After revival of the application, the patent examiner may, upon more detailed review, determine that the reply is lacking in some respect. In this limited situation, the patent examiner should send out a letter giving a 2-month shortened statutory period under 37 CFR 1.135(c) for correction of the error or omission. Extensions of time under 37 CFR 1.136(a) are permitted. If applicant does not correct the omission within the time period set in the letter (including any extension), the application is again abandoned.

(b) Abandonment for Failure To Reply to a Final Action

A reply under 37 CFR 1.113 to a final action must include a request for continued examination (RCE) under 37 CFR 1.114 or cancellation of, or appeal from the rejection of, each claim so rejected. Accordingly, in a nonprovisional application abandoned for failure to reply to a final action, the reply required for consideration of a petition to revive must be:

(A) a Notice of Appeal and appeal fee;

(B) an amendment under 37 CFR 1.116 that cancels all the rejected claims or otherwise *prima facie* places the application in condition for allowance;

(C) the filing of an RCE (accompanied by a submission that meets the reply requirements of 37 CFR 1.111 and the requisite fee) under 37 CFR 1.114 for utility or plant applications filed on or after June 8, 1995 (see paragraph (d) below); or

(D) the filing of a continuing application under 37 CFR 1.53(b) (or a CPA under 37 CFR 1.53(d) if the application is a design application).

When a notice of appeal is the reply filed pursuant to 37 CFR 1.137(b)(1), the time period under 37 CFR 41.37 for filing the appeal brief will be set by the Director of the USPTO in the decision granting the petition.

An application subject to a final action in which a proposed amendment under 37 CFR 1.116 is filed as the required reply will normally be routed by the Office of Petitions to the Technology Center (TC) to determine whether a proposed amendment places the application in condition for allowance prior to granting any petition to revive such application. The examiner is instructed that if the reply places the application in condition for allowance, the examiner should use the typewriter tool in Adobe Acrobat to write in the margin of the reply "OK to enter upon revival." If the petition is otherwise grantable and the examiner indicates that the reply places the application in condition for allowance, the petition will be granted. If, on the other hand, the reply would not place the application in condition for allowance, the examiner is instructed to complete form PTOL-303 and return the form to the Office of

Petitions with the application. Form PTOL-303 should not be mailed to the applicant by the examiner. In this situation, the Office of Petitions will not grant the petition. A copy of the form PTOL-303 is marked with the notation "Courtesy Copy" by the Office of Petitions. The courtesy copy is sent as an attachment with the decision on the petition. The advisory form PTOL-303 merely serves as an advisory notice to the Office of Petitions regarding the decision of the examiner on the amendment after final rejection.

(c) Abandonment for Failure To File an Appeal Brief

In those situations where abandonment occurred because of the failure to file an appeal brief, the reply required pursuant to 37 CFR 1.137(b)(1) must be either:

(A) an appeal brief in compliance with 37 CFR 41.37(c);

(B) the filing of an RCE accompanied by a submission and the requisite fee in compliance with 37 CFR 1.114 for utility or plant applications filed on or after June 8, 1995, abandoned after the close of prosecution as defined in 37 CFR 1.114(b) (see paragraph (d) below); or

(C) the filing of a continuing application under 37 CFR 1.53(b) (or a CPA under 37 CFR 1.53(d) if the application is a design application).

(d) Filing an RCE as the Required Reply

For utility or plant applications abandoned for failure to reply to a final Office action or for failure to file an appeal brief, the required reply may be the filing of an RCE accompanied by a submission and the requisite fee. When an RCE is the reply filed pursuant to 37 CFR 1.137(b)(1) to revive such an application, the submission accompanying the RCE must be a reply responsive within the meaning of 37 CFR 1.111 to the last Office action. Consideration of whether the submission is responsive within the meaning of 37 CFR 1.111 to the last Office action is done without factoring in the "final" status of such action. The submission may be a previously filed amendment after final or a statement that incorporates by reference the arguments in a previously filed appeal or reply brief. See MPEP § 706.07(h), subsection II.

The petition may be granted if the submission appears to be a *bona fide* attempt to provide a complete reply to the last Office action. After revival of the application, the examiner may, upon a more detailed review, determine that the reply is lacking in some respect. In this limited situation, the examiner should send out a letter giving a 2-month shortened statutory period under 37 CFR 1.135(c) for correction of the error or omission. Extensions of time under 37 CFR 1.136(a) are permitted. If the applicant does not correct the omission within the time period set in the letter (including any extension), the application is again abandoned.

(e) A Continuing Application or RCE May Be Required by the Office

The Office may require the filing of a continuing application or an RCE (if the prosecution prior to abandonment was closed) (or request for further examination pursuant to 37 CFR 1.129(a)) to meet the reply requirement of 37 CFR 1.137(b)(1) where, under the circumstances of the application, treating a reply under 37 CFR 1.111 or 1.113 would place an inordinate burden on the Office. Exemplary circumstances of when treating a reply under 37 CFR 1.111 or 1.113 may place an inordinate burden on the Office are where:

(A) an application has been abandoned for an inordinate period of time;

(B) an application file contains multiple or conflicting replies to the last Office action; or

(C) the reply or replies submitted under 37 CFR 1.137(b)(1) are questionable as to compliance with 37 CFR 1.111 or 1.113.

5. Abandonment for Failure To Notify the Office of a Foreign Filing After the Submission of a Non-Publication Request

If an applicant makes a nonpublication request upon filing with the appropriate certifications, the utility or plant application filed on or after November 29, 2000 will not be published under 35 U.S.C. 122(b)(1). See 35 U.S.C. 122(b)(2)(B)(i). If an applicant makes a nonpublication request and then rescinds, pursuant to 35 U.S.C. 122(b)(2)(B)(ii), the nonpublication request before or on the date a counterpart application is filed in a foreign country,

or under a multilateral international agreement, that requires eighteen-month publication, the nonpublication request will be treated as annulled and the application will be treated as if the nonpublication request were never made. See MPEP §§ 1123 and 1124. An applicant who has made a nonpublication request, but who subsequently files an application directed to the invention disclosed in the U.S. application in a foreign country, or under a multilateral international agreement, that requires eighteen-month publication before the nonpublication request is rescinded, must, in addition to the rescission, notify the Office of such filing within forty-five days after the date of such filing. The requirement in 35 U.S.C. 122(b)(2)(B)(iii) for notice of the foreign filing is in addition to any rescission of the nonpublication request under 35 U.S.C. 122(b)(2)(B)(ii). If an applicant files a counterpart application in a foreign country after having filed an application in the USPTO with a nonpublication request, filing a rescission of the nonpublication request under 35 U.S.C. 122(b)(2)(B)(ii) without also providing a notice of the foreign filing in a timely manner will result in the abandonment of the U.S. application under 35 U.S.C. 122(b)(2)(B)(iii). 37 CFR 1.137(f), however, provides that an application abandoned as a result of the failure to timely provide such a notice to the Office is subject to revival pursuant to 37 CFR 1.137 if the delay in submitting the notice was unintentional.

A nonprovisional application abandoned pursuant to 35 U.S.C. 122(b)(2)(B)(iii) for failure to timely notify the Office of the filing of an application in a foreign country or under a multinational treaty that requires eighteen-month publication may be revived only on the basis of unintentional delay pursuant to 37 CFR 1.137. The reply requirement of 37 CFR 1.137(c) is met by the notification of such filing in a foreign country or under a multinational treaty, but the filing of a petition under 37 CFR 1.137 will not operate to stay any period for reply that may be running against the application. Since the Office cannot ascertain whether an application is abandoned under 35 U.S.C. 122(b)(2)(B)(iii), the Office may continue to process and examine the application until the Office is notified of applicant's failure to meet the forty-five days notice requirement of 35 U.S.C. 122(b)(2)(B)(iii). Therefore, the filing of a petition

under 37 CFR 1.137 to revive such an application will not operate to stay any period for reply that may be running against the application. Applicants may use form PTO/SB/64a to file a petition for revival under 37 CFR 1.137.

B. *Petition Fee Requirement*

35 U.S.C. 41(a)(7) provides that the Office shall charge \$1,700.00 on filing each petition for the revival of an abandoned application for a patent, for the delayed payment of the fee for issuing each patent, for the delayed response by the patent owner in any reexamination proceeding, for the delayed payment of the fee for maintaining a patent in force, for the delayed submission of a priority or benefit claim, or for the extension of the 12-month period for filing a subsequent application. 35 U.S.C. 41(a)(7) also provides that the Director may refund any part of the fee, in exceptional circumstances as determined by the Director. This provision permits the Office to refund (or waive) the fee specified in 35 U.S.C. 41(a)(7) in situations in which the failure to take the required action or pay the required fee was due to a widespread disaster, such as a hurricane, earthquake, or flood, in the manner that the Office would waive surcharges that are not required by statute. The "exceptional circumstances" provision does not permit applicants to request a refund on the basis of there being exceptional circumstances.

The phrase "[o]n filing" in 35 U.S.C. 41(a)(7) means that the petition fee is required for the filing (and not merely the grant) of a petition under 37 CFR 1.137. See H.R. Rep. No. 542, 97th Cong., 2d Sess. 6 (1982), *reprinted in* 1982 U.S.C.C.A.N. 770 ("[t]he fees set forth in this section are due on filing the petition"). Therefore, the Office: (A) will not refund the petition fee required by 37 CFR 1.17(m), regardless of whether the petition under 37 CFR 1.137 is dismissed or denied (unless there are exceptional circumstances as determined by the Director); and (B) will not reach the merits of any petition under 37 CFR 1.137 lacking the requisite petition fee.

C. *Unintentional Delay*

While the Office reserves the authority to require further information concerning the cause of

abandonment and delay in filing a petition to revive, the Office relies upon the applicant's duty of candor and good faith and accepts the statement that "the entire delay in filing the required reply from the due date for the reply until the filing of a grantable petition pursuant to 37 CFR 1.137(a) was unintentional" without requiring further information in the vast majority of petitions under 37 CFR 1.137(a). This is because the applicant is obligated under 37 CFR 1.118 to inquire into the underlying facts and circumstances when a practitioner provides this statement to the Office. In addition, providing an inappropriate statement in a petition under 37 CFR 1.137(a) to revive an abandoned application may have an adverse effect when attempting to enforce any patent resulting from the application. See *Lumenyte Int'l Corp. v. Cable Lite Corp.*, Nos. 96-1011, 96-1077, 1996 U.S. App. LEXIS 16400, 1996 WL 383927 (Fed. Cir. July 9, 1996)(unpublished)(patents held unenforceable due to a finding of inequitable conduct in submitting an inappropriate statement that the abandonment was unintentional).

The Office is almost always satisfied as to whether "the entire delay...was unintentional" on the basis of statement(s) by the applicant or representative explaining the cause of the delay (accompanied at most by copies of correspondence relevant to the period of delay).

The legislative history of Public Law 97-247, § 3, 96 Stat. 317 (1982), reveals that the purpose of 35 U.S.C. 41(a)(7) is to permit the Office to have discretion to revive abandoned applications in appropriate circumstances, but places a limit on this discretion stating that "[u]nder this section a petition accompanied by [the requisite fee] would not be granted where the abandonment or the failure to pay the fee for issuing the patent was intentional as opposed to being unintentional or unavoidable." H.R. Rep. No. 542, 97th Cong., 2d Sess. 6-7 (1982), reprinted in 1982 U.S.C.A.N. 770-71. A delay resulting from a deliberately chosen course of action on the part of the applicant is not an "unintentional" delay within the meaning of 37 CFR 1.137.

Where the applicant deliberately permits an application to become abandoned (e.g., due to a conclusion that the claims are unpatentable, that a

rejection in an Office action cannot be overcome, or that the invention lacks sufficient commercial value to justify continued prosecution), the abandonment of such application is considered to be a deliberately chosen course of action, and the resulting delay cannot be considered as "unintentional" within the meaning of 37 CFR 1.137. See *In re Application of G*, 11 USPQ2d 1378, 1380 (Comm'r Pat. 1989). An intentional course of action is not rendered unintentional when, upon reconsideration, the applicant changes his or her mind as to the course of action that should have been taken. See *In re Maldague*, 10 USPQ2d 1477, 1478 (Comm'r Pat. 1988).

A delay resulting from a deliberately chosen course of action on the part of the applicant does not become an "unintentional" delay within the meaning of 37 CFR 1.137 because:

(A) the applicant does not consider the claims to be patentable over the references relied upon in an outstanding Office action;

(B) the applicant does not consider the allowed or patentable claims to be of sufficient breadth or scope to justify the financial expense of obtaining a patent;

(C) the applicant does not consider any patent to be of sufficient value to justify the financial expense of obtaining the patent;

(D) the applicant does not consider any patent to be of sufficient value to maintain an interest in obtaining the patent; or

(E) the applicant remains interested in eventually obtaining a patent, but simply seeks to defer patent fees and patent prosecution expenses.

Likewise, a change in circumstances that occurred subsequent to the abandonment of an application does not render "unintentional" the delay resulting from a previous deliberate decision to permit an application to be abandoned. These matters simply confuse the question of whether there was a deliberate decision not to continue the prosecution of an application with why there was a deliberate decision not to continue the prosecution of an application.

In order to expedite treatment, applicants filing a petition under 37 CFR 1.137 to revive an abandoned application are advised to include the statement “the entire delay in filing the required reply from the due date for the reply until the filing of a grantable petition pursuant to 37 CFR 1.137(a) was unintentional,” even if applicant chooses to include a statement of the facts concerning the delay. Electronic petitions, that are automatically processed and immediately decided, may be filed using the Web-based ePetition process for the following types of petitions: (1) Petitions to Accept Late Payment of Issue Fee - Unintentional Late Payment (37 CFR 1.137(a)); (2) Petitions for Revival of an Application based on Failure to Notify the Office of a Foreign

or International Filing (37 CFR 1.137(f)); (3) Petitions for Revival of an Application for Continuity Purposes Only (37 CFR 1.137(a)); and (4) Petitions for Revival of an Abandoned Patent Application Abandoned Unintentionally (37 CFR 1.137(a)) (For Cases Abandoned After 1st Action and Prior to Notice of Allowance). Applicants may use the forms provided by the Office (PTO/SB/64, PTO/SB/64a, or PTO/SB/64PCT). Additional information regarding the ePetition process is available from: www.uspto.gov/patents-application-process/applying-online/epetition-resource-page.

Applicants may use the forms provided by the Office (PTO/SB/64, PTO/SB/64a, or PTO/SB/64PCT).

Office of Petitions: Decision Count Sheet

Mailing Month

12

Application No.

13724287



For US serial numbers: enter number only, no slashes or commas. Ex: 10123456

For PCT: enter "51+single digit of year of filing+last 5 numbers", Ex. for PCT/US05/12345, enter 51512345

Deciding Official:

Paul Shanoski

Count (1) - Palm Credit

13/724,287

Decision:

DISMISSED

FINANCE WORK NEEDED

Select Check Box for YES



Decision Type:

525 - 37 CFR 1.181 for W/D HOLDING OF ABANDONMEN



Notes:

Count (2)

Decision:

n/a

FINANCE WORK NEEDED

Select Check Box for YES

Decision Type:

NONE

Notes:

Count (3)

Decision:

n/a

FINANCE WORK NEEDED

Select Check Box for YES

Decision Type:

NONE

Notes:

Initials of Approving Official (if required)

If more than 3 decisions, attach 2nd count sheet & mark this box



Printed on: 12/19/2016

Office of Petitions: Routing Sheet



4 7 0 0

Application No.

This application is being forwarded to your office for further processing. A decision has been rendered on a petition filed in this application, as indicated below. For details of this decision, please see the document PET.OP.DEC filed on the same date as this document.

GRANTED

DISMISSED

DENIED

OCT 05 2016

Second Renewed Petition pursuant to 37 C.F.R. § 1.181(a)

Dear Paul Shanoski, the abandonments are examiner initiated. The challenge is remove CIP abandonments, allow the last claims filed **and issuance of patents. Applicant acknowledges the examiners indifference and utterly lack of interest in the precedent search material.**

8. Case: 13/724,287

Title: **INTRINSIC TRANSDUCTION SYSTEM**

“The examiner was exhibiting non responsive patronize by blanket rejection and culpable jeopardy. Not participating in the allowance of this application, instigates abandonment ”
The examiner has failed to remedy the acceptance of this application and multiplied the incidence of rejection. Obviously, not actively involved in deliberation or allowance as the remarks aren't line specific, detail word accomplished or deficient for a self limited claim.

THE APPLICANT CONTENDS THE EXAMINER ENGAGED A NEGATIVE PATH BY
NON DESCRIPTIVE REPLIES VOID AN APTITUDE OF RECOGNIZANCE PURPOSE.

Lawsuits 15-CV-01248, 15-CV-01263, and 15-CV-01914, were filed against USPTO failing to provide a Free Enterprise Market System and conspiring to create an abandon litigation backlog.

As a preliminary matter, it is noted precedent petitions are filed in the following: 12/903,322, 13/572,672, 13/692,121,13/724,287, 13/970,616, 13/778,476, 13/844,999, and 14/023,286

IN ADDITION, DESIGN APPLICATIONS SHOULD BE ISSUED IMMEDIATELY...

29/461,909, and 29/477,572.

**APPLICANT ALBEIT WAS ENGAGED IN AN ACTIVE SUBMISSION, AWAITING
REPLY DURING SUPPOSED ABANDONMENT AND THROUGH MIS-LEADERSHIP.**

Applicant respectfully requests reconsideration of the application and its passage to allowance.
Should any impediments to allowance remain, Applicant requests that the Examiner contact the
undersigned at the indicated phone number.

Respectfully submitted, James Jennings

Date: 10/06/16

By: /JAMES EDWARD JENNINGS/

PO Box 270081 Louisville, CO 80027

303.664.1829

JUN 07 2016

Renewed Petition pursuant to 37 C.F.R. § 1.181(a)

Dear Paul Shanoski, applicants and consumerist will aggregate toward an electronic-market as opposed to lawsuit means of recourse compensation. **NO POINT OF SALE OR PURCHASE.**

Lawsuits **15-CV-01248, 15-CV-01263, and 15-CV-01914**, were filed against USPTO failing to provide a Free Enterprise Market System and conspiring to create an abandon litigation backlog.

Micro account number # 82669-845 was not issued a Patent for the year 2015 and 2nd qtr 2016.

8. Case: **13/724,287**

Title: **INTRINSIC TRANSDUCTION SYSTEM**

The application **13/778,476** discloses apparatus parts for expediency and search burden relief.

The Last claims were overlooked and presented less burden for ease by use of a previous search.

Applicant looks forward to an overturning of earlier decisions on **System** components elements.

*All above mentioned **UTILITY** applications could have been resolved by **AFCP 2.0** and any rendered assistance. However, an examiner was not moved to be an assistance or allowance.*

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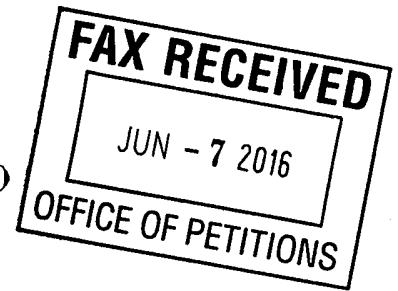
Date: 06/06/16

By: /JAMES EDWARD JENNINGS/

PO Box 270081 Louisville, CO 80027

303.664.1829

Renewed Petition pursuant to 37 C.F.R. § 1.181(a)



Dear Paul Shanoski, applicants and consumerist will aggregate toward an electronic-market as opposed to lawsuit means of recourse compensation. **NO POINT OF SALE OR PURCHASE.**

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Should any impediments to allowance remain, Applicant requests that the Examiner contact the
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Respectfully submitted, James Jennings

Date: 06/06/16

By: /JAMES EDWARD JENNINGS/

PO Box 270081 Louisville, CO 80027

303.664.1829

*** RX REPORT ***

RECEPTION OK

TX/RX NO	8570
RECIPIENT ADDRESS	3036641829
DESTINATION ID	
ST. TIME	06/07 03:02
TIME USE	01'10
PGS.	2
RESULT	OK



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/724,287	12/21/2012	JAMES EDWARD JENNINGS		8891

82669 7590 03/01/2016
James Edward Jennings
P.O. Box 270081
Louisville, CO 80027

EXAMINER

PORTER, JR, GARY A

ART UNIT	PAPER NUMBER
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3766

MAIL DATE	DELIVERY MODE
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03/01/2016

PAPER

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 Abandonment	Application No.	Applicant(s)
	13/724,287	JENNINGS, JAMES EDWARD
	Examiner	Art Unit
	ALLEN PORTER, JR	3766

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

This application is abandoned in view of:

1. Applicant's failure to timely file a proper reply to the Office letter mailed on 28 May 2015.
 - (a) A reply was received on _____ (with a Certificate of Mailing or Transmission dated _____), which is after the expiration of the period for reply (including a total extension of time of _____ month(s)) which expired on _____.
 - (b) A proposed reply was received on 12/13/2015, but it does not constitute a proper reply under 37 CFR 1.113 to the final rejection. (A proper reply under 37 CFR 1.113 to a final rejection consists only of: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) if this is utility or plant application, a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. Note that RCEs are not permitted in design applications.)
 - (c) A reply was received on _____ but it does not constitute a proper reply, or a bona fide attempt at a proper reply, to the non-final rejection. See 37 CFR 1.85(a) and 1.111. (See explanation in box 7 below).
 - (d) No reply has been received.

2. Applicant's failure to timely pay the required issue fee and publication fee, if applicable, within the statutory period of three months from the mailing date of the Notice of Allowance (PTOL-85).
 - (a) The issue fee and publication fee, if applicable, was received on _____ (with a Certificate of Mailing or Transmission dated _____), which is after the expiration of the statutory period for payment of the issue fee (and publication fee) set in the Notice of Allowance (PTOL-85).
 - (b) The submitted fee of \$_____ is insufficient. A balance of \$_____ is due.
The issue fee required by 37 CFR 1.18 is \$_____. The publication fee, if required by 37 CFR 1.18(d), is \$_____.
 - (c) The issue fee and publication fee, if applicable, has not been received.

3. Applicant's failure to timely file corrected drawings as required by, and within the three-month period set in, the Notice of Allowability (PTO-37).
 - (a) Proposed corrected drawings were received on _____ (with a Certificate of Mailing or Transmission dated _____), which is after the expiration of the period for reply.
 - (b) No corrected drawings have been received.

4. The letter of express abandonment which is signed by the attorney or agent of record or other party authorized under 37 CFR 1.33(b). See 37 CFR 1.138(b).

5. The letter of express abandonment which is signed by an attorney or agent (acting in a representative capacity under 37 CFR 1.34) upon the filing of a continuing application.

6. The decision by the Board of Patent Appeals and Interference rendered on _____ and because the period for seeking court review of the decision has expired and there are no allowed claims.

7. The reason(s) below:

/ALLEN PORTER, JR/
Primary Examiner, Art Unit 3766

Petitions to revive under 37 CFR 1.137, or requests to withdraw the holding of abandonment under 37 CFR 1.181, should be promptly filed to minimize any negative effects on patent term.

AMENDMENTS TO THE CLAIMS: CANCEL 1-3

4.(NEW) An intrinsic transduction system method ~~providing~~ comprising:
a piezoelectric impact-spin polymeric electro-disc sole plate device(s) for energy harvesting; and
a polymeric piezoelectric electro-thermal element provides a stress-strain-impact-spin-sensing;
and
an electro-disc comprising: a controller distributes power and recharges an electro-spun battery;
and a spark cleat comprising: a force-static potential plates provides an electromagnetic energy.

~~means for comprises a molded part having a nerve stimulating unit or a~~
~~midsole device at least partially molded therein;~~

~~means for comprises an impact-sensing element made from a polymeric piezoelectric~~
~~material; a battery means, a stimulus device or an information display device and a circuit~~
~~connected to said piezoelectric material;~~

~~means for responsive to electrical energy produced upon impact which permits the nerve~~
~~stimulus device to be energized from the battery or any information displaying device to be~~
~~activated;~~

~~means for charging the negative ion transistor and battery; and~~

~~means for deliver an electrical signal or/and to deliver the therapeutic fluid.~~

5. (NEW) The intrinsic transduction system method comprising: in accordance with claim 4,
~~wherein said means for comprises a molded part having a nerve stimulating unit or a mid device
at least partially molded therein comprises an out;~~

~~wherein said means for comprises an impact-sensing element made from a polymeric
piezoelectric material, a battery means, a stimulus device or an information display device and a
circuit connected to said piezoelectric material comprises a mid;~~

~~wherein said means for responsive to electrical energy produced upon impact which permits the
nerve stimulus device to be energized from the battery or any information displaying device to be
activated comprises a stimulus unit;~~

~~wherein said means for charging the negative ion transistor and battery comprises an oscillating
circuit; and~~

~~wherein said means for deliver an electrical signal or/and to deliver the therapeutic fluid
comprises a therapeutic lead.~~

regulating a piezoelectric impact and spin polymeric energy harvester and electronic circuit
device(s) for an ions; and

providing an electro-thermal disc comprising electrode, fluid reservoir and catheter for therapy;

and capacitating a circuit comprising a electro-spun plates and leads for a distributing of an ions.

6. (NEW) An intrinsic transduction system method ~~providing~~ comprising:

~~an out, for comprises a molded part having a nerve stimulating unit or a mid device at least partially molded therein;~~

~~a mid, for comprises an impact-sensing element made from a polymeric piezoelectric material, a battery means, a stimulus device or an information display device and a circuit connected to said piezoelectric material;~~

~~a stimulus unit, for responsive to electrical energy produced upon impact which permits the nerve stimulus device to be energized from the battery or any information displaying device to be activated;~~

~~an oscillating circuit, for charging the negative ion transistor and battery, and~~

~~a therapeutic lead, for electrical signal and/or delivery of therapeutic fluid.~~

grounding a piezoelectric polymeric disks and leads for a Negative/Positive ion polar synthesis;

and

regenerating an electro-thermal disc comprising a transistor and electrode for an ion therapeutic.

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

APPLICATION FOR U.S. LETTERS PATENT

TITLE: INTRINSIC TRANSDUCTION SYSTEM

INVENTOR: JENNINGS, James Edward

CROSS REFERENCE TO RELATED APPLICATIONS

[001] This is a Continuation of Application Serial No. 13/572,679, filed October 25, 2012, now patent No. 8,894,514, granted November 25, 2014.

BACKGROUND OF THE INVENTION

Field of the Invention

[002] This invention relates to transduction piezoelectric nerve stimulation and more specifically relates to devices for applying transcutaneous nerve stimulation for physiotherapeutic purposes. The present disclosure relates generally to systems and methods for causing nerve cells to regenerate and, more particularly, to systems and methods for promoting nerve regeneration in the central and peripheral nervous stimuli systems of humans.

[003] Transcutaneous nerve stimulation, commonly referred to as TENS is the application of a controlled amount of low electrical currents to stimulate nerves and/or muscle tissues in a patient for treating numerous physiological problems such as muscle and joint pain and inflammation. The currents may be provided in a steady flow or in electrical impulses of various wavelength frequencies. The electrical currents primarily stimulate the nerve for the body to produce natural endorphin's to block the perception of pain and also physically cause the muscle tissues at the area of application to tighten and relax repeatedly, and thus increasing the blood circulation to enhance the natural curing process. The TENS currents are provided by a generator and the currents are delivered with application probes to the inflicted locations of a patient's body. The free end of the currents application probes is commonly in the form of a flexible inductive

composite pad which must be attached to the patient's body with conductive adhesive gel and/or adhesive tapes in order to deliver the current to the patient's body. However, the curing process is not efficient if it is relying solely on the TENS stimulation.

[004] Peripheral nerve fibers have been classified in order of decreasing size and conduction velocity in a manner which is now standardized. Generally, as the fibre size decreases, the amplitude of electrical stimulation required to elicit an action potential increases. Also, the smaller fibre will require longer pulse durations than large fibre stimuli. These differences in nerve response have been used to selectively stimulate different types of nerve fibers by varying the amplitude, pulse duration, or pulse repetition rate of an electrical stimulating pulse. The desired degree of nerve fibre selectivity, however, has not been achieved in the prior art, with the result that, for example, an elicited touch response resulting from the stimulating pulse is often accompanied by a prickly, stinging, burning, sharp or other unpleasant noxious response.

[005] Therefore, various exemplary embodiments of the invention may provide a nerve regeneration system that may include an interactive diagnostic device configured to measure nerve growth, re-growth, and/or connections between severed or otherwise damaged nerve segments.

[006] To attain the advantages and in accordance with the purpose of the invention, as embodied and broadly described herein, one exemplary aspect of the invention may provide a nerve regeneration system comprising a lead configured to be placed in a body proximate a damaged nerve, a portion of the lead being configured to stimulate the damaged nerve.

[007] According to one exemplary aspect, the stimulation comprises a therapeutic electric signal, and the parameter of the stimulation may comprise a parameter associated with the electric signal. For example, the parameter may comprise one or more of strength, direction, current, or voltage of the electric signal. According to another exemplary aspect, the nerve regeneration system may comprise an electrode coupled to the lead and configured to deliver electric stimulation to the damaged nerve. The electrode may include a plurality of electrodes and the parameter may comprise one or more of a number, a sequence, or a combination of electrodes to be energized to deliver electric stimulation. The system may also comprise a conductor for connecting the electrode to the control module. According to still another aspect, the control module may be enclosed in a substantially sealed housing with one or more leads extending from the housing. The control module may be configured to communicate with an external device. According to another aspect, the present disclosure is directed toward a nerve regeneration system that comprises a nerve regeneration module comprising at least one lead implanted in a body proximate a damaged nerve. The nerve regeneration module may be configured to administer a nerve regeneration treatment to the damaged nerve and detect a patient response to the nerve regeneration treatment. According to still another aspect, the nerve regeneration system comprises a power supply configured to generate an electromagnetic signal for stimulating the damaged nerve. Accordingly, the at least one lead may comprise one or more electrodes electrically coupled to the power supply, the one or more electrodes being configured to deliver the electromagnetic signal to the damaged nerve. According to one embodiment, the one or more of the electrodes are disposed along a length of the at least one lead.

[008] Additional objects and advantages of the invention will be set forth in part in the description which follows, and in part will be obvious from the description, or may be learned by practice of the invention. The objects and advantages of the invention will be realized and attained by means of the elements and combinations particularly pointed out in the appended claims.

[009] It is to be understood that both the foregoing general description and the following detailed description are exemplary and explanatory only and are not restrictive of the invention, as claimed.

DESCRIPTION OF RELATED ART

[0010] The central nervous system, including the brain, is the primary control system of a body, communicating with one or more parts of the body via a complicated system of interconnected nerves. Nerves are cable-like bundles of axons that carry electrical signals and impulses between one or more neurons and the central nervous system. Thus, nerves play a critical role in communicating sensory and stimulated signals between various parts of the body (e.g., muscles, organs, glands, etc.) and the central nervous system

[0011] Nerves may be damaged or severed either through trauma or disease. Damaged or severed nerves may inhibit the central nervous system's ability to receive sensory and stimulatory data from individual neurons, potentially limiting the nervous system's control over the body. For example, severe nerve damage may lead to paralysis, such as paraplegia or quadriplegia.

[0012] In the peripheral nervous system, a common treatment to repair damaged nerves involves a surgical procedure to harvest a healthy nerve from another part of the patient's body and graft the harvested nerve to bridge the damaged section. Although surgery can successfully repair damaged nerve cells in many cases, these procedures may have several disadvantages. For instance, in most cases, several invasive surgical procedures are required to find suitable donor nerves. Further, damage to nerves at the donor site is quite common, potentially leading to weakening of donor nerves at the expense of the recipient nerves.

[0013] Some alternatives to surgical repair of damaged nerves have been developed. These systems typically involve surrounding damaged nerves in a sheath and administering therapeutic drugs or electromagnetic energy to the damaged nerve site. The administration of the therapeutic drugs and/or electromagnetic energy may facilitate nerve regeneration, while the sheath guides the nerve to grow in a desired direction.

[0014] Engineer Georges Lakhovsky, believed that people could achieve good health by adjusting the oscillation of their cells. He tapped Tesla to assist him in building the Multiple Wave Oscillator. Lakhovsky claimed the machine would improve health, remove pathogens, and even cure cancer. "The action of the pounding surf creates negative air ions and we also see it immediately after spring thunderstorms when people report lightened moods," says ion researcher Michael Terman, PhD, of Columbia University in New York. The Organic Electronics research group at Linköping University previously developed ion transistors for transport of both positive and negative ions, as well as biomolecules. An advantage of chemical circuits is that the

charge carrier consists of chemical substances with various functions. This means that we now have new opportunities to control and regulate the signal paths of cells in the human body.

[0015] Energy in electronic elements: Electric potential energy, or electrostatic potential energy, is a potential energy (measured in joules) that results from conservative Coulomb forces and is associated with the configuration of a particular set of point charges within a defined system. The term "electric potential energy" is used to describe the potential energy in systems with time-variant electric fields, while the term "electrostatic potential energy" is used to describe the potential energy in systems with time-invariant electric fields.

[0016] Capacitance is the ability of a body to store an electrical charge. Any body or structure that is capable of being charged, either with static electricity or by an electric current, exhibits capacitance. A common form of energy storage device is a parallel-plate capacitor. In a parallel plate capacitor, capacitance is directly proportional to the surface area of the conductor plates and inversely proportional to the separation distance between the plates. If the charges on the plates are $+q$ and $-q$, and V gives the voltage between the plates, then the capacitance C is given by $C = q/V$.

[0017] The capacitance is a function only of the physical dimensions (geometry) of the conductors and the permittivity of the dielectric. It is independent of the potential difference between the conductors and the total charge on them.

Piezoelectricity is the combined effect of the electrical behavior of the material:

$$D = \epsilon E$$

where D is the electric charge density displacement (electric displacement), ϵ is permittivity and

E is electric field strength, and

$$\text{Hooke's Law: } S = s T$$

where S is strain, s is compliance and T is stress.

Physical Properties of TPU

[0018] TPU possesses a combination of physical properties not available in other thermoplastic materials or synthetic rubbers, including: Superior Abrasion resistance for physically punishing, high-wear applications. Formulated UV resistance prevents yellowing or embrittlement. Elevated tensile strength provides reliability and durability over the life of the product in which the film is used. Good memory retention, Durometers (hardness) from very soft to very hard. High resistance to hydrocarbons, chemicals, ozone, bacteria, and fungus make it ideal for tough industrial environments. Inherently waterproof, for use in performance apparel, bedding, transdermal and wound care applications. Superior resistance to skin oils, yet has good "hand" or "feel" when in contact with the skin. Easily fabricated using thermal bonding, laminating, die cutting, radio frequency (RF) sealing or vacuum forming and Flame-retardant. Typically, when two or more of these properties are required for an application, TPU is the material of choice.

Other TPU Medical Applications

[0019] TPU is typically used for parts requiring a high level of performance. Applications typically require a flexible material with a high degree of flex resistance, wearability and durability. Many of the characteristics of TPU make it ideal for medical use. Medical applications include: IV site dressings, Transdermal patches, Thin film wound dressings, Cast and dressing covers, Surgical gowns & drapes, Puncture-resistant gloves, Incontinence pads, Compression dressings, Orthopedic gel insoles, Medical anti-shock trousers, Gel-filled positioning pads, Inflatable support bladders, Pressure infuser cuffs, Extraction bags, Hospital mattresses, covers, Orthodontic brace aligners.

[0020] Copolymers: Copolymers of PVDF are also used in piezoelectric and electrostrictive applications. One of the most commonly-used copolymers is P(VDF-trifluoroethylene), usually available in ratios of about 50:50 wt% and 65:35 wt% (equivalent to about 56:44 mol% and 70:30 mol%). Another one is P(VDF-tetrafluoroethylene). They improve the piezoelectric response by improving the crystallinity of the material.

[0021] A novel electrospun TPU/PVdF porous fibrous polymer electrolyte for lithium ion batteries. Novel blend-based gel polymer electrolyte (GPE) films of thermoplastic polyurethane (TPU) and poly(vinylidene fluoride) (PVdF) (denoted as TPU/PVdF) have been prepared by electrospinning. The electrospun thermoplastic polyurethane-co-poly (vinylidene fluoride) membranes were activated with a 1M solution of LiClO₄ in EC/PC and showed a high ionic conductivity about 1.6 mS cm⁻¹ at room temperature. The electrochemical stability is at 5.0 V

versus Li⁺/Li, making them suitable for practical applications in lithium cells. Cycling tests of Li/GPE/LiFePO₄ cells showed the suitability of the electrospun membranes made of TPU/PVdF (80/20, w/w) for applications in lithium rechargeable batteries.

[0022] A novel high-performance gel polymer electrolyte membrane basing on electrospinning technique for lithium rechargeable batteries. Nonwoven films of composites of thermoplastic polyurethane (TPU) with different proportion of poly(vinylidene fluoride) (PVdF) (80, 50 and 20%, w/w) are prepared by electrospinning 9 wt% polymer solution at room temperature. Then the gel polymer electrolytes (GPEs) are prepared by soaking the electrospun TPU–PVdF blending membranes in 1 M LiClO₄/ethylene carbonate (EC)/propylene carbonate (PC) for 1 h. The gel polymer electrolyte (GPE) shows a maximum ionic conductivity of 3.2×10^{-3} S cm⁻¹ at room temperature and electrochemical stability up to 5.0 V versus Li⁺/Li for the 50:50 blend ratio of TPU:PVdF system. At the first cycle, it shows a first charge–discharge capacity of 168.9 mAh g⁻¹ when the gel polymer electrolyte (GPE) is evaluated in a Li/PE/lithium iron phosphate (LiFePO₄) cell at 0.1 C-rate at 25 °C. TPU–PVdF (50:50, w/w) based gel polymer electrolyte is observed much more suitable than the composite films with other ratios for high-performance lithium rechargeable batteries.

[0023] TPU combines the best properties of rubber and plastic, but has no plasticizers to leach out and cause allergic reactions or embrittle over time. Thus, products made from polyurethane film & sheet, retain long-term flexibility and outstanding shelf life.

[0024] Thus, there is a need for an improved nerve stimuli regeneration system that may overcome one or more of the problems discussed above. In particular, there is a need for an improved nerve regeneration system that can efficiently optimize the treatment parameters, without requiring invasive exploratory techniques.

OBJECTS AND SUMMARY OF THE INVENTION

[0025] The intrinsic transduction system of the present invention provides products, preferably an athletic shoe or athletic apparel, adapted to emit Piezoelectricity energy or information in response to impact. The product comprises a molded part having a Nerve stimulating unit or a midsole device at least partially molded therein. The unit comprises an impact-sensing element made from a polymeric piezoelectric material, a battery means, a stimulus device or an information display device and a circuit connected to said piezoelectric material. The stimulus unit is responsive to electrical energy produced upon impact which permits the nerve stimulus device to be energized from the battery or any information displaying device to be activated. In one embodiment, the electrical energy resulting from each impact is used as a trigger to operate nerve stimulating unit via the circuit incorporated therein, and the amount and/or duration of the stimulus emission can be independently determined/controlled by appropriate design of the circuit.

[0026] The product is preferably a spin disk, garment or shoe, particularly a prosthetic spinal disc, athletic garment or a sports shoe. The molded outsole part is preferably a thermoplastic unit structure, with at least a midsole, the circuit and the transducer stimulus device disposed in or

molded into the midsole part of the structure, and with the piezoelectric stimulus-emitting device being arranged to emit energy outwardly from said midsole part and/or by leads. The polymeric piezoelectric material may be molded into the midsole part of the structure, preferably in the region of maximum stress. Reference my U.S. Patent 8,894,514 discloses spin piezoelectric disk.

[0027] In still another embodiment, the circuit responds to the magnitude of the electrical energy produced by the piezoelectric material and thereby selectively energizes one or more of the nerve stimulating devices depending on the amount of electrical energy produced. In this manner, a visual indication of the magnitude of the pressure exerted upon the sole can be displayed.

[0028] The present invention provides a stimulating pulse having frequency components falling within predetermined frequency band limits. This pulse reliably elicits a touch response without the heretofore attendant noxious sensation mentioned above. It has been demonstrated that the differential excitation of the touch fibers relative to pain specific fibers inhibits the transmission of pain to the conscious centers. The type of stimulation specified herein, optimizes the differential excitation between touch and pain specific fibers, thus optimizing the inhibition of pain transmission.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a top view of the piezoelectric disk orb control of the present invention;

FIG. 2 is a side view of the piezoelectric disk orb control of the present invention;

FIG. 3 is a top view of the piezoelectric disk orb of the present invention;

FIG. 4 is a side view of the piezoelectric embed disk orb of the present invention with a base;

FIG. 5 is an elevation view of the piezoelectric disk battery capacitor of the present invention;

FIG. 6 is a top view of the piezoelectric disk control of the present invention;

FIG. 7 is a side view of the piezoelectric vertebral disc of the present invention;

FIG. 8 is a perspective view of the piezoelectric vertebral disc of another embodiment;

FIG. 9 is a side view of the midsole-outsole vertebral disc of the present invention;

FIG. 10 is a side view of the battery capacitor vertebral disc of the present invention;

FIG. 11 is a perspective front view of therapeutic garments embodiment of the present invention.

FIG. 12 is a perspective rear view of therapeutic garments embodiment of the present invention.

FIGS. 13 illustrate views of footwear product including features of the present invention;

FIGS. 14 illustrate views of footwear product including features of the present invention;

FIG. 15 is an elevational perspective view of a cleat of the present invention;

FIG. 16 is a perspective top elevation view of shoe insole according to the present invention;

FIG. 17 -19 are side elevations view of shoe sole according to the present invention;

FIG. 20 is a block schematic circuitry diagram of the transducer according to the invention;

FIG. 21 is a schematic circuitry diagram of a negative ion transducer according to the invention.

DETAILED DESCRIPTION OF A PREFERRED EMBODIMENT

[0029] Negative ions are odorless, tasteless, and invisible molecules that we inhale in abundance in certain environments. Think mountains, waterfalls, and beaches. Once they reach our bloodstream, negative ions are believed to produce biochemical reactions that increase levels of the mood chemical serotonin, helping to alleviate depression, relieve stress, and boost our daytime energy.

[0030] Ions are molecules that have gained or lost an electrical charge. . They are created in nature as air molecules break apart due to sunlight, radiation, and moving air and water. You may have experienced the power of negative ions when you last set foot on the beach or walked beneath a waterfall. While part of the euphoria is simply being around these wondrous settings and away from the normal pressures of home and work, the air circulating in the mountains and the beach is said to contain tens of thousands of negative ions -- Much more than the average home or office building, which contain dozens or hundreds, and many register a flat zero.

[0031] Thus, there is an increasing interest in external electrical skin stimulation for such purposes as pain suppression, nuero-muscular stimulation, communication systems, etcetera. Obviously, many modifications and variations of the present invention are possible in light of the teaching of devices shown in U.S. Patent Nos. 1,059,090, No. 1,305,725 and No.6,703,785 . Specifically, there are many alternative ways of transducing the optimized waveforms disclosed herein which do not depart from the intended scope of the application. Accordingly, within the scope of the appended claims, the invention may be practiced otherwise than as specifically described.

DETAILED DESCRIPTION OF THE INVENTION

[0032] **FIGS. 1, FIG. 2 and FIG.3** show the construction of a spin Piezoelectric transducer **33, 35, 37, 39** according to the invention. The illustrated piezoelectric transducer **FIG.1** thru **3** is a module comprising a thin and small case disk housing outsole **42**. **FIG.4** transducer has a insole of piezoelectric **26**, embed coupler outsole **42** base member, accommodated about the midsole

30 casing. **FIG.5** battery transducer **41**, starting from a regular lithium-ion coin battery, replaced the usual divider between electrodes with a polyvinylidene difluoride film whose piezoelectric nature produces a charging action inside that gap through just a little pressure. Further, modified(AL foil **32**, LiCoO₂ **34**, PVDF **36**, TiO₂ NT **38**, Ti foil **40**) with the attachment of a midsole-outsole housing case. **Fig.1 & Fig.6** an oscillating transducer **33,44** incorporates a controller **31** and designs **29** may form an abstract or geometrical pattern, emblem, or a logo or one or more alphanumeric characters constituting, for example, a trademark of the manufacturer. The ends of the fibers at these various points may be colored, e.g. with different colored translucent inks or dyes. A transducer disk of piezoelectric material and ion polarity synthesis.

INTERNAL

[0033] **Fig.7** and **Fig.9** shows two adjacent vertebrae **127** and **128** with midsole **130**-outsole **142** molded transducer disc prosthesis **146,148, 149** replacing the natural disc. Disc prosthesis **146** is a representation of the Charité prosthesis modified by the inclusion of outsole **142** plate transducers **135** and or midsole fluid reserve **125**, battery capacitor **141**, transistors, antenna. **FIG. 8** shows a Bryan similar cervical disc **145**. Note that it is only recommended as a prosthesis for the cervical vertebrae. It has a midsole **130** (not visible) between two molded outsole **142** plates **133** transducers (only one shown).

[0034] A flexible midsole disk **130** membrane between the molded outsole disk **142** case housing surrounds the transducers **135** and or midsole fluid reserve **125**, battery capacitor **141**, transistors nucleus. Applicant understands that current models of the cervical disc do not have the small tabs

147. Fig.9 illustrates vertebral bodies **127** and **128** are separated by molded intervertebral midsole **130** outsole **142** discs. Each disc has a nucleus midsole **130** surrounded by an annulus outsole **142**. **Fig.10** represents a intervertebral prosthetic housing a battery capacitor **141** and end transducers **135**. This embodiment may also house midsole fluid **125** reserve accessible by a catheter aperture **123**, battery capacitor **141**, transistors and leads **150** to damaged nerve endings.

APPAREL

[0035] Fig.11 and **Fig.12** depict athletic apparel transducers head to toe garments according to embodiments of the present invention. Transducer **35** garment **51,55** may be adapted to be worn by a wearer therapeutically. The shoes **60,70** shown in **FIG. 13** and **FIG. 14** comprises a battery transducer **41**, unitary sole-and-heel structure attached by molding or other means to a midsole **30**. The transducers **35,44**, forefoot sole and heel battery transducer **41** structure may be molded to the **Fig.16** insole **88** midsole **30** using methods well known in the art. Located or molded within the **Fig.17, Fig.18, Fig.19** sole **81,83** of the forefoot sole **81,82,83** and heel battery transducer **41** structure, preferably adjacent to a point of maximum stress (i.e. near the part corresponding to the ball or heel of the wearer's foot) is a piezoelectric **93** impact battery capacitor **41** comprised of a sheet or layer of polymeric piezoelectric material. This piezoelectric impact battery capacitor **41** preferably comprises polyvinylidene fluoride(PVDF) which has been stretch oriented and electrically polarized to enhance its piezoelectric properties. Such materials are known in the art. Referring to **FIGS. 1** thru **19**, the piezoelectric transducers **33, 35, 37, 39, 44, 135, 145, 146, 148, 149** is electrically conductive to a **Fig.20 & Fig.21** circuits **90,100** which contains a battery capacitor **41,92**. Additional embodiments include but not limited to fluid **25**

reserve, controllers **31,96**, touchscreen **57**, CPU **96**, transistor **99** chips, antenna **94**, resistor **97**, oscillator **91** and leads **50, 150**. Said transducer parts communicate with design **29** emboss numerals, letters and emblems including logos, trademarks and fonts.

SPARK CLEAT/SOLE

[0036] **Fig.15** provides spark transducer midsole **30** outsole **42** cleats **72** for athletic shoes, spark cleats **72** have a piezoelectric sole attachment member transducer disk **35** having a longitudinal axis for fitting into sole attachment means in the soles of the shoes and coupled traction edge **73**. **Fig.13-14** and **Fig.16-19** detail various embodiments of the transducer **35** shoe midsole **30**-outsole **42** sole and/or insole **88** including CPU **96**, resistor **97** transistor **99** chips, controllers **31** and battery capacitors **41, 92**.

DIAGRAM SCHEMATICS

[0037] **FIG. 20** is a block circuit diagram showing the transducer, antenna **94**, touchscreen **57**, resistor **97**, controller **96**, transistor **99** and battery **98** capacitor **92**. The transistor **99** has an oscillation **91** using a piezoelectric **93** transducer as oscillating means charges the battery **98** capacitor **92**, transistor **99** boosts, controlled **96** and dispersed. **FIG. 21** is a circuit diagram showing the negative ion transistor **99**. The negative ion transistor **99** has an oscillating circuit **91** using a piezoelectric transducer as oscillating means. The oscillating circuit **91** generates a signal **26** at a frequency **101** of, for instance, 75 kHz as resonant frequency **101** of the piezoelectric **93** transducer **33, 35, 37, 39, 44** (which is determined by the length direction dimension) or the neighborhood (± 5 kHz) of the resonant frequency **101**. Reference my U.S. 8,894,514 power unit.

[0038] Negative ions are synthesized and polarized by simply grounding a positive ion lead **150**.

ALTERNATIVE EMBODIMENTS

[0039] Alternatively, send out signals to muscle synapses where chips work with common signaling substances, for example acetylcholine. According to yet another aspect, the **FIG. 10** system may comprise a first lead **150** may configured to deliver an electrical signal, and a second lead **150** configured to deliver the therapeutic fluid **125** to the damaged nerve. The lead may comprise a catheter tube lead **150** in fluid communication with the fluid delivery device and configured to deliver the therapeutic fluid to the damaged nerve. According to still another aspect, the control module may comprise a fluid delivery device configured to provide a therapeutic fluid to the damaged nerve. For example, the control module comprises a fluid port for supplying fluid to the fluid delivery device. All embodiments may be produced with alternative materials, in the art.

Serial No.: 13/724,287
Filing Date: 12/21/2012
Confirmation No.: 8891
GAU:1629
PAGES 1-5

1.-3. (CANCELED)

4.(CURRENTLY AMENDED) An intrinsic transduction system comprising:

a piezoelectric impact-spin polymeric electro-disc sole plate device(s) for energy harvesting; and
a polymeric piezoelectric electro-thermal element provides a stress-strain-impact-spin-sensing;
and

an electro-disc comprising: a controller distributes power and recharges an electro-spun battery;
and a spark cleat comprising: a force-static potential plates provides an electromagnetic energy.

5.(CURRENTLY AMENDED) An intrinsic transduction system method comprising:

regulating a piezoelectric impact and spin polymeric energy harvester and electronic circuit
device(s) for an ions; and

providing an electro-thermal disc comprising electrode, fluid reservoir and catheter for therapy;
and capacitating a circuit comprising a electro-spun plates and leads for a distributing of an ions.

6.(CURRENTLY AMENDED) An intrinsic transduction system method comprising:

grounding a piezoelectric polymeric disks and leads for a Negative/Positive ion polar synthesis;
and

regenerating an electro-thermal disc comprising a transistor and electrode for an ion therapeutic.

Serial No.: 13/724,287
Filing Date: 12/21/2012
Confirmation No.: 8891
GAU:3766

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: JENNINGS, James Edward

SERIAL NO.: 13/724,287

FILING DATE: 12/21/ 2012

TITLE: INTRINSIC TRANSDUCTION SYSTEM

GROUP ART UNIT: 3766

EXAMINER: Porter, Jr. Gary A.

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

RESPONSE TO CORRESPONDENCE

Dear Examiner Porter:

This correspondence is being filed as a Response to the Office Action Summary issued on Dec. 7, 2015. Applicant request entry of the amendments indicated below and consideration of the appended remarks. No new matter has been entered by way of these amendments, less burden.

Previously, the examiner stated the opposition of prior art by the presentation of claims and today no novel opposition exists within the entire system, Remarks and/or Arguments begin on page 2.

AMENDMENT TO CLAIMS: (CURRENTLY AMENDED) 4-6

Applicant has currently amended and annotated 5/9/15 submission claims for allowance.

AMENDMENT TO SPECIFICATION

This is a Continuation of Application Serial No. 13/572,679, filed October 25, 2012, now patent No. 8,894,514, granted November 25, 2014. Precedence of an applicant can not be held against.

REMARKS/ARGUMENTS

APPLICANT HAS NOT BROADEN THE CLAIMS BUT FOCUSED ON THE UTILITY.

The examiner insists on a continuation of Application for allowance, similar thought pattern-path

Applicant respectfully requests reconsideration of the application and its passage to allowance.

Should any impediments to allowance remain, Applicant requests that the Examiner contact the undersigned at the indicated phone number. No new matter has been entered by amendments.

Respectfully submitted, James Jennings

/JAMES EDWARD JENNINGS/

Date: 12/13/2015

By: _____
PO Box 270081 Louisville, CO 80027
303.664.1829

Electronic Acknowledgement Receipt

EFS ID:	24344475
Application Number:	13724287
International Application Number:	
Confirmation Number:	8891
Title of Invention:	INTRINSIC TRANSDUCTION SYSTEM
First Named Inventor/Applicant Name:	JAMES EDWARD JENNINGS
Customer Number:	82669
Filer:	James Edward Jennings
Filer Authorized By:	
Attorney Docket Number:	
Receipt Date:	13-DEC-2015
Filing Date:	21-DEC-2012
Time Stamp:	21:29:57
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Supplemental Response or Supplemental Amendment	ANNO_SPUN_CLAIMS.pdf	26129 <small>0557bf42cddb10fa5b892b48baf859b5fa22aff76</small>	no	3

Warnings:

Information:

2	Specification	ITS_SPEC_PIEZO_SPUN.pdf	84948	no	18
			ea36e6c94153a9884d32660531e62df8e0aeabfa		
Warnings:					
Information:					
3	Amendment Copy Claims/Response to Suggested Claims	SPUN_CLAIMS.pdf	23039	no	1
			422a0d8594124a967e39bc7a014efc330bb82cdd		
Warnings:					
Information:					
4	Applicant Arguments/Remarks Made in an Amendment	SPUN_LETTER.pdf	30201	no	2
			3964074339755581a9f653cef161bbe701754ccd		
Warnings:					
Information:					
Total Files Size (in bytes):				164317	

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 a 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.

Electronic Patent Application Fee Transmittal

Application Number:	13724287			
Filing Date:	21-Dec-2012			
Title of Invention:	INTRINSIC TRANSDUCTION SYSTEM			
First Named Inventor/Applicant Name:	JAMES EDWARD JENNINGS			
Filer:	James Edward Jennings			
Attorney Docket Number:				
Filed as Micro Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension - 4 months with \$450 paid	3254	1	100	100
Miscellaneous:				
Total in USD (\$)				100

Electronic Acknowledgement Receipt

EFS ID:	24316107
Application Number:	13724287
International Application Number:	
Confirmation Number:	8891
Title of Invention:	INTRINSIC TRANSDUCTION SYSTEM
First Named Inventor/Applicant Name:	JAMES EDWARD JENNINGS
Customer Number:	82669
Filer:	James Edward Jennings
Filer Authorized By:	
Attorney Docket Number:	
Receipt Date:	09-DEC-2015
Filing Date:	21-DEC-2012
Time Stamp:	21:53:18
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$100
RAM confirmation Number	9603
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Fee Worksheet (SB06)	fee-info.pdf	30288 <small>e4cb7b5eac2c42b80311cdeaf7cd5dc298c30be7</small>	no	2

Warnings:

Information:

Total Files Size (in bytes):	30288
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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

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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.



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/724,287	12/21/2012	JAMES EDWARD JENNINGS		8891

82669 7590 12/07/2015
James Edward Jennings
P.O. Box 270081
Louisville, CO 80027

EXAMINER

PORTER, JR, GARY A

ART UNIT	PAPER NUMBER
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3766

MAIL DATE	DELIVERY MODE
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12/07/2015

PAPER

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.

DETAILED ACTION

1. The present application is being examined under the pre-AIA first to invent provisions.
2. An examination of this application reveals that applicant is unfamiliar with patent prosecution procedure. While an applicant may prosecute the application (except that a juristic entity must be represented by a patent practitioner, 37 CFR 1.31), lack of skill in this field usually acts as a liability in affording the maximum protection for the invention disclosed. Applicant is advised to secure the services of a registered patent attorney or agent to prosecute the application, since the value of a patent is largely dependent upon skilled preparation and prosecution. The Office cannot aid in selecting an attorney or agent.

A listing of registered patent attorneys and agents is available at <https://oedci.uspto.gov/OEDCI/>. Applicants may also obtain a list of registered patent attorneys and agents located in their area by writing to the Mail Stop OED, Director of the U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450.

Response to Arguments

3. With respect to the response received 11/23/2015, the Examiner notes that an RCE was never filed by Applicant and therefore there was not an RCE to respond to. Additionally, the Examiner notes that Applicant failed to submit a proper AFCEP response as noted on the attached PTO-2323 AFCEP form and therefore the claims cannot be

Art Unit: 3766

addressed under the AFCP 2.0 program. Lastly, the claim sets submitted 11/03/2015 and 11/23/2015 are improper since Applicant deleted claim language from claims 4-6 without underlining any additions or striking through any deletions. Newly presented Claims 4-6 are new claims and therefore should be renumbered 10, 11 and 12 and indicated as "new". Lastly, the claims presented on 11/03/2015 and 11/23/2105 have the same 35 USC 112, enablement issues that have been addressed numerous times in the Advisory Actions mailed 06/22/2015, 08/10/2015 and 08/18/2015. In other words, the claims do not simplify any issues and therefore are not entered at this time.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALLEN PORTER, JR whose telephone number is (571)270-5419. The examiner can normally be reached on Monday - Friday, 9AM - 6PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Layno can be reached on (571)272-4949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic

Application/Control Number: 13/724,287

Page 4

Art Unit: 3766

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ALLEN PORTER, JR/
Primary Examiner, Art Unit 3766

Advisory Action Before the Filing of an Appeal Brief	Application No. 13/724,287	Applicant(s) JENNINGS, JAMES EDWARD	
	Examiner ALLEN PORTER, JR	Art Unit 3766	AIA (First Inventor to File) Status No

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

THE REPLY FILED 23 November 2015 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

NO NOTICE OF APPEAL FILED

1. The reply was filed after a final rejection. No Notice of Appeal has been filed. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114 if this is a utility or plant application. Note that RCEs are not permitted in design applications. The reply must be filed within one of the following time periods:

- a) The period for reply expires 3 months from the mailing date of the final rejection.
- b) The period for reply expires on: (1) the mailing date of this Advisory Action; or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
- c) A prior Advisory Action was mailed more than 3 months after the mailing date of the final rejection in response to a first after-final reply filed within 2 months of the mailing date of the final rejection. The current period for reply expires _____ months from the mailing date of the prior Advisory Action or SIX MONTHS from the mailing date of the final rejection, whichever is earlier.

Examiner Note: If box 1 is checked, check either box (a), (b) or (c). ONLY CHECK BOX (b) WHEN THIS ADVISORY ACTION IS THE FIRST RESPONSE TO APPLICANT'S FIRST AFTER-FINAL REPLY WHICH WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. ONLY CHECK BOX (c) IN THE LIMITED SITUATION SET FORTH UNDER BOX (c). See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) or (c) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. The proposed amendments filed after a final rejection, but prior to the date of filing a brief, will not be entered because
- a) They raise new issues that would require further consideration and/or search (see NOTE below);
 - b) They raise the issue of new matter (see NOTE below);
 - c) They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
 - d) They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: See Continuation Sheet. (See 37 CFR 1.116 and 41.33(a)).

4. The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).

5. Applicant's reply has overcome the following rejection(s): _____.

6. Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

7. For purposes of appeal, the proposed amendment(s): (a) will not be entered, or (b) will be entered, and an explanation of how the new or amended claims would be rejected is provided below or appended.

AFFIDAVIT OR OTHER EVIDENCE

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

9. The affidavit or other evidence filed after final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).

10. The affidavit or other evidence filed after the date of filing the Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).

11. The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

12. The request for reconsideration has been considered but does NOT place the application in condition for allowance because: _____.

13. Note the attached Information *Disclosure Statement(s)*. (PTO/SB/08) Paper No(s). _____

14. Other: PTO-2323 IS ATTACHED.

STATUS OF CLAIMS

15. The status of the claim(s) is (or will be) as follows:

- Claim(s) allowed: _____
- Claim(s) objected to: _____
- Claim(s) rejected: 7-9 (see par. 17 of Final Rejection mailed 05/28/2015).
- Claim(s) withdrawn from consideration: _____

/ALLEN PORTER, JR/
Primary Examiner, Art Unit 3766

Continuation of 3. NOTE: The claim sets submitted 11/3/2015 and 11/23/2015 are improper. Applicant listed Claims 4-6 as currently amended but these claims are different claims from the originally presented Claims 4-6. Applicant has not correctly underlined any additions to the claim or provided strikethroughs for any deletions. It appears Claims 4-6 as presented in the amendments are new claims. The claims should be numbered 10, 11 and 12 and listed as new claims. Regardless, the issues set forth in the Final Rejection mailed 05/28/2015 are still present. The Examiner contends the specification is deficient and does not enable the claimed subject matter. The issues present in the current Application with respect to 35 USC 112 have been made abundantly clear in the Advisory Actions mailed 06/22/2015, 08/10/2015, and 08/18/2015. Please refer to these actions for the specific details.

AFCP 2.0 Decision

Application No.

13/724,287

Applicant(s)

JENNINGS, JAMES EDWARD

Examiner

ALLEN PORTER, JR

Art Unit

3766

This is in response to the After Final Consideration Pilot request filed 18 November 2015.

1. **Improper Request** – The AFCP 2.0 request is improper for the following reason(s) and the after final amendment submitted with the request will be treated under pre-pilot procedure.

- An AFCP 2.0 request form PTO/SB/434 (or equivalent document) was not submitted.
- A non-broadening amendment to at least one independent claim was not submitted.
- A proper AFCP 2.0 request was submitted in response to the most recent final rejection.
- Other: See Continuation Sheet

2. **Proper Request**

A. After final amendment submitted with the request will not be treated under AFCP 2.0.

The after final amendment cannot be reviewed and a search conducted within the guidelines of the pilot program.

- The after final amendment will be treated under pre-pilot procedure.

B. Updated search and/or completed additional consideration.

The examiner performed an updated search and/or completed additional consideration of the after final amendment within the time authorized for the pilot program. The result(s) of the updated search and/or completed additional consideration are:

- 1. All of the rejections in the most recent final Office action are overcome and a Notice of Allowance is issued herewith.
- 2. The after final amendment would not overcome all of the rejections in the most recent final Office action. See attached interview summary for further details.
- 3. The after final amendment was reviewed, and it raises a new issue(s). See attached interview summary for further details.
- 4. The after final amendment raises new issues, but would overcome all of the rejections in the most recent final Office action. A decision on determining allowability could not be made within the guidelines of the pilot. See attached interview summary for further details, including any newly discovered prior art.
- 5. Other:

Examiner Note: Please attach an interview summary when necessary as described above.

Continuation of Improper Request: The claim sets submitted 11/3/2015 and 11/23/2015 are improper. Applicant listed Claims 4-6 as currently amended but these claims are different claims from the originally presented Claims 4-6. Applicant has not correctly underlined any additions to the claim or provided strikethroughs for any deletions. It appears Claims 4-6 as presented in the amendments are new claims. Therefore, the claims should be numbered 7, 8 and 19. Additionally, claims 4-6 as currently presented significantly broaden the claims, which is not permitted under AFCP 2.0.

12/01/2015

Serial No.: 13/724,287
Filing Date: 12/21/2012
Confirmation No.: 8891
GAU:3766

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: JENNINGS, James Edward

SERIAL NO.: 13/724,287

FILING DATE: 12/21/ 2012

TITLE: INTRINSIC TRANSDUCTION SYSTEM

GROUP ART UNIT: 3766

EXAMINER: Porter, Jr. Gary A.

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

RESPONSE TO CORRESPONDENCE

Dear Examiner Porter:

This correspondence is being filed as a Response to the Notice of Extension Fee issued on Nov. 19, 2015. Applicant requests entry of the amendments indicated below and consideration of the appended remarks. Examiner has NEVER responded to the RCE filed.

AFCP PILOT PROGRAM WAS A DISTRACTION.

AMENDMENT TO CLAIMS: (CURRENTLY AMENDED) 4-6

APPLICANT HAS AMENDED A CLAIMS FOR ALLOWANCE.

REMARKS

Applicant claims the invention to be obvious variants. Applicant agrees there is an abundance of inseparable systemic novelty. No new matter has been entered by way of these amendments. The actions within AFCP 2.0 are improper and focus misdirected as a tangent on Fig. 21. Patent US 3899144 has one sole drawing Fig. 1 with similar depiction of a modified flow chart. Thus, for all intended purposes referenced US 8894514 addition is not required. And said deficiencies do not exist, as said Fig. 21 is exemplary. The invention also surpasses Koo by the addition of **spin** spark cleat and by the **spin** shoe inclusion with attachment comprising a complete body system.

ARGUMENTS

Issuing a final rejection is an acceptable way of disposing of an application, and most patent examiners now issue only a first rejection, and then a final rejection.

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In supporting an obviousness rejection, an examiner can only combine references that are in "analogous fields". The examiner bears the burden of demonstrating a motivation for combining references. This requirement was reaffirmed just recently in an unpublished opinion on the Board of Patent Appeals and Interferences Ex part Gottling, (BPAI, Aug. 29, 2005); citing In re Fritch, 972 F. 2d 1260, 1266 (Fed. Cir. 1992). The examiner sought to combine the teaching of three references. Each of the references, however, disclosed a different approach and the only suggestion for combining the references was "found in the luxury of hindsight".

HAWAII STATE ENERGY DEPARTMENT: Ocean Energy

Thermal Energy (heat): Two major ocean thermal technologies are of interest in Hawaii: seawater air conditioning and ocean thermal energy conversion. Both rely on the fact that the deep ocean is significantly colder than the tropical surface-nearly 40 degrees Fahrenheit colder. In Hawaii, this deep, cold water is comparatively close to shore in many locations.

Marine hydrokinetic Energy (motion): Marine hydrokinetics (MHK) refers to technologies which tap the kinetic energy of the ocean-the energy carried by moving water. Most typically, the ocean's motion is converted to useable electricity by a device which either **spins** as the water flows past or **bobs** up and down in the water. [Http://energy.hawaii.gov/renewable-energy/ocean](http://energy.hawaii.gov/renewable-energy/ocean)

Applicant respectfully requests reconsideration of the application and its passage to allowance. Should any impediments to allowance remain, Applicant requests that the Examiner contact the undersigned at the indicated phone number.

Respectfully submitted, James Jennings

/JAMES EDWARD JENNINGS/

Date: 11/23/2015

By: _____
PO Box 270081 Louisville, CO 80027
303.664.1829

DO NOT ENTER: /G. PORTER, JR/

12/01/2015

Serial No.: 13/724,287
Filing Date: 12/21/2012
Confirmation No.: 8891
GAU:3766

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: JENNINGS, James Edward

SERIAL NO.: 13/724,287

FILING DATE: 12/21/ 2012

TITLE: INTRINSIC TRANSDUCTION SYSTEM

GROUP ART UNIT: 3766

EXAMINER: Porter, Jr. Gary A.

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

RESPONSE TO CORRESPONDENCE

Dear Examiner Porter:


This correspondence is being filed as a Response to the Office Action issued on Aug. 18, 2015.

Applicant requests entry of the amendments indicated below and consideration of the appended remarks.

AMENDMENT TO CLAIMS: (CURRENTLY AMENDED) 4-6

REMARKS

Applicant claims the invention to be obvious variants. Applicant agrees there is an abundance of inseparable systemic novelty. No new matter has been entered by way of these amendments. The actions within AFCP 2.0 are improper and focus misdirected as a tangent on Fig. 21. Patent US 3899144 has one sole drawing Fig. 1 with similar depiction of a modified flow chart. Thus, for

<i>Index of Claims</i> 	Application/Control No. 13724287	Applicant(s)/Patent Under Reexamination JENNINGS, JAMES EDWARD
	Examiner ALLEN PORTER, JR	Art Unit 3766

✓	Rejected
=	Allowed

-	Cancelled
÷	Restricted

N	Non-Elected
I	Interference

A	Appeal
O	Objected

Claims renumbered in the same order as presented by applicant
 CPA
 T.D.
 R.1.47

CLAIM		DATE							
Final	Original	05/02/2014	08/22/2014	05/27/2015	12/01/2015				
	1	÷	-	-	-				
	2	÷	-	-	-				
	3	÷	-	-	-				
	4		✓	-	-				
	5		✓	-	-				
	6		✓	-	-				
	7			✓	✓				
	8			✓	✓				
	9			✓	✓				

12/01/2015

Serial No.: 13/724,287
Filing Date: 12/21/2012
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Electronic Patent Application Fee Transmittal

Application Number:	13724287			
Filing Date:	21-Dec-2012			
Title of Invention:	INTRINSIC TRANSDUCTION SYSTEM			
First Named Inventor/Applicant Name:	JAMES EDWARD JENNINGS			
Filer:	James Edward Jennings			
Attorney Docket Number:				
Filed as Micro Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension - 3 months with \$50 paid	3253	1	300	300
Miscellaneous:				
Total in USD (\$)				300

Electronic Acknowledgement Receipt

EFS ID:	24201909
Application Number:	13724287
International Application Number:	
Confirmation Number:	8891
Title of Invention:	INTRINSIC TRANSDUCTION SYSTEM
First Named Inventor/Applicant Name:	JAMES EDWARD JENNINGS
Customer Number:	82669
Filer:	James Edward Jennings
Filer Authorized By:	
Attorney Docket Number:	
Receipt Date:	27-NOV-2015
Filing Date:	21-DEC-2012
Time Stamp:	12:27:38
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$300
RAM confirmation Number	30263
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

--

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Fee Worksheet (SB06)	fee-info.pdf	30288 58d4e341a93c30595ae5e2553fcb1ced4225a7fc	no	2

Warnings:

Information:

Total Files Size (in bytes):	30288
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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 a 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.

Serial No.: 13/724,287
Filing Date: 12/21/2012
Confirmation No.: 8891
GAU:1629
PAGES 1-5

1.-3. (CANCELED)

4.(CURRENTLY AMENDED) An intrinsic transduction system comprising:

a piezoelectric impact and spin polymeric device(s) for energy harvesting;

an impact-sensing element made from a polymeric piezoelectric material provides stress/strain;

a transducer apparatus comprising: a disk(s) oscillates, distributes power and recharges a battery;

and a transducer of electric potential energy and electrostatic potential energy provides a spark.

5.(CURRENTLY AMENDED) An intrinsic transduction system comprising:

a piezoelectric impact and spin polymeric energy harvester and electronic circuit device(s) for regulating ions; and

a circuit connected to piezoelectric material provides capacitance and distribution of ions.

6.(CURRENTLY AMENDED) An intrinsic transduction system comprising:

a piezoelectric polymeric disk material wherein negative ion polarity synthesis is by grounding a positive lead; and

a transistor for transport of both positive and negative ions.

Electronic Acknowledgement Receipt

EFS ID:	24169927
Application Number:	13724287
International Application Number:	
Confirmation Number:	8891
Title of Invention:	INTRINSIC TRANSDUCTION SYSTEM
First Named Inventor/Applicant Name:	JAMES EDWARD JENNINGS
Customer Number:	82669
Filer:	James Edward Jennings
Filer Authorized By:	
Attorney Docket Number:	
Receipt Date:	23-NOV-2015
Filing Date:	21-DEC-2012
Time Stamp:	19:39:19
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
------------------------	----

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Applicant Arguments/Remarks Made in an Amendment	AFCP_PILOT_LETTER.pdf	37268 c783cde370e7ebbf30a8aae3a0d3e03b2cb a9161	no	3

Warnings:

Information:

2	Amendment Copy Claims/Response to Suggested Claims	PIEZOMID_CLAIMS_AFCP.pdf	22600 c102364f1a04a0c1cc29374aad167b8939b6421d	no	1
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Warnings:

Information:

Total Files Size (in bytes):

59868

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Serial No.: 13/724,287
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Confirmation No.: 8891
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Respectfully submitted, James Jennings

/JAMES EDWARD JENNINGS/

Date: 11/23/2015

By: _____
PO Box 270081 Louisville, CO 80027
303.664.1829



UNITED STATES PATENT AND TRADEMARK OFFICE


UNITED STATES DEPARTMENT OF COMMERCE
U.S. Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

82669 e 2015-11-19

James Edward Jennings
P.O. Box 270081
Louisville, CO 80027

Paper No.

Application No.: 13/724,287 	Date Mailed: 2015-11-19
First Named Inventor: JAMES EDWARD JENNINGS	Examiner: PORTER, JR, GARY A
Attorney Docket No.:	Art Unit: 3766
Confirmation No.: 8891	Filing Date: 12/21/2012

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

Commissioner for Patents

NOTICE REQUIRING EXTENSION OF TIME FEE <i>No New Time Period is Provided</i>	Application No. 13/724,287	Applicant(s) JENNINGS, JAMES EDWARD
		Art Unit ESSM

Applicant's reply to the Office Action mailed on 18 August, 2015 was received in the Office on 03 November, 2015, which is after the expiration of the period for reply set in the Office action. The time period for reply continues to run from the mailing date of the Office action. This application will become ABANDONED unless applicant obtains an extension of time by filing a petition under 37 CFR 1.136(a) accompanied by the appropriate fee as set forth in 37 CFR 1.17(a)(1)-(5) within the maximum extendable time period for reply (*e.g.*, six months for a reply to a non-final rejection).

The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee due. The expiration of the time period is determined by the amount of the fee paid. In no case may an applicant reply later than the maximum period of SIX (6) MONTHS statutory period or obtain an extension for more than FIVE (5) MONTHS beyond the date for reply set forth in an Office action.

- 1. The appropriate extension of time fee is missing.
- 2. The extension of time fee submitted is insufficient.
- 3. The funds in Deposit Account No. _____ are insufficient to cover the entire fee due. The balance is due within the time period set forth in this notice. See note below regarding the appropriate service charge.
- 4. The Credit Card payment to cover the entire fee due to Account _____ (**Card type + last 4 digits ONLY**) was refused. The balance is due within the time period set forth in this notice. See note below regarding the appropriate service charge.
- 5. Other.

Explanation (*Provide specific details of the required correction in order to assist the applicant. Indicate whether a service charge has been added to the fee due*):

Three month extension of time is due paid only \$50.00 for a one month the applicant still need to pay \$300.00 the total amount for a three month extension of time is \$350.00.

THE AMOUNT OF THE FEE(S) DUE IS SUBJECT TO CHANGE, GENERALLY ON OCTOBER 1 OF EACH YEAR (37 CFR 1.17 & 1.21). THE AMOUNT OF THE FEE(S) DUE IS DETERMINED AS OF THE DATE A COMPLETE REPLY WITH THE APPROPRIATE FEE(S) IS RECEIVED BY THE OFFICE (37 CFR 1.8 & 1.10). BECAUSE THE AMOUNT DUE IS SUBJECT TO CHANGE, IT IS RECOMMENDED THAT APPLICANT CHECK THE CURRENT FEE SCHEDULE WHICH IS AVAILABLE ON THE USPTO'S WEBSITE AT: <http://www.uspto.gov/web/offices/ac/qs/ope/fees.htm>

Service Charges: There is a \$50 service charge for processing each payment refused (including a check returned "unpaid") or charged back by a financial institution (37 CFR 1.21(m)). There is a \$25.00 service charge for each month when the balance of a deposit account is below \$1000 at the end of the month (37 CFR 1.21(b)(2)).

Technical Support Staff (TSS): /JOHN EPPS/

Telephone Number: (571)272-3006

Note to TSS: Please do NOT use this notice if the application is under a final rejection.

NOV 18 2015

Doc Code: A.NE.AFCP

Document Description: After Final Consideration Pilot Program Request

PTO/SB/434 (05-13)

**CERTIFICATION AND REQUEST FOR CONSIDERATION UNDER THE
AFTER FINAL CONSIDERATION PILOT PROGRAM 2.0**

Practitioner Docket No.:	Application No.:	Filing Date:
	13/724,287	12/21/12
First Named Inventor:	Title:	
JAMES EDWARD JENNINGS	INTRINSIC TRANSDUCTION SYSTEM	

APPLICANT HEREBY CERTIFIES THE FOLLOWING AND REQUESTS CONSIDERATION UNDER THE AFTER FINAL CONSIDERATION PILOT PROGRAM 2.0 (AFCP 2.0) OF THE ACCOMPANYING RESPONSE UNDER 37 CFR 1.116.

1. The above-identified application is (i) an original utility, plant, or design nonprovisional application filed under 35 U.S.C. 111(a) [a continuing application [e.g., a continuation or divisional application] is filed under 35 U.S.C. 111(a) and is eligible under (i)], or (ii) an international application that has entered the national stage in compliance with 35 U.S.C. 371(c).
2. The above-identified application contains an outstanding final rejection.
3. Submitted herewith is a response under 37 CFR 1.116 to the outstanding final rejection. The response includes an amendment to at least one independent claim, and the amendment does not broaden the scope of the independent claim in any aspect.
4. This certification and request for consideration under AFCP 2.0 is the only AFCP 2.0 certification and request filed in response to the outstanding final rejection.
5. Applicant is willing and available to participate in any interview requested by the examiner concerning the present response.
6. This certification and request is being filed electronically using the Office's electronic filing system (EFS-Web).
7. Any fees that would be necessary consistent with current practice concerning responses after final rejection under 37 CFR 1.116, e.g., extension of time fees, are being concurrently filed herewith. [There is no additional fee required to request consideration under AFCP 2.0.]
8. By filing this certification and request, applicant acknowledges the following:
 - Reissue applications and reexamination proceedings are not eligible to participate in AFCP 2.0.
 - The examiner will verify that the AFCP 2.0 submission is compliant, i.e., that the requirements of the program have been met (see items 1 to 7 above). For compliant submissions:
 - The examiner will review the response under 37 CFR 1.116 to determine if additional search and/or consideration (i) is necessitated by the amendment and (ii) could be completed within the time allotted under AFCP 2.0. If additional search and/or consideration is required but cannot be completed within the allotted time, the examiner will process the submission consistent with current practice concerning responses after final rejection under 37 CFR 1.116, e.g., by mailing an advisory action.
 - If the examiner determines that the amendment does not necessitate additional search and/or consideration, or if the examiner determines that additional search and/or consideration is required and could be completed within the allotted time, then the examiner will consider whether the amendment places the application in condition for allowance (after completing the additional search and/or consideration, if required). If the examiner determines that the amendment does not place the application in condition for allowance, then the examiner will contact the applicant and request an interview.
 - The interview will be conducted by the examiner, and if the examiner does not have negotiation authority, a primary examiner and/or supervisory patent examiner will also participate.
 - If the applicant declines the interview, or if the interview cannot be scheduled within ten (10) calendar days from the date that the examiner first contacts the applicant, then the examiner will proceed consistent with current practice concerning responses after final rejection under 37 CFR 1.116.

Signature	Date
/JAMES EDWARD JENNINGS/	11/18/2015
Name (Print/Typed)	Practitioner Registration No.
JAMES EDWARD JENNINGS	

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, see below.

* Total of _____ forms are submitted.

Electronic Patent Application Fee Transmittal

Application Number:	13724287			
Filing Date:	21-Dec-2012			
Title of Invention:	INTRINSIC TRANSDUCTION SYSTEM			
First Named Inventor/Applicant Name:	JAMES EDWARD JENNINGS			
Filer:	James Edward Jennings			
Attorney Docket Number:				
Filed as Micro Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension - 1 month with \$0 paid	3251	1	50	50
Miscellaneous:				
Total in USD (\$)				50

Electronic Acknowledgement Receipt

EFS ID:	24070692
Application Number:	13724287
International Application Number:	
Confirmation Number:	8891
Title of Invention:	INTRINSIC TRANSDUCTION SYSTEM
First Named Inventor/Applicant Name:	JAMES EDWARD JENNINGS
Customer Number:	82669
Filer:	James Edward Jennings
Filer Authorized By:	
Attorney Docket Number:	
Receipt Date:	12-NOV-2015
Filing Date:	21-DEC-2012
Time Stamp:	22:09:42
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$50
RAM confirmation Number	9878
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Fee Worksheet (SB06)	fee-info.pdf	30283 b3a698af0ba65230305f43879897500752bf012c	no	2

Warnings:

Information:

Total Files Size (in bytes):	30283
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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 a 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


UNITED STATES DEPARTMENT OF COMMERCE
U.S. Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

82669 e 2015-11-09

James Edward Jennings
P.O. Box 270081
Louisville, CO 80027

Paper No.

Application No.: 13/724,287 	Date Mailed: 2015-11-09
First Named Inventor: JAMES EDWARD JENNINGS	Examiner: PORTER, JR, GARY A
Attorney Docket No.:	Art Unit: 3766
Confirmation No.: 8891	Filing Date: 12/21/2012

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

Commissioner for Patents

NOTICE REQUIRING EXTENSION OF TIME FEE <i>No New Time Period is Provided</i>	Application No. 13/724,287	Applicant(s) JENNINGS, JAMES EDWARD
		Art Unit OPES

Applicant's reply to the Office Action mailed on 03 November, 2015 was received in the Office on 03 November, 2015, which is after the expiration of the period for reply set in the Office action. The time period for reply continues to run from the mailing date of the Office action. This application will become ABANDONED unless applicant obtains an extension of time by filing a petition under 37 CFR 1.136(a) accompanied by the appropriate fee as set forth in 37 CFR 1.17(a)(1)-(5) within the maximum extendable time period for reply (*e.g.*, six months for a reply to a non-final rejection).

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- 2. The extension of time fee submitted is insufficient.
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- 5. Other.

Explanation (*Provide specific details of the required correction in order to assist the applicant. Indicate whether a service charge has been added to the fee due*):
for three month extension of time.

THE AMOUNT OF THE FEE(S) DUE IS SUBJECT TO CHANGE, GENERALLY ON OCTOBER 1 OF EACH YEAR (37 CFR 1.17 & 1.21). THE AMOUNT OF THE FEE(S) DUE IS DETERMINED AS OF THE DATE A COMPLETE REPLY WITH THE APPROPRIATE FEE(S) IS RECEIVED BY THE OFFICE (37 CFR 1.8 & 1.10). BECAUSE THE AMOUNT DUE IS SUBJECT TO CHANGE, IT IS RECOMMENDED THAT APPLICANT CHECK THE CURRENT FEE SCHEDULE WHICH IS AVAILABLE ON THE USPTO'S WEBSITE AT: <http://www.uspto.gov/web/offices/ac/qs/ope/fees.htm>

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Technical Support Staff (TSS): /POLIN ANG/

Telephone Number: (571)272-9493

Note to TSS: Please do NOT use this notice if the application is under a final rejection.

Serial No.: 13/724,287
Filing Date: 12/21/2012
Confirmation No.: 8891
GAU:3766

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: JENNINGS, James Edward

SERIAL NO.: 13/724,287

FILING DATE: 12/21/ 2012

TITLE: INTRINSIC TRANSDUCTION SYSTEM

GROUP ART UNIT: 3766

EXAMINER: Porter, Jr. Gary A.

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

RESPONSE TO CORRESPONDENCE

Dear Examiner Porter:

This correspondence is being filed as a Response to the Office Action issued on Aug. 18, 2015.

Applicant requests entry of the amendments indicated below and consideration of the appended remarks.

AMENDMENT TO CLAIMS: (CURRENTLY AMENDED) 4-6

REMARKS

Applicant claims the invention to be obvious variants. Applicant agrees there is an abundance of inseparable systemic novelty. No new matter has been entered by way of these amendments. The actions within AFCP 2.0 are improper and focus misdirected as a tangent on Fig. 21. Patent US 3899144 has one sole drawing Fig. 1 with similar depiction of a modified flow chart. Thus, for

all intended purposes referenced US 8894514 addition is not required. And said deficiencies do not exist, as said Fig. 21 is exemplary. The invention also surpasses Koo by the addition of **spin** spark cleat and by the **spin** shoe inclusion with attachment comprising a complete body system.

ARGUMENTS

Issuing a final rejection is an acceptable way of disposing of an application, and most patent examiners now issue only a first rejection, and then a final rejection.

"NO GROUNDS" Rules 706.07 (a)(b) the reciprocal effect of the incentive is price gouging and/or rules 706.07 (b) (c) premature final objection, Systemic Prejudicial Pattern.

Non-Analogous Fields

In supporting an obviousness rejection, an examiner can only combine references that are in "analogous fields". The examiner bears the burden of demonstrating a motivation for combining references. This requirement was reaffirmed just recently in an unpublished opinion on the Board of Patent Appeals and Interferences Ex part Gottling, (BPAI, Aug. 29, 2005); citing In re Fritch, 972 F. 2d 1260, 1266 (Fed. Cir. 1992). The examiner sought to combine the teaching of three references. Each of the references, however, disclosed a different approach and the only suggestion for combining the references was "found in the luxury of hindsight".

More often than not the examiner simply can't meet the Dembiczak standard. She just cannot find any teaching, suggestion, or motivation to combine the references in the manner claimed. Of course, that doesn't mean the examiners give up. It does, however, mean that the appellant has a strong hand in arguing against obviousness, and should be quick to file an appeal if the examiner

refuses to withdraw the obviousness rejections."In other words, the examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed". Examiners fail when forced to identify such specific teaching, suggestion, or motivation in the prior art.

HAWAII STATE ENERGY DEPARTMENT: Ocean Energy

Thermal Energy (heat): Two major ocean thermal technologies are of interest in Hawaii: seawater air conditioning and ocean thermal energy conversion. Both rely on the fact that the deep ocean is significantly colder than the tropical surface-nearly 40 degrees Fahrenheit colder. In Hawaii, this deep, cold water is comparatively close to shore in many locations.

Marine hydrokinetic Energy (motion): Marine hydrokinetics (MHK) refers to technologies which tap the kinetic energy of the ocean-the energy carried by moving water. Most typically, the ocean's motion is converted to useable electricity by a device which either **spins** as the water flows past or **boobs** up and down in the water. [Http://energy.hawaii.gov/renewable-energy/ocean](http://energy.hawaii.gov/renewable-energy/ocean)

Applicant respectfully requests reconsideration of the application and its passage to allowance. Should any impediments to allowance remain, Applicant requests that the Examiner contact the undersigned at the indicated phone number.

Respectfully submitted, James Jennings

/JAMES EDWARD JENNINGS/

Date: 11/03/2015

By: _____
PO Box 270081 Louisville, CO 80027
303.664.1829

Serial No.: 13/724,287
Filing Date: 12/21/2012
Confirmation No.: 8891
GAU:1629
PAGES 1-5

1.-3. (CANCELED)

4.(CURRENTLY AMENDED) An intrinsic transduction system comprising a piezoelectric impact and spin polymeric harvester device(s).

5.(CURRENTLY AMENDED) An intrinsic transduction system comprising a piezoelectric impact and spin polymeric harvester and electronic circuit device(s).

6.(CURRENTLY AMENDED) An intrinsic transduction system comprising a piezoelectric polymeric disk material wherein negative ion polarity synthesis is by grounding a positive lead.

Electronic Acknowledgement Receipt

EFS ID:	23975767
Application Number:	13724287
International Application Number:	
Confirmation Number:	8891
Title of Invention:	INTRINSIC TRANSDUCTION SYSTEM
First Named Inventor/Applicant Name:	JAMES EDWARD JENNINGS
Customer Number:	82669
Filer:	James Edward Jennings
Filer Authorized By:	
Attorney Docket Number:	
Receipt Date:	03-NOV-2015
Filing Date:	21-DEC-2012
Time Stamp:	16:18:01
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Applicant Arguments/Remarks Made in an Amendment	AFCP_SPIN_3.pdf	38079 ac0fae601f89d037d4ebd3c3f03a005b632a dc22	no	3

Warnings:

Information:

2	Claims	PIEZOMID_CLAIMS_3.pdf	21381 e71dcfaebd820510df46c429b703200075c9d52	no	1
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Warnings:

Information:

Total Files Size (in bytes):	59460
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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.

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Serial No.: 13/724,287
Filing Date: 12/21/2012
Confirmation No.: 8891
GAU:3766

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: JENNINGS, James Edward

SERIAL NO.: 13/724,287

FILING DATE: 12/21/ 2012

TITLE: INTRINSIC TRANSDUCTION SYSTEM

GROUP ART UNIT: 3766

EXAMINER: Porter, Jr. Gary A.

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

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Applicant respectfully requests reconsideration of the application and its passage to allowance. Should any impediments to allowance remain, Applicant requests that the Examiner contact the undersigned at the indicated phone number.

Respectfully submitted, James Jennings

/JAMES EDWARD JENNINGS/

Date: 11/03/2015

By: _____
PO Box 270081 Louisville, CO 80027
303.664.1829

Serial No.: 13/724,287
Filing Date: 12/21/2012
Confirmation No.: 8891
GAU:1629
PAGES 1-5

1.-3. (CANCELED)

4.(CURRENTLY AMENDED) An intrinsic transduction system comprising a piezoelectric impact and spin polymeric harvester device(s).

5.(CURRENTLY AMENDED) An intrinsic transduction system comprising a piezoelectric impact and spin polymeric harvester and electronic circuit device(s).

6.(CURRENTLY AMENDED) An intrinsic transduction system comprising a piezoelectric polymeric disk material wherein negative ion polarity synthesis is by grounding a positive lead.

Electronic Acknowledgement Receipt

EFS ID:	23975388
Application Number:	13844999
International Application Number:	
Confirmation Number:	4888
Title of Invention:	MATRIX TRANSDUCTION SYSTEM
First Named Inventor/Applicant Name:	JAMES EDWARD JENNINGS
Customer Number:	82669
Filer:	James Edward Jennings
Filer Authorized By:	
Attorney Docket Number:	
Receipt Date:	03-NOV-2015
Filing Date:	17-MAR-2013
Time Stamp:	16:03:38
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Applicant Arguments/Remarks Made in an Amendment	AFCP_SPIN_3.pdf	38079 <small>ac0fae601f89d037d4ebd3c3f03a005b632a dc22</small>	no	3

Warnings:

Information:

2	Claims	PIEZOMID_CLAIMS_3.pdf	21381	no	1
			e71dcfaebd820510df46c4c29b703200075c9d52		

Warnings:

Information:

Total Files Size (in bytes):	59460
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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.

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Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 13/724,287	Filing Date 12/21/2012	<input type="checkbox"/> To be Mailed
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ENTITY: LARGE SMALL MICRO

APPLICATION AS FILED – PART I

FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)
<input type="checkbox"/> BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
<input type="checkbox"/> SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A	
<input type="checkbox"/> 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 \$ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X \$ =	
<input type="checkbox"/> 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).			
<input type="checkbox"/> 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)	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
AMENDMENT	11/03/2015	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR		
	Total (37 CFR 1.16(i))	* 3	Minus	** 20	=	X \$ =
	Independent (37 CFR 1.16(h))	* 3	Minus	***3	=	X \$ =
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))					
<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
					TOTAL ADD'L FEE	

	(Column 1)	(Column 2)	(Column 3)	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR		
	Total (37 CFR 1.16(i))	*	Minus	**	=	X \$ =
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X \$ =
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))					
<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
					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".
 The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

LIE
/POLIN ANG/

Serial No.: 13/724,287
Filing Date: 12/21/2012
Confirmation No.: 8891
GAU:3766

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: JENNINGS, James Edward

SERIAL NO.: 13/724,287

FILING DATE: 12/21/ 2012

TITLE: INTRINSIC TRANSDUCTION SYSTEM

GROUP ART UNIT: 3766

EXAMINER: Porter, Jr. Gary A.

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

RESPONSE TO CORRESPONDENCE

Dear Examiner Porter:

This correspondence is being filed as a Response to the Office Action issued on Aug. 18, 2015.

Applicant requests entry of the amendments indicated below and consideration of the appended remarks.

REMARKS

Applicant claims the invention to be obvious variants. Applicant agrees there is an abundance of inseparable systemic novelty. No new matter has been entered by way of these amendments. The actions within AFCP 2.0 are improper and focus misdirected as a tangent on Fig. 21. Patent US 3899144 has one sole drawing Fig. 1 with similar depiction of a modified flow chart. Thus, for all intended purposes referenced US 8894514 addition is not required. And said deficiencies do

not exist, as said Fig. 21 is exemplary. The invention also surpasses Koo by the addition of **spin** spark cleat and by the **spin** shoe inclusion with attachment comprising a complete body system.

ARGUMENTS

HAWAII STATE ENERGY DEPARTMENT: Ocean Energy

Thermal Energy (heat): Two major ocean thermal technologies are of interest in Hawaii: seawater air conditioning and ocean thermal energy conversion. Both rely on the fact that the deep ocean is significantly colder than the tropical surface-nearly 40 degrees Fahrenheit colder. In Hawaii, this deep, cold water is comparatively close to shore in many locations.

Marine hydrokinetic Energy (motion): Marine hydrokinetics (MHK) refers to technologies which tap the kinetic energy of the ocean-the energy carried by moving water. Most typically, the ocean's motion is converted to useable electricity by a device which either **spins** as the water flows past or **bobs** up and down in the water. [Http://energy.hawaii.gov/renewable-energy/ocean](http://energy.hawaii.gov/renewable-energy/ocean)

Applicant respectfully requests reconsideration of the application and its passage to allowance. Should any impediments to allowance remain, Applicant requests that the Examiner contact the undersigned at the indicated phone number.

Respectfully submitted, James Jennings

/JAMES EDWARD JENNINGS/

Date: 10/23/2015

By: _____
PO Box 270081 Louisville, CO 80027
303.664.1829

Electronic Acknowledgement Receipt

EFS ID:	23877414
Application Number:	13724287
International Application Number:	
Confirmation Number:	8891
Title of Invention:	INTRINSIC TRANSDUCTION SYSTEM
First Named Inventor/Applicant Name:	JAMES EDWARD JENNINGS
Customer Number:	82669
Filer:	James Edward Jennings
Filer Authorized By:	
Attorney Docket Number:	
Receipt Date:	23-OCT-2015
Filing Date:	21-DEC-2012
Time Stamp:	15:35:11
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Supplemental Response or Supplemental Amendment	AFCP_SPIN.pdf	33631 5afeaf2be9aefb2534a46382da1ba56dfe71052e	no	2

Warnings:

Information:

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 a 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.

Porter, Gary A.

From: James Jennings <jmjnnngs@aol.com>
Sent: Friday, August 14, 2015 1:29 PM
To: Porter, Gary A.; Lee, Michelle K.
Cc: Layno, Carl
Subject: Re: app. 13/724287

You, requested new matter and I did not incorporate ,sound delusional and you did not request a new drawing -

Sent from AOL Mobile Mail
Get the new AOL app: mail.mobile.aol.com

On Friday, August 14, 2015, Porter, Gary A. <Gary.Porter@USPTO.GOV> wrote:

Mr. Jennings,

After consulting with a quality specialist here in the office, we have discovered that incorporating any structure from your patent 8,894,514, particularly regarding the spin disk, at this point in time is not possible. In patent lingo it would be what we call "new matter". We have been kicking around numerous ideas to try and get that structure from patent 8,894,514 into this current application and unfortunately there is no way to do so.

One option you have available and that you can pursue is what we call a Continuation-in-Part (CIP). What this entails is filing a new application and then you would preferably copy the pertinent sections of patent 8,894,514 that describe the detailed structure of the spin disk and add that language to the language of the present application. In other words, the new CIP application would have the exact same language as the present application with the addition of the language from patent 8,894,514 describing the spin disk. The downside to such a filing is you would lose your current filing date and obtain a new filing date on the day you file the CIP.

Additionally, you would want to add language describing the particular configuration of the transistor as well as show the changes in Fig. 21 of your application. The language you added to the specification on 8/12/2015 is not sufficient in that you only state "grounding the positive ion lead". A transistor has three ports or connections and your specification does not show how they are connected to produce negative ions. For an example of how subject matter, such as transistors, are properly illustrated and described in a specification please see Gehlke et al. (U.S. Patent 4,542,434), particularly Fig. 3.

Basically, the specification of your current application is deficient for lack of details regarding the particular construction of the claimed invention and cannot be overcome by adding details at this point. Your options at this

point are to file a Continuation-in-Part as discussed above or, if you feel that your specification is fine as-is and disagree with the Office's position regarding your specification, you could appeal.

Before you decide which path to take, feel free to give me, Carl Layno or Matthew DeSanto a call. You can also call the Inventors Assistance Center (IAC) at 800-786-9199 for any questions you might have. I also highly recommend, due to the complexity of the issues before us, that you enlist the help of an attorney, at least to get over the 35 U.S.C. §112 issues before us. I also believe Mr. DeSanto discussed with you the pro bono assistance program found at this site:

<http://www.uspto.gov/patents-getting-started/using-legal-services/pro-bono/patent-pro-bono-program>

and that Colorado has an assistance center through this program which can be found at this site:

<http://www.micasaresourcecenter.org/business-development/pro-bono-patent-program/>

Seeking an attorney will greatly streamline this process and will avoid wasting time and effort on your part trying to comply with the standards set forth in 35 U.S.C. §112.

I know this is a lot of information, but the good news is, if you file a CIP, we are at least in a position to limit our discussions to relevant prior art instead of focusing on formal matters as they pertain to 35 U.S.C. §112.

Best Regards,

Allen Porter

Patent Examiner

U.S. Patent & Trademark Office

Art Unit: 3766

571-270-5419

AFCP 2.0 Decision

Application No.

13/724,287

Applicant(s)

JENNINGS, JAMES EDWARD

Examiner

ALLEN PORTER, JR

Art Unit

3766

This is in response to the After Final Consideration Pilot request filed 08/12/2015.

1. **Improper Request** – The AFCP 2.0 request is improper for the following reason(s) and the after final amendment submitted with the request will be treated under pre-pilot procedure.

- An AFCP 2.0 request form PTO/SB/434 (or equivalent document) was not submitted.
- A non-broadening amendment to at least one independent claim was not submitted.
- A proper AFCP 2.0 request was submitted in response to the most recent final rejection.
- Other:

2. **Proper Request**

A. After final amendment submitted with the request will not be treated under AFCP 2.0.

The after final amendment cannot be reviewed and a search conducted within the guidelines of the pilot program.

- The after final amendment will be treated under pre-pilot procedure.

B. Updated search and/or completed additional consideration.

The examiner performed an updated search and/or completed additional consideration of the after final amendment within the time authorized for the pilot program. The result(s) of the updated search and/or completed additional consideration are:

- 1. All of the rejections in the most recent final Office action are overcome and a Notice of Allowance is issued herewith.
- 2. The after final amendment would not overcome all of the rejections in the most recent final Office action. See attached interview summary for further details.
- 3. The after final amendment was reviewed, and it raises a new issue(s). See attached interview summary for further details.
- 4. The after final amendment raises new issues, but would overcome all of the rejections in the most recent final Office action. A decision on determining allowability could not be made within the guidelines of the pilot. See attached interview summary for further details, including any newly discovered prior art.
- 5. Other:

Examiner Note: Please attach an interview summary when necessary as described above.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/724,287	12/21/2012	JAMES EDWARD JENNINGS		8891

82669 7590 08/18/2015
James Edward Jennings
P.O. Box 270081
Louisville, CO 80027

EXAMINER

PORTER, JR, GARY A

ART UNIT	PAPER NUMBER
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3766

MAIL DATE	DELIVERY MODE
-----------	---------------

08/18/2015

PAPER

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.

DETAILED ACTION

1. The present application is being examined under the pre-AIA first to invent provisions.

Response to Arguments

2. After further review of the specification and after consulting with TQAS Michael Hayes, it was determined that adding any incorporation by reference to U.S. Patent 8,894,514 at this point would constitute new matter. Therefore, the deficiencies under 35 U.S.C. §112 as pointed out in the Final Rejection mailed 05/28/2015 have not been overcome. The Examiner notified Applicant via authorized email that the claimed subject matter is still not enabled under 35 U.S.C. §112 and there is no way to remedy this application at this time to fix the deficiencies. In said email, the Examiner noted the options available to Applicant, i.e. filing a CIP or filing an appeal. The only way to add the details of the omitted structure would be to file a CIP. The Examiner further noted that if Applicant disagrees with the position taken, Applicant could file an appeal. The email communication further pointed to examples of how to properly describe and illustrate claimed features, particularly transistors, in an application. The Examiner additionally pointed to several resources Applicant could use to help with the issues in this application. Applicant responded that no new matter was added and that no new drawings were requested. Please see attached email communication.

3. However, the fact that the reference to a patent was newly added to the specification and said patent must be relied upon for structural details regarding the

Art Unit: 3766

piezoelectric spin disk constitutes new matter since it was not present before the first action was completed in the application.

4. Secondly, as explicitly stated in the interview summary mailed 08/06/2015, the Examiner did indeed request new drawings, in particular an amendment to Fig. 21 showing how each of the three ports of the transistor are connected.

5. Lastly, the Examiner notes that while not discussed by Applicant in the AFCP response, the claims are currently under a 35 U.S.C. §102 rejection with respect to Koo et al. (2006/0235465). The Examiner also found a pertinent reference Gehlke et al. (U.S. Patent 4,542,434) in an updated search. This reference provides an example of how to connect transistors to produce positive and negative ions (Fig. 3). The art rejections under 35 U.S.C. 102 would also need to be directly addressed in any further responses to the office.

6. The Examiner notes Applicant must either file a CIP, a notice of appeal or an RCE before 11/30/2015 to keep the application from going abandoned. An RCE is not advised since the issues at hand can only be remedied via a CIP as discussed in the email communication. The Application is currently under final rejection and these are the only ways to keep the application from going abandoned before the statutory period for reply of 6 months runs out. Currently, Applicant is in a shortened statutory period for reply of 3 months that expires 8/28/2015. Any response after this date must be accompanied by an extension of time fee.

Art Unit: 3766

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALLEN PORTER, JR whose telephone number is (571)270-5419. The examiner can normally be reached on Monday - Friday, 9AM - 6PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Layno can be reached on (571)272-4949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ALLEN PORTER, JR/
Primary Examiner, Art Unit 3766

Advisory Action Before the Filing of an Appeal Brief	Application No. 13/724,287	Applicant(s) JENNINGS, JAMES EDWARD	
	Examiner ALLEN PORTER, JR	Art Unit 3766	AIA (First Inventor to File) Status No

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

THE REPLY FILED 12 August 2015 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

NO NOTICE OF APPEAL FILED

1. The reply was filed after a final rejection. No Notice of Appeal has been filed. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114 if this is a utility or plant application. Note that RCEs are not permitted in design applications. The reply must be filed within one of the following time periods:

- a) The period for reply expires 3 months from the mailing date of the final rejection.
- b) The period for reply expires on: (1) the mailing date of this Advisory Action; or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
- c) A prior Advisory Action was mailed more than 3 months after the mailing date of the final rejection in response to a first after-final reply filed within 2 months of the mailing date of the final rejection. The current period for reply expires _____ months from the mailing date of the prior Advisory Action or SIX MONTHS from the mailing date of the final rejection, whichever is earlier.

Examiner Note: If box 1 is checked, check either box (a), (b) or (c). ONLY CHECK BOX (b) WHEN THIS ADVISORY ACTION IS THE FIRST RESPONSE TO APPLICANT'S FIRST AFTER-FINAL REPLY WHICH WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. ONLY CHECK BOX (c) IN THE LIMITED SITUATION SET FORTH UNDER BOX (c). See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) or (c) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. The proposed amendments filed after a final rejection, but prior to the date of filing a brief, will not be entered because
- a) They raise new issues that would require further consideration and/or search (see NOTE below);
 - b) They raise the issue of new matter (see NOTE below);
 - c) They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
 - d) They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).

5. Applicant's reply has overcome the following rejection(s): _____.

6. Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

7. For purposes of appeal, the proposed amendment(s): (a) will not be entered, or (b) will be entered, and an explanation of how the new or amended claims would be rejected is provided below or appended.

AFFIDAVIT OR OTHER EVIDENCE

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

9. The affidavit or other evidence filed after final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).

10. The affidavit or other evidence filed after the date of filing the Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).

11. The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

12. The request for reconsideration has been considered but does NOT place the application in condition for allowance because: see attached Response to Arguments.

13. Note the attached Information *Disclosure Statement(s)*. (PTO/SB/08) Paper No(s). _____

14. Other: PTO-2323, PTO-892, COPY OF EMAIL COMMUNICATION ON 8/14/2015.

STATUS OF CLAIMS

15. The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: _____
Claim(s) objected to: _____
Claim(s) rejected: 7-9.
Claim(s) withdrawn from consideration: _____

/ALLEN PORTER, JR/
Primary Examiner, Art Unit 3766

Notice of References Cited	Application/Control No. 13/724,287	Applicant(s)/Patent Under Reexamination JENNINGS, JAMES EDWARD	
	Examiner ALLEN PORTER, JR	Art Unit 3766	Page 1 of 1

U.S. PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A US-4,542,434	09-1985	Gehlke et al.	361/231
	B US-			
	C US-			
	D US-			
	E US-			
	F US-			
	G US-			
	H US-			
	I US-			
	J US-			
	K US-			
	L US-			
	M US-			

FOREIGN PATENT DOCUMENTS

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

NON-PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	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 MM-YYYY format are publication dates. Classifications may be US or foreign.

DO NOT ENTER: /GP/

08/14/2015

Serial No.: 13/724,287
Filing Date: 12/21/2012
Confirmation No.: 8891
GAU:3766

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: JENNINGS, James Edward

SERIAL NO.: 13/724,287

FILING DATE: 12/21/ 2012

TITLE: INTRINSIC TRANSDUCTION SYSTEM

GROUP ART UNIT: 3766

EXAMINER: Porter, Jr. Gary A.

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

RESPONSE/AMENDMENT

Dear Examiner Porter:

This correspondence is being filed as a Response to the Office Action issued on August 6, 2015.

Applicant requests entry of the amendments indicated below and consideration of the appended remarks.

REMARKS

Applicant claims the invention to be obvious variants. Applicant agrees there is an abundance of inseparable systemic novelty. No new matter has been entered by way of these amendments.

AMENDMENTS TO DRAWINGS: NONE

AMENDMENTS TO CLAIMS: CURRENTLY AMENDED

AMENDMENTS TO SPECIFICATION: CURRENTLY AMENDED 0026,0032,0037,0038

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application Number: 13/724287

Filing Date: 12-21-2012

Title: INTRINSIC TRANSDUCTION SYSTEM

Examiner Name: Allen Porter, Jr.

Art Unit: 3766

* * * * *

Date: 7-8-15

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

AUTHORIZATION FOR ELECTRONIC COMMUNICATION

Sir:

Recognizing that Internet communications are not secure, I/we hereby authorize the USPTO to communicate with me/us concerning any subject matter of this application by electronic mail. I/We understand that a copy of these communications will be made of record in the application file.

Respectfully submitted,

By:  _____

Printed Name: JAMES JENNINGS

Email Address: JJJENNINGS@AOL.COM

Serial No.: 13/724,287
Filing Date: 12/21/2012
Confirmation No.: 8891
GAU:1629
PAGES 1-5

1.-3. (CANCELED)

4.(PREVIOUSLY PRESENTED) An intrinsic transduction system comprising:

a piezoelectric molded part having a nerve stimulating unit, circuit and/or a midsole disk device at least partially molded therein;

an impact/spin-sensing element made from a polymeric piezoelectric material, a battery capacitors, a stimulus device and/or an information display device and a circuit connected to said piezoelectric material;

a piezoelectric response to electrical energy produced upon impact/spin, which permits a nerve stimulus device to be energized from a battery and/or any information displaying device to be activated;

a piezoelectric molded oscillation part having a nerve stimulating unit and/or a impact/spin battery/capacitor midsole disk device at least partially molded therein;

a charging a transistor configured to produce negative ion, circuit and battery;

a delivery of an electrical signal and/or to deliver a therapeutic fluid;

a molded part having a nerve stimulating unit and/or a midsole disk device at least partially molded therein a shoe and a prosthetic;

a piezoelectric lead attachment to an upper/garment disk;

a charging battery, capacitor, oscillate circuit;

a piezoelectric outsole/midsole disk device;

a transducer system comprising an athletic apparel circuit provides impact/spin and oscillating disk shoes, disk cleats, disk garments and prosthetics;

a transducer system comprising a piezoelectric circuit for an impact/spin disks subsystem circuit of athletic prosthetics, garments, spark cleats and shoes;

a transducer system comprising a piezoelectric circuit for an oscillating disks subsystem circuit of athletic prosthetics, garments, spark cleats and shoes;

a transducer disk of piezoelectric material and ion polarity synthesis; and

a therapeutic ion frequency of piezoelectric disks.

5. (PREVIOUSLY PRESENTED) The intrinsic transduction system in accordance with claim **4**, comprising:

wherein said piezoelectric transducer molded part having a nerve stimulating unit, circuit and/or a midsole disk device at least partially molded therein comprises an outsole disk;

wherein said transducer comprises an impact/spin-sensing element made from a polymeric piezoelectric material, a battery capacitor, a stimulus device and/or an information display device and a circuit connected to said piezoelectric material comprises a midsole disk;

wherein said piezoelectric transducer response to electrical energy produced upon impact/spin which permits a nerve stimulus device to be energized from a battery and/or any information

displaying device to be activated comprises a stimulus unit;

wherein said charging a transistor configured to produce negative ion and battery comprises an oscillating circuit;

wherein said delivers an electrical signal, ion frequency and/or to deliver a therapeutic fluid comprises a therapeutic lead;

wherein said system comprises a molded part having a nerve stimulating unit and/or a midsole disk device at least partially molded therein a shoe and a prosthetic;

wherein said transducer voltage comprises a piezoelectric molded oscillation part having a nerve stimulating unit and/or an impact/spin battery/capacitor midsole disk device at least partially molded therein;

wherein said athletic prosthetic is an oscillating disk lead attachable lead garment;

wherein said athletic shoe is an oscillating disk lead attachable lead upper garment;

wherein said outsole/midsole disk device shoe is a lead attached to oscillating disk garment;

wherein said outsole/midsole disk device shoe and prosthetic is attached to lead garment;

wherein said transducer stimulus comprises a negative ion chip and disk spark cleat;

wherein said stimulation comprises a therapeutic electric signal and ion frequency; and

wherein said therapeutic subsystem comprises a reservoir for fluid delivery lead;

6. (PREVIOUSLY PRESENTED) An intrinsic transduction system comprising:

an outsole disk, a piezoelectric molded part having a nerve stimulating unit, circuit and/or a midsole disk device at least partially molded therein;

a midsole disk, a sensing element made from a polymeric piezoelectric material, a battery capacitor, a stimulus device and/or an information display device and a circuit connected to said piezoelectric material;

a stimulus unit, for piezoelectric response to electrical energy produced upon impact/spin which permits a nerve stimulus device to be energized from a battery and/or any information displaying device to be activated;

an oscillating disk circuit, for charging a negative ion transistor and battery;

a therapeutic lead, for electrical signal and/or delivery of therapeutic fluid;

an outsole disk, a molded part having a nerve stimulating unit and/or a midsole device at least partially molded therein a shoe and a prosthetic;

an upper/garment, for piezoelectric lead attached oscillate circuit and impact/spin disk device;

an outsole, for voltage comprises a piezoelectric molded oscillation part having a nerve stimulating unit and/or an impact/spin battery/capacitor midsole disk device at least partially molded therein;

a transducer system comprising a negative ion circuit, piezoelectric impact/spin disks and oscillating disks;

a transducer system comprising a piezoelectric circuit, impact/spin subsystem circuit of disks prosthetics, disks garments, disks spark cleats and disks shoes;

a transducer system comprising a piezoelectric circuit, oscillation subsystem circuit of disks prosthetics, disks garments, disks spark cleats and disks shoes;

an intrinsic transducer system prosthetic vertebrae disc comprising midsole disk, outsole disk, disk bladders, electrode leads, and having a textile portion touchscreen;

an intrinsic transducer system wherein a piezoelectric circuit comprises therapeutic disks, leads, controllers, resistors, bladders, display and catheters;

an intrinsic transducer system for an athletic garments circuit comprising piezoelectric disks and therapeutic leads;

an intrinsic transducer system for an athletic prosthetic comprises a midsole/outsole disk;

an athletic apparel circuit provides negative ion transistor, impact and spin oscillating disk shoes, disk cleats, disk garments;

a piezoelectric transducer circuit, negative ion subsystem, and impact/spin disks subsystem circuit of athletic prosthetics, garments, spark cleats and shoes;

a piezoelectric transducer, ion frequency circuit, impact/spin oscillating disks sub circuit of athletic prosthetics, garments, spark cleats and shoes; and

a negative ions are synthesized and polarized by simply grounding a positive ion lead.

**CERTIFICATION AND REQUEST FOR CONSIDERATION UNDER THE
AFTER FINAL CONSIDERATION PILOT PROGRAM 2.0**

Practitioner Docket No.:	Application No.:	Filing Date:
	13/724,287	12/21/12
First Named Inventor:	Title:	
JAMES EDWARD JENNINGS	INTRINSIC TRANSDUCTION SYSTEM	
<p>APPLICANT HEREBY CERTIFIES THE FOLLOWING AND REQUESTS CONSIDERATION UNDER THE AFTER FINAL CONSIDERATION PILOT PROGRAM 2.0 (AFCP 2.0) OF THE ACCOMPANYING RESPONSE UNDER 37 CFR 1.116.</p> <ol style="list-style-type: none"> 1. The above-identified application is (i) an original utility, plant, or design nonprovisional application filed under 35 U.S.C. 111(a) [a continuing application (<i>e.g.</i>, a continuation or divisional application) is filed under 35 U.S.C. 111(a) and is eligible under (i)], or (ii) an international application that has entered the national stage in compliance with 35 U.S.C. 371(c). 2. The above-identified application contains an outstanding final rejection. 3. Submitted herewith is a response under 37 CFR 1.116 to the outstanding final rejection. The response includes an amendment to at least one independent claim, and the amendment does not broaden the scope of the independent claim in any aspect. 4. This certification and request for consideration under AFCP 2.0 is the only AFCP 2.0 certification and request filed in response to the outstanding final rejection. 5. Applicant is willing and available to participate in any interview requested by the examiner concerning the present response. 6. This certification and request is being filed electronically using the Office's electronic filing system (EFS-Web). 7. Any fees that would be necessary consistent with current practice concerning responses after final rejection under 37 CFR 1.116, <i>e.g.</i>, extension of time fees, are being concurrently filed herewith. [There is no additional fee required to request consideration under AFCP 2.0.] 8. By filing this certification and request, applicant acknowledges the following: <ul style="list-style-type: none"> • Reissue applications and reexamination proceedings are not eligible to participate in AFCP 2.0. • The examiner will verify that the AFCP 2.0 submission is compliant, <i>i.e.</i>, that the requirements of the program have been met (see items 1 to 7 above). For compliant submissions: <ul style="list-style-type: none"> ○ The examiner will review the response under 37 CFR 1.116 to determine if additional search and/or consideration (i) is necessitated by the amendment and (ii) could be completed within the time allotted under AFCP 2.0. If additional search and/or consideration is required but cannot be completed within the allotted time, the examiner will process the submission consistent with current practice concerning responses after final rejection under 37 CFR 1.116, <i>e.g.</i>, by mailing an advisory action. ○ If the examiner determines that the amendment does not necessitate additional search and/or consideration, or if the examiner determines that additional search and/or consideration is required and could be completed within the allotted time, then the examiner will consider whether the amendment places the application in condition for allowance (after completing the additional search and/or consideration, if required). If the examiner determines that the amendment does not place the application in condition for allowance, then the examiner will contact the applicant and request an interview. <ul style="list-style-type: none"> ▪ The interview will be conducted by the examiner, and if the examiner does not have negotiation authority, a primary examiner and/or supervisory patent examiner will also participate. ▪ If the applicant declines the interview, or if the interview cannot be scheduled within ten (10) calendar days from the date that the examiner first contacts the applicant, then the examiner will proceed consistent with current practice concerning responses after final rejection under 37 CFR 1.116. 		
Signature	Date	
/JAMES EDWARD JENNINGS/	8/12/15	
Name (Print/Typed)	Practitioner Registration No.	
JAMES EDWARD JENNINGS	82669	
<p>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, see below*.</p>		
<p><input type="checkbox"/> * Total of _____ forms are submitted.</p>		

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.

Electronic Acknowledgement Receipt

EFS ID:	23183189
Application Number:	13724287
International Application Number:	
Confirmation Number:	8891
Title of Invention:	INTRINSIC TRANSDUCTION SYSTEM
First Named Inventor/Applicant Name:	JAMES EDWARD JENNINGS
Customer Number:	82669
Filer:	James Edward Jennings
Filer Authorized By:	
Attorney Docket Number:	
Receipt Date:	12-AUG-2015
Filing Date:	21-DEC-2012
Time Stamp:	00:19:06
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	13724287_IDS_18.pdf	613256 <small>38a247fb7f268e5620a30c76ea04da81af3494d2</small>	no	5

Warnings:

Information:

2	Applicant Arguments/Remarks Made in an Amendment	PIEZOMID_LETTER_SPIN_FINAL.pdf	33620 37ee9e2f09517f33f63cddcf10ab87e30346ee85	no	2
Warnings:					
Information:					
3	Specification	ITS_SPEC_PIEZO_FINAL_REV.pdf	83146 8563aa9ef5b6ecfd04619e25fd3083a01fa4a0f9	no	16
Warnings:					
Information:					
4	Amendment Copy Claims/Response to Suggested Claims	PIEZOMID_CLAIMS_FINAL.pdf	32995 2e4469ee05894bc8daf4d7ec38b1088e4b969433	no	5
Warnings:					
Information:					
5	After Final Consideration Program Request	sb0434_ITS.pdf	225711 0568127e1e0cd69f3e514d907fae7d988eb5fc1e	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			988728		

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 a 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.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		13724287
	Filing Date		2012-12-21
	First Named Inventor	JAMES EDWARD JENNINGS	
	Art Unit		3766
	Examiner Name	PORTER, GARY A.	
	Attorney Docket Number		

U.S.PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	8627512		2014-01-14	DODD	HINGED PLATES
	2	8894514		2014-11-25	JENNINGS	PIEZOELECTRIC SMART DEVICE
	3	8961733		2015-02-24	DODD	HINGED PLATES
	4	8161826		2012-12-24	TAYLOR	PIEZOELECTRIC MATRIX
	5	7487606		2009-02-10	KOO	ACUPRESSURE SHOE
	6	7309357		2012-12-18	KIM	PROSTHETIC DISK
	7	6703785		2004-03-09	AIKI	NEGATIVE ION GENERATOR
	8	7163545		2007-01-16	YASZEMSKI	SPINAL IMPLANT

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	13724287
Filing Date	2012-12-21
First Named Inventor	JAMES EDWARD JENNINGS
Art Unit	3766
Examiner Name	PORTER, GARY A.
Attorney Docket Number	

9	5500635		1996-03-19	MOTT	PIEZOELECTRIC SHOE
10	1962565		1934-06-12	LAKHOVSKY	OSCILLATING CIRCUITS
11	0609250		1898-08-16	TESLA	ELECTRICAL IGNITER
12	3540823		1970-11-17	EBINE	PIEZOELECTRIC SPARK
13	0406968		1889-07-16	TESLA	DYNAMO ELECTRIC MACHINE
14	2638706		1953-05-19	SEALE	SPINNING EMBOSS DISK
15	3158946		1964-12-01	UPCHURCH	SPINNING HUB CAP
16	5290094		1994-03-01	GRAGG	AUTO WHEEL ENHANCERS
17	6594871		2003-07-22	HOFFMAN	JEWELRY
18	9080970		2015-07-14	TYBRANDT	SELECTIVE ION TRANSPORT

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U.S.PATENT APPLICATION PUBLICATIONS

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	13724287
	Filing Date	2012-12-21
	First Named Inventor	JAMES EDWARD JENNINGS
	Art Unit	3766
	Examiner Name	PORTER, GARY A.
	Attorney Docket Number	

Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
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Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ²	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T ⁵
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NON-PATENT LITERATURE DOCUMENTS

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Examiner Initials*	Cite No	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, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
	1	Ion-based electronic chip to control muscles: Entirely new circuit technology based on ions and molecules Linköping University, http://www.sciencedaily.com/releases/2012/05/120529113543.htm	<input type="checkbox"/>

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EXAMINER SIGNATURE

Examiner Signature		Date Considered	
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	13724287
Filing Date	2012-12-21
First Named Inventor	JAMES EDWARD JENNINGS
Art Unit	3766
Examiner Name	PORTER, GARY A.
Attorney Docket Number	

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.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

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	/JAMES EDWARD JENNINGS/	Date (YYYY-MM-DD)	2015-08-12
Name/Print	JAMES EDWARD JENNINGS	Registration Number	82669

This collection of information is required by 37 CFR 1.97 and 1.98. 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 1 hour 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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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 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 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.

Serial No.: 13/724,287
Filing Date: 12/21/2012
Confirmation No.: 8891
GAU:3766

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: JENNINGS, James Edward

SERIAL NO.: 13/724,287

FILING DATE: 12/21/ 2012

TITLE: INTRINSIC TRANSDUCTION SYSTEM

GROUP ART UNIT: 3766

EXAMINER: Porter, Jr. Gary A.

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

RESPONSE/AMENDMENT

Dear Examiner Porter:

This correspondence is being filed as a Response to the Office Action issued on August 6, 2015.

Applicant requests entry of the amendments indicated below and consideration of the appended remarks.

REMARKS

Applicant claims the invention to be obvious variants. Applicant agrees there is an abundance of inseparable systemic novelty. No new matter has been entered by way of these amendments.

AMENDMENTS TO DRAWINGS: NONE

AMENDMENTS TO CLAIMS: CURRENTLY AMENDED

AMENDMENTS TO SPECIFICATION: CURRENTLY AMENDED 0026,0032,0037,0038

IDS -US PATENT ADDITIONS :SPINNING DISKS

We have suggested the transistor of negative ions for their health benefits. However, production of positive ions exists in a electro magnetic field, leads serve as electrodes.

ION BASED ELECTRONIC CHIP SOURCE: US 9080970

ARGUMENTS: NONE

Applicant respectfully requests reconsideration of the application and its passage to allowance. Should any impediments to allowance remain, Applicant requests that the Examiner contact the undersigned at the indicated phone number.

Respectfully submitted, James Jennings

/JAMES EDWARD JENNINGS/

Date: 08/12/2015

By: _____

PO Box 270081 Louisville, CO 80027

303.664.1829

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

APPLICATION FOR U.S. LETTERS PATENT

TITLE: INTRINSIC TRANSDUCTION SYSTEM

INVENTOR: JENNINGS, James Edward

CROSS REFERENCE TO RELATED APPLICATIONS

[001] NONE

BACKGROUND OF THE INVENTION

Field of the Invention

[002] This invention relates to transduction piezoelectric nerve stimulation and more specifically relates to devices for applying transcutaneous nerve stimulation for physiotherapeutic purposes.

The present disclosure relates generally to systems and methods for causing nerve cells to regenerate and, more particularly, to systems and methods for promoting nerve regeneration in the central and peripheral nervous stimuli systems of humans.

[003] Transcutaneous nerve stimulation, commonly referred to as TENS is the application of a controlled amount of low electrical currents to stimulate nerves and/or muscle tissues in a patient for treating numerous physiological problems such as muscle and joint pain and inflammation. The currents may be provided in a steady flow or in electrical impulses of various wavelength frequencies. The electrical currents primarily stimulate the nerve for the body to produce natural endorphin's to block the perception of pain and also physically cause the muscle tissues at the area of application to tighten and relax repeatedly, and thus increasing the blood circulation to enhance the natural curing process. The TENS currents are provided by a generator and the currents are delivered with application probes to the inflicted locations of a patient's body. The free end of the currents application probes is commonly in the form of a flexible inductive composite pad which must be attached to the patient's body with conductive adhesive gel and/or adhesive tapes in order to deliver the current to the patient's body. However, the curing process is not efficient if it is relying solely on the TENS stimulation.

[004] Peripheral nerve fibers have been classified in order of decreasing size and conduction velocity in a manner which is now standardized. Generally, as the fibre size decreases, the amplitude of electrical stimulation required to elicit an action potential increases. Also, the smaller fibre will require longer pulse durations than large fibre stimuli. These differences in nerve response have been used to selectively stimulate different types of nerve fibers by varying the amplitude, pulse duration, or pulse repetition rate of an electrical stimulating pulse. The desired degree of nerve fibre selectivity, however, has not been achieved in the prior art, with the result that, for example, an elicited touch response resulting from the stimulating pulse is often accompanied by a prickly, stinging, burning, sharp or other unpleasant noxious response.

[005] Therefore, various exemplary embodiments of the invention may provide a nerve regeneration system that may include an interactive diagnostic device configured to measure nerve growth, re-growth, and/or connections between severed or otherwise damaged nerve segments.

[006] To attain the advantages and in accordance with the purpose of the invention, as embodied and broadly described herein, one exemplary aspect of the invention may provide a nerve regeneration system comprising a lead configured to be placed in a body proximate a damaged nerve, a portion of the lead being configured to stimulate the damaged nerve.

[007] According to one exemplary aspect, the stimulation comprises a therapeutic electric signal, and the parameter of the stimulation may comprise a parameter associated with the electric signal. For example, the parameter may comprise one or more of strength, direction, current, or voltage of the electric signal. According to another exemplary aspect, the nerve regeneration system may comprise an electrode coupled to the lead and configured to deliver electric stimulation to the damaged nerve. The electrode may include a plurality of electrodes and the

parameter may comprise one or more of a number, a sequence, or a combination of electrodes to be energized to deliver electric stimulation. The system may also comprise a conductor for connecting the electrode to the control module. According to still another aspect, the control module may be enclosed in a substantially sealed housing with one or more leads extending from the housing. The control module may be configured to communicate with an external device. According to another aspect, the present disclosure is directed toward a nerve regeneration system that comprises a nerve regeneration module comprising at least one lead implanted in a body proximate a damaged nerve. The nerve regeneration module may be configured to administer a nerve regeneration treatment to the damaged nerve and detect a patient response to the nerve regeneration treatment. According to still another aspect, the nerve regeneration system comprises a power supply configured to generate an electromagnetic signal for stimulating the damaged nerve. Accordingly, the at least one lead may comprise one or more electrodes electrically coupled to the power supply, the one or more electrodes being configured to deliver the electromagnetic signal to the damaged nerve. According to one embodiment, the one or more of the electrodes are disposed along a length of the at least one lead.

[008] Additional objects and advantages of the invention will be set forth in part in the description which follows, and in part will be obvious from the description, or may be learned by practice of the invention. The objects and advantages of the invention will be realized and attained by means of the elements and combinations particularly pointed out in the appended claims.

[009] It is to be understood that both the foregoing general description and the following detailed description are exemplary and explanatory only and are not restrictive of the invention, as claimed.

DESCRIPTION OF RELATED ART

[0010] The central nervous system, including the brain, is the primary control system of a body, communicating with one or more parts of the body via a complicated system of interconnected nerves. Nerves are cable-like bundles of axons that carry electrical signals and impulses between one or more neurons and the central nervous system. Thus, nerves play a critical role in communicating sensory and stimulated signals between various parts of the body (e.g., muscles, organs, glands, etc.) and the central nervous system.

[0011] Nerves may be damaged or severed either through trauma or disease. Damaged or severed nerves may inhibit the central nervous system's ability to receive sensory and stimulatory data from individual neurons, potentially limiting the nervous system's control over the body. For example, severe nerve damage may lead to paralysis, such as paraplegia or quadriplegia.

[0012] In the peripheral nervous system, a common treatment to repair damaged nerves involves a surgical procedure to harvest a healthy nerve from another part of the patient's body and graft the harvested nerve to bridge the damaged section. Although surgery can successfully repair damaged nerve cells in many cases, these procedures may have several disadvantages. For instance, in most cases, several invasive surgical procedures are required to find suitable donor nerves. Further, damage to nerves at the donor site is quite common, potentially leading to weakening of donor nerves at the expense of the recipient nerves.

[0013] Some alternatives to surgical repair of damaged nerves have been developed. These systems typically involve surrounding damaged nerves in a sheath and administering therapeutic drugs or electromagnetic energy to the damaged nerve site. The administration of the therapeutic drugs and/or electromagnetic energy may facilitate nerve regeneration, while the sheath guides the nerve to grow in a desired direction.

[0014] Engineer Georges Lakhovsky, believed that people could achieve good health by adjusting the oscillation of their cells. He tapped Tesla to assist him in building the Multiple Wave Oscillator. Lakhovsky claimed the machine would improve health, remove pathogens, and even cure cancer. "The action of the pounding surf creates negative air ions and we also see it immediately after spring thunderstorms when people report lightened moods," says ion researcher Michael Terman, PhD, of Columbia University in New York. The Organic Electronics research group at Linköping University previously developed ion transistors for transport of both positive and negative ions, as well as biomolecules. An advantage of chemical circuits is that the charge carrier consists of chemical substances with various functions. This means that we now have new opportunities to control and regulate the signal paths of cells in the human body.

[0015] Energy in electronic elements: Electric potential energy, or electrostatic potential energy, is a potential energy (measured in joules) that results from conservative Coulomb forces and is associated with the configuration of a particular set of point charges within a defined system. The term "electric potential energy" is used to describe the potential energy in systems with time-variant electric fields, while the term "electrostatic potential energy" is used to describe the potential energy in systems with time-invariant electric fields.

[0016] Capacitance is the ability of a body to store an electrical charge. Any body or structure that is capable of being charged, either with static electricity or by an electric current, exhibits capacitance. A common form of energy storage device is a parallel-plate capacitor. In a parallel plate capacitor, capacitance is directly proportional to the surface area of the conductor plates and inversely proportional to the separation distance between the plates. If the charges on the plates are $+q$ and $-q$, and V gives the voltage between the plates, then the capacitance C is given by $C = q/V$.

[0017] The capacitance is a function only of the physical dimensions (geometry) of the conductors and the permittivity of the dielectric. It is independent of the potential difference between the conductors and the total charge on them.

Piezoelectricity is the combined effect of the electrical behavior of the material:

$$D = \epsilon E$$

where D is the electric charge density displacement (electric displacement), ϵ is permittivity and E is electric field strength, and

$$\text{Hooke's Law: } S = s T$$

where S is strain, s is compliance and T is stress.

Physical Properties of TPU

[0018] TPU possesses a combination of physical properties not available in other thermoplastic materials or synthetic rubbers, including: Superior Abrasion resistance for physically punishing, high-wear applications. Formulated UV resistance prevents yellowing or embrittlement. Elevated tensile strength provides reliability and durability over the life of the product in which the film is used. Good memory retention, Durometers (hardness) from very soft to very hard. High resistance to hydrocarbons, chemicals, ozone, bacteria, and fungus make it ideal for tough industrial environments. Inherently waterproof, for use in performance apparel, bedding, transdermal and wound care applications. Superior resistance to skin oils, yet has good "hand" or "feel" when in contact with the skin. Easily fabricated using thermal bonding, laminating, die cutting, radio frequency (RF) sealing or vacuum forming and Flame-retardant. Typically, when two or more of these properties are required for an application, TPU is the material of choice.

Other TPU Medical Applications

[0019] TPU is typically used for parts requiring a high level of performance. Applications typically require a flexible material with a high degree of flex resistance, wearability and durability. Many of the characteristics of TPU make it ideal for medical use. Medical applications include: IV site dressings, Transdermal patches, Thin film wound dressings, Cast and dressing covers, Surgical gowns & drapes, Puncture-resistant gloves, Incontinence pads, Compression dressings, Orthopedic gel insoles, Medical anti-shock trousers, Gel-filled positioning pads, Inflatable support bladders, Pressure infuser cuffs, Extraction bags, Hospital mattresses, covers, Orthodontic brace aligners.

[0020] Copolymers: Copolymers of PVDF are also used in piezoelectric and electrostrictive applications. One of the most commonly-used copolymers is P(VDF-trifluoroethylene), usually available in ratios of about 50:50 wt% and 65:35 wt% (equivalent to about 56:44 mol% and 70:30 mol%). Another one is P(VDF-tetrafluoroethylene). They improve the piezoelectric response by improving the crystallinity of the material.

[0021] A novel electrospun TPU/PVdF porous fibrous polymer electrolyte for lithium ion batteries. Novel blend-based gel polymer electrolyte (GPE) films of thermoplastic polyurethane (TPU) and poly(vinylidene fluoride) (PVdF) (denoted as TPU/PVdF) have been prepared by electrospinning. The electrospun thermoplastic polyurethane-co-poly (vinylidene fluoride) membranes were activated with a 1M solution of LiClO₄ in EC/PC and showed a high ionic conductivity about 1.6 mS cm⁻¹ at room temperature. The electrochemical stability is at 5.0 V versus Li⁺/Li, making them suitable for practical applications in lithium cells. Cycling tests of Li/GPE/LiFePO₄ cells showed the suitability of the electrospun membranes made of TPU/PVdF (80/20, w/w) for applications in lithium rechargeable batteries.

[0022] A novel high-performance gel polymer electrolyte membrane basing on electrospinning technique for lithium rechargeable batteries. Nonwoven films of composites of thermoplastic polyurethane (TPU) with different proportion of poly(vinylidene fluoride) (PVdF) (80, 50 and 20%, w/w) are prepared by electrospinning 9 wt% polymer solution at room temperature. Then the gel polymer electrolytes (GPEs) are prepared by soaking the electrospun TPU–PVdF blending membranes in 1 M LiClO₄/ethylene carbonate (EC)/propylene carbonate (PC) for 1 h. The gel polymer electrolyte (GPE) shows a maximum ionic conductivity of 3.2×10^{-3} S cm⁻¹ at room temperature and electrochemical stability up to 5.0 V versus Li⁺/Li for the 50:50 blend ratio of TPU:PVdF system. At the first cycle, it shows a first charge–discharge capacity of 168.9 mAh g⁻¹ when the gel polymer electrolyte (GPE) is evaluated in a Li/PE/lithium iron phosphate (LiFePO₄) cell at 0.1 C-rate at 25 °C. TPU–PVdF (50:50, w/w) based gel polymer electrolyte is observed much more suitable than the composite films with other ratios for high-performance lithium rechargeable batteries.

[0023] TPU combines the best properties of rubber and plastic, but has no plasticizers to leach out and cause allergic reactions or embrittle over time. Thus, products made from polyurethane film & sheet, retain long-term flexibility and outstanding shelf life.

[0024] Thus, there is a need for an improved nerve stimuli regeneration system that may overcome one or more of the problems discussed above. In particular, there is a need for an improved nerve regeneration system that can efficiently optimize the treatment parameters, without requiring invasive exploratory techniques.

OBJECTS AND SUMMARY OF THE INVENTION

[0025] The intrinsic transduction system of the present invention provides products, preferably an athletic shoe or athletic apparel, adapted to emit Piezoelectricity energy or information in response to impact. The product comprises a molded part having a Nerve stimulating unit or a midsole device at least partially molded therein. The unit comprises an impact-sensing element made from a polymeric piezoelectric material, a battery means, a stimulus device or an information display device and a circuit connected to said piezoelectric material. The stimulus unit is responsive to electrical energy produced upon impact which permits the nerve stimulus device to be energized from the battery or any information displaying device to be activated. In one embodiment, the electrical energy resulting from each impact is used as a trigger to operate nerve stimulating unit via the circuit incorporated therein, and the amount and/or duration of the stimulus emission can be independently determined/controlled by appropriate design of the circuit.

[0026] The product is preferably a spin disk, garment or shoe, particularly a prosthetic spinal disc, athletic garment or a sports shoe. The molded outsole part is preferably a thermoplastic unit structure, with at least a midsole, the circuit and the transducer stimulus device disposed in or molded into the midsole part of the structure, and with the piezoelectric stimulus-emitting device being arranged to emit energy outwardly from said midsole part and/or by leads. The polymeric piezoelectric material may be molded into the midsole part of the structure, preferably in the region of maximum stress. Reference my U.S. Patent 8,894,514 discloses spin piezoelectric disk.

[0027] In still another embodiment, the circuit responds to the magnitude of the electrical energy produced by the piezoelectric material and thereby selectively energizes one or more of the nerve stimulating devices depending on the amount of electrical energy produced. In this manner, a

visual indication of the magnitude of the pressure exerted upon the sole can be displayed.

[0028] The present invention provides a stimulating pulse having frequency components falling within predetermined frequency band limits. This pulse reliably elicits a touch response without the heretofore attendant noxious sensation mentioned above. It has been demonstrated that the differential excitation of the touch fibers relative to pain specific fibers inhibits the transmission of pain to the conscious centers. The type of stimulation specified herein, optimizes the differential excitation between touch and pain specific fibers, thus optimizing the inhibition of pain transmission.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a top view of the piezoelectric disk orb control of the present invention;

FIG. 2 is a side view of the piezoelectric disk orb control of the present invention;

FIG. 3 is a top view of the piezoelectric disk orb of the present invention;

FIG. 4 is a side view of the piezoelectric embed disk orb of the present invention with a base;

FIG. 5 is an elevation view of the piezoelectric disk battery capacitor of the present invention;

FIG. 6 is a top view of the piezoelectric disk control of the present invention;

FIG. 7 is a side view of the piezoelectric vertebral disc of the present invention;

FIG. 8 is a perspective view of the piezoelectric vertebral disc of another embodiment;

FIG. 9 is a side view of the midsole-outsole vertebral disc of the present invention;

FIG. 10 is a side view of the battery capacitor vertebral disc of the present invention;

FIG. 11 is a perspective front view of therapeutic garments embodiment of the present invention.

FIG. 12 is a perspective rear view of therapeutic garments embodiment of the present invention.

FIGS. 13 illustrate views of footwear product including features of the present invention;

FIGS. 14 illustrate views of footwear product including features of the present invention;

FIG. 15 is an elevational perspective view of a cleat of the present invention;

FIG. 16 is a perspective top elevation view of shoe insole according to the present invention;

FIG. 17 -19 are side elevations view of shoe sole according to the present invention;

FIG. 20 is a block schematic circuitry diagram of the transducer according to the invention;

FIG. 21 is a schematic circuitry diagram of a negative ion transducer according to the invention.

DETAILED DESCRIPTION OF A PREFERRED EMBODIMENT

[0029] Negative ions are odorless, tasteless, and invisible molecules that we inhale in abundance in certain environments. Think mountains, waterfalls, and beaches. Once they reach our bloodstream, negative ions are believed to produce biochemical reactions that increase levels of the mood chemical serotonin, helping to alleviate depression, relieve stress, and boost our daytime energy.

[0030] Ions are molecules that have gained or lost an electrical charge. . They are created in nature as air molecules break apart due to sunlight, radiation, and moving air and water. You may have experienced the power of negative ions when you last set foot on the beach or walked beneath a waterfall. While part of the euphoria is simply being around these wondrous settings and away from the normal pressures of home and work, the air circulating in the mountains and the beach is said to contain tens of thousands of negative ions -- Much more than the average home or office building, which contain dozens or hundreds, and many register a flat zero.

[0031] Thus, there is an increasing interest in external electrical skin stimulation for such purposes as pain suppression, nuero-muscular stimulation, communication systems, etcetera.

Obviously, many modifications and variations of the present invention are possible in light of the

teaching of devices shown in U.S. Patent Nos. 1,059,090, No. 1,305,725 and No.6,703,785 .

Specifically, there are many alternative ways of transducing the optimized waveforms disclosed herein which do not depart from the intended scope of the application. Accordingly, within the scope of the appended claims, the invention may be practiced otherwise than as specifically described.

DETAILED DESCRIPTION OF THE INVENTION

[0032] **FIGS. 1, FIG. 2 and FIG.3** show the construction of a spin Piezoelectric transducer **33, 35, 37, 39** according to the invention. The illustrated piezoelectric transducer **FIG.1** thru **3** is a module comprising a thin and small case disk housing outsole **42**. **FIG.4** transducer has a insole of piezoelectric **26**, embed coupler outsole **42** base member, accommodated about the midsole **30** casing. **FIG.5** battery transducer **41**, starting from a regular lithium-ion coin battery, replaced the usual divider between electrodes with a polyvinylidene difluoride film whose piezoelectric nature produces a charging action inside that gap through just a little pressure. Further, modified(AL foil **32**, LiCoO₂ **34**, PVDF **36**, TiO₂ NT **38**, Ti foil **40**) with the attachment of a midsole-outsole housing case. **Fig.1 & Fig.6** an oscillating transducer **33,44** incorporates a controller **31**and designs **29** may form an abstract or geometrical pattern, emblem, or a logo or one or more alphanumeric characters constituting, for example, a trademark of the manufacturer. The ends of the fibers at these various points may be colored, e.g. with different colored translucent inks or dyes. A transducer disk of piezoelectric material and ion polarity synthesis.

INTERNAL

[0033] **Fig.7** and **Fig.9** shows two adjacent vertebrae **127** and **128** with midsole **130**-outsole **142** molded transducer disc prosthesis **146,148, 149** replacing the natural disc. Disc prosthesis **146** is a representation of the Charité prosthesis modified by the inclusion of outsole **142** plate transducers **135** and or midsole fluid reserve **125**, battery capacitor **141**, transistors, antenna.

FIG. 8 shows a Bryan similar cervical disc **145**. Note that it is only recommended as a prosthesis for the cervical vertebrae. It has a midsole **130** (not visible) between two molded outsole **142** plates **133** transducers (only one shown).

[0034] A flexible midsole disk **130** membrane between the molded outsole disk **142** case housing surrounds the transducers **135** and or midsole fluid reserve **125**, battery capacitor **141**, transistors nucleus. Applicant understands that current models of the cervical disc do not have the small tabs **147**. **Fig.9** illustrates vertebral bodies **127** and **128** are separated by molded intervertebral midsole **130** outsole **142** discs. Each disc has a nucleus midsole **130** surrounded by an annulus outsole **142**. **Fig.10** represents a intervertebral prosthetic housing a battery capacitor **141** and end transducers **135**. This embodiment may also house midsole fluid **125** reserve accessible by a catheter aperture **123**, battery capacitor **141**, transistors and leads **150** to damaged nerve endings.

APPAREL

[0035] **Fig.11** and **Fig.12** depict athletic apparel transducers head to toe garments according to embodiments of the present invention. Transducer **35** garment **51,55** may be adapted to be worn by a wearer therapeutically. The shoes **60,70** shown in **FIG. 13** and **FIG. 14** comprises a battery transducer **41**, unitary sole-and-heel structure attached by molding or other means to a midsole **30**. The transducers **35,44**, forefoot sole and heel battery transducer **41** structure may be molded

to the **Fig.16** insole **88** midsole **30** using methods well known in the art. Located or molded within the **Fig.17, Fig.18, Fig.19** sole **81,83** of the forefoot sole **81,82,83** and heel battery transducer **41** structure, preferably adjacent to a point of maximum stress (i.e. near the part corresponding to the ball or heel of the wearer's foot) is a piezoelectric **93** impact battery capacitor **41** comprised of a sheet or layer of polymeric piezoelectric material. This piezoelectric impact battery capacitor **41** preferably comprises polyvinylidene fluoride(PVDF) which has been stretch oriented and electrically polarized to enhance its piezoelectric properties. Such materials are known in the art. Referring to **FIGS. 1 thru 19**, the piezoelectric transducers **33, 35, 37, 39, 44, 135, 145, 146, 148, 149** is electrically conductive to a **Fig.20 & Fig.21** circuits **90,100** which contains a battery capacitor **41,92**. Additional embodiments include but not limited to fluid **25** reserve, controllers **31,96**, touchscreen **57**, CPU **96**, transistor **99** chips, antenna **94**, resistor **97**, oscillator **91** and leads **50, 150**. Said transducer parts communicate with design **29** emboss numerals, letters and emblems including logos, trademarks and fonts.

SPARK CLEAT/SOLE

[0036] **Fig.15** provides spark transducer midsole **30** outsole **42** cleats **72** for athletic shoes, spark cleats **72** have a piezoelectric sole attachment member transducer disk **35** having a longitudinal axis for fitting into sole attachment means in the soles of the shoes and coupled traction edge **73**. **Fig.13-14** and **Fig.16-19** detail various embodiments of the transducer **35** shoe midsole **30**-outsole **42** sole and/or insole **88** including CPU **96**, resistor **97** transistor **99** chips, controllers **31** and battery capacitors **41, 92**.

DIAGRAM SCHEMATICS

[0037] FIG. 20 is a block circuit diagram showing the transducer, antenna 94, touchscreen 57, resistor 97, controller 96, transistor 99 and battery 98 capacitor 92. The transistor 99 has an oscillation 91 using a piezoelectric 93 transducer as oscillating means charges the battery 98 capacitor 92, transistor 99 boosts, controlled 96 and dispersed. FIG. 21 is a circuit diagram showing the negative ion transistor 99. The negative ion transistor 99 has an oscillating circuit 91 using a piezoelectric transducer as oscillating means. The oscillating circuit 91 generates a signal 26 at a frequency 101 of, for instance, 75 kHz as resonant frequency 101 of the piezoelectric 93 transducer 33, 35, 37, 39, 44 (which is determined by the length direction dimension) or the neighborhood (± 5 kHz) of the resonant frequency 101. Reference my U.S. 8,894,514 power unit.

[0038] Negative ions are synthesized and polarized by simply grounding a positive ion lead 150.

ALTERNATIVE EMBODIMENTS

[0039] Alternatively, send out signals to muscle synapses where chips work with common signaling substances, for example acetylcholine. According to yet another aspect, the FIG. 10 system may comprise a first lead 150 may configured to deliver an electrical signal, and a second lead 150 configured to deliver the therapeutic fluid 125 to the damaged nerve. The lead may comprise a catheter tube lead 150 in fluid communication with the fluid delivery device and configured to deliver the therapeutic fluid to the damaged nerve. According to still another aspect, the control module may comprise a fluid delivery device configured to provide a therapeutic fluid to the damaged nerve. For example, the control module comprises a fluid port for supplying fluid to the fluid delivery device. All embodiments may be produced with alternative materials, in the art.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 13/724,287	Filing Date 12/21/2012	<input type="checkbox"/> To be Mailed
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ENTITY: LARGE SMALL MICRO

APPLICATION AS FILED – PART I

FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)
<input type="checkbox"/> BASIC FEE <small>(37 CFR 1.16(a), (b), or (c))</small>	N/A	N/A	N/A	
<input type="checkbox"/> SEARCH FEE <small>(37 CFR 1.16(k), (l), or (m))</small>	N/A	N/A	N/A	
<input type="checkbox"/> EXAMINATION FEE <small>(37 CFR 1.16(o), (p), or (q))</small>	N/A	N/A	N/A	
TOTAL CLAIMS <small>(37 CFR 1.16(i))</small>	minus 20 =	*	X \$ =	
INDEPENDENT CLAIMS <small>(37 CFR 1.16(h))</small>	minus 3 =	*	X \$ =	
<input type="checkbox"/> APPLICATION SIZE FEE <small>(37 CFR 1.16(s))</small>	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).			
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT <small>(37 CFR 1.16(j))</small>				
<small>* If the difference in column 1 is less than zero, enter "0" in column 2.</small>			TOTAL	

APPLICATION AS AMENDED – PART II

	(Column 1)	(Column 2)	(Column 3)	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
AMENDMENT	08/12/2015	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR			
	Total <small>(37 CFR 1.16(i))</small>	* 3	Minus	** 20	= 0	X \$20 = 0
	Independent <small>(37 CFR 1.16(h))</small>	* 2	Minus	***3	= 0	X \$105 = 0
	<input type="checkbox"/> Application Size Fee <small>(37 CFR 1.16(s))</small>					
<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>						
					TOTAL ADD'L FEE	0

	(Column 1)	(Column 2)	(Column 3)	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR			
	Total <small>(37 CFR 1.16(i))</small>	*	Minus	**	=	X \$ =
	Independent <small>(37 CFR 1.16(h))</small>	*	Minus	***	=	X \$ =
	<input type="checkbox"/> Application Size Fee <small>(37 CFR 1.16(s))</small>					
<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>						
					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".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

LIE
/ANTHONY WILLIAMS/

This collection of information is required by 37 CFR 1.16. 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 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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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/724,287	12/21/2012	JAMES EDWARD JENNINGS		8891

82669 7590 08/10/2015
James Edward Jennings
P.O. Box 270081
Louisville, CO 80027

EXAMINER

PORTER, JR, GARY A

ART UNIT	PAPER NUMBER
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3766

MAIL DATE	DELIVERY MODE
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08/10/2015

PAPER

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.

Advisory Action Before the Filing of an Appeal Brief	Application No. 13/724,287	Applicant(s) JENNINGS, JAMES EDWARD	
	Examiner ALLEN PORTER, JR	Art Unit 3766	AIA (First Inventor to File) Status No

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

THE REPLY FILED 06/30/2015 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

NO NOTICE OF APPEAL FILED

1. The reply was filed after a final rejection. No Notice of Appeal has been filed. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114 if this is a utility or plant application. Note that RCEs are not permitted in design applications. The reply must be filed within one of the following time periods:

- a) The period for reply expires _____ months from the mailing date of the final rejection.
- b) The period for reply expires on: (1) the mailing date of this Advisory Action; or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
- c) A prior Advisory Action was mailed more than 3 months after the mailing date of the final rejection in response to a first after-final reply filed within 2 months of the mailing date of the final rejection. The current period for reply expires _____ months from the mailing date of the prior Advisory Action or SIX MONTHS from the mailing date of the final rejection, whichever is earlier.

Examiner Note: If box 1 is checked, check either box (a), (b) or (c). ONLY CHECK BOX (b) WHEN THIS ADVISORY ACTION IS THE FIRST RESPONSE TO APPLICANT'S FIRST AFTER-FINAL REPLY WHICH WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. ONLY CHECK BOX (c) IN THE LIMITED SITUATION SET FORTH UNDER BOX (c). See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) or (c) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. The proposed amendments filed after a final rejection, but prior to the date of filing a brief, will not be entered because
- a) They raise new issues that would require further consideration and/or search (see NOTE below);
 - b) They raise the issue of new matter (see NOTE below);
 - c) They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
 - d) They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

- 4. The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
- 5. Applicant's reply has overcome the following rejection(s): _____.
- 6. Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
- 7. For purposes of appeal, the proposed amendment(s): (a) will not be entered, or (b) will be entered, and an explanation of how the new or amended claims would be rejected is provided below or appended.

AFFIDAVIT OR OTHER EVIDENCE

- 8. A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.
- 9. The affidavit or other evidence filed after final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
- 10. The affidavit or other evidence filed after the date of filing the Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
- 11. The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

- 12. The request for reconsideration has been considered but does NOT place the application in condition for allowance because:
See Continuation Sheet.
- 13. Note the attached Information *Disclosure Statement(s)*. (PTO/SB/08) Paper No(s). _____
- 14. Other: _____.

STATUS OF CLAIMS

15. The status of the claim(s) is (or will be) as follows:

- Claim(s) allowed: .
- Claim(s) objected to: .
- Claim(s) rejected: 7-9.
- Claim(s) withdrawn from consideration: .

/ALLEN PORTER, JR/
Primary Examiner, Art Unit 3766

Continuation of 12. does NOT place the application in condition for allowance because: see the interview summary mailed 08/06/2015. In said interview, the Examiner discussed ways to overcome the 112 issues in the Final Rejection. Agreement was made to further discuss and work on the issues via email. Authorization to communicate via email has been given by Applicant. .

OK TO ENTER: /GP/

08/07/2015

Serial No.: 13/724,287
Filing Date: 12/21/2012
Confirmation No.: 8891
GAU:3766

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: JENNINGS, James Edward

SERIAL NO.: 13/724,287

FILING DATE: 12/21/ 2012

TITLE: INTRINSIC TRANSDUCTION SYSTEM

GROUP ART UNIT: 3766

EXAMINER: Porter, Jr. Gary A.

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

RESPONSE/AMENDMENT

Dear Examiner Porter:

This correspondence is being filed as a Response to the Office Action issued on June 22, 2015.

Applicant requests entry of the amendments indicated below and consideration of the appended remarks.

REMARKS

Applicant claims the invention to be obvious variants. Applicant agrees there is an abundance of inseparable systemic novelty. No new matter has been entered by way of these amendments.

AMENDMENTS TO DRAWINGS: NONE

AMENDMENTS TO CLAIMS: NONE

AMENDMENTS TO SPECIFICATION: NONE



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/724,287	12/21/2012	JAMES EDWARD JENNINGS		8891

82669 7590 08/06/2015
James Edward Jennings
P.O. Box 270081
Louisville, CO 80027

EXAMINER

PORTER, JR, GARY A

ART UNIT	PAPER NUMBER
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3766

MAIL DATE	DELIVERY MODE
-----------	---------------

08/06/2015

PAPER

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.

Examiner-Initiated Interview Summary	Application No. 13/724,287	Applicant(s) JENNINGS, JAMES EDWARD	
	Examiner ALLEN PORTER, JR	Art Unit 3766	

All participants (applicant, applicant's representative, PTO personnel):

- (1) ALLEN PORTER, JR. (3) JAMES JENNINGS.
(2) CARL LAYNO. (4) _____.

Date of Interview: 05 August 2015.

Type: Telephonic Video Conference
 Personal [copy given to: applicant applicant's representative]

Exhibit shown or demonstration conducted: Yes No.
If Yes, brief description: _____.

Issues Discussed 101 112 102 103 Others
(For each of the checked box(es) above, please describe below the issue and detailed description of the discussion)

Claim(s) discussed: 4.

Identification of prior art discussed: Tybrandt et al. (2012/0031757).

Substance of Interview

(For each issue discussed, provide a detailed description and indicate if agreement was reached. Some topics may include: identification or clarification of a reference or a portion thereof, claim interpretation, proposed amendments, arguments of any applied references etc...)

See Continuation Sheet.

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.

Attachment

/ALLEN PORTER, JR/
Primary Examiner, Art Unit 3766

Continuation of Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Discussed the particular structure of the claimed negative ion transistor. Applicant indicated the negative ion transistor is a transistor configured to produce negative ions and not a specially constructed transistor as disclosed by Tybrandt. The Examiner recommended deleting the phrase "negative ion transistor" from the specification, claims and drawings and replacing it with "a transistor configured to produce negative ions." In addition to this change, the Examiner suggested amending the specification to detail exactly how the transistor is connected to produce the negative ions. Particularly, the Examiner recommended showing how each of the ports of the transistor are connected to the overall circuit. Currently, Fig. 21 contains a box with a single connection. However, since standard transistors are three port devices and not single port devices, it is unclear how the transistor is configured to produce negative ions. Further clarification can be made in Fig. 21 to illustrate the transistor connections that produce negative ions.

Secondly, the spin piezoelectric transducer was discussed. The Examiner noted that a "spin piezoelectric transducer" is not a standard structure and is unclear what exact structure is being described. Applicant indicated that the particulars of the spin piezoelectric transducer are disclosed in U.S. Patent 8,894,514, which belongs to the Applicant. The Examiner notes col.9, line 50-col. 10, line 52 disclose in detail how to construct such a device. See also Fig. 11-13. The Examiner noted that these are the details necessary to overcome the rejection in the present application with respect to the term "spin piezoelectric transducer." The Examiner suggested amending paragraph [0032] of the specification to read "Figs. 1, Fig. 2 and Fig. 3 show the construction of a spin Piezoelectric transducer 33, 35, 37, 39 according to the invention. U.S. Patent 8,894,514 to Jennings, which is herein incorporated by reference, discloses the particular construction of the spin piezoelectric transducer, otherwise referred to as Orb assembly 333 and/or 444 in the '514 patent(see Fig. 11 and 12 of U.S. Patent 8,894,514, as well as claim 1, particularly the claimed "power unit")."

The Examiner then noted that once the changes were made, Applicant could email the Examiner with a draft amendment incorporating the changes in addition to a signed form authorizing email communications. Additionally, Applicant could pursue the AFCP 2.0 program in order to have these changes examined after-final. Applicant was given the contact information of Matthew DeSanto for any further questions due to his expertise in handling pro se cases..

Electronic Patent Application Fee Transmittal

Application Number:	13724287			
Filing Date:	21-Dec-2012			
Title of Invention:	INTRINSIC TRANSDUCTION SYSTEM			
First Named Inventor/Applicant Name:	JAMES EDWARD JENNINGS			
Filer:	James Edward Jennings			
Attorney Docket Number:				
Filed as Micro Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
RCE - 1st Request	3801	1	300	300
Total in USD (\$)				300

Electronic Acknowledgement Receipt

EFS ID:	22822234
Application Number:	13724287
International Application Number:	
Confirmation Number:	8891
Title of Invention:	INTRINSIC TRANSDUCTION SYSTEM
First Named Inventor/Applicant Name:	JAMES EDWARD JENNINGS
Customer Number:	82669
Filer:	James Edward Jennings
Filer Authorized By:	
Attorney Docket Number:	
Receipt Date:	03-JUL-2015
Filing Date:	21-DEC-2012
Time Stamp:	11:55:35
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Fee Worksheet (SB06)	fee-info.pdf	29929 <small>7e1d9e8e3034e82e49abacdce18ef43d868d460c</small>	no	2

Warnings:

Information:

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 a 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.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		13724287
	Filing Date		2012-12-21
	First Named Inventor	JAMES EDWARD JENNINGS	
	Art Unit		3766
	Examiner Name	PORTER, GARY A.	
	Attorney Docket Number		

U.S.PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	8627512		2014-01-14	DODD	HINGED PLATES
	2	8894514		2014-11-25	JENNINGS	PIEZOELECTRIC SMART DEVICE
	3	8961733		2015-02-24	DODD	HINGED PLATES
	4	8161826		2012-12-24	TAYLOR	PIEZOELECTRIC MATRIX
	5	7487606		2009-02-10	KOO	ACUPRESSURE SHOE
	6	7309357		2012-12-18	KIM	PROSTHETIC DISK
	7	6703785		2004-03-09	AIKI	NEGATIVE ION GENERATOR
	8	7163545		2007-01-16	YASZEMSKI	SPINAL IMPLANT

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	13724287
Filing Date	2012-12-21
First Named Inventor	JAMES EDWARD JENNINGS
Art Unit	3766
Examiner Name	PORTER, GARY A.
Attorney Docket Number	

9	5500635		1996-03-19	MOTT	PIEZOELECTRIC SHOE
10	1962565		1934-06-12	LAKHOVSKY	OSCILLATING CIRCUITS
11	0609250		1898-08-16	TESLA	ELECTRICAL IGNITER
12	3540823		1970-11-17	EBINE	PIEZOELECTRIC SPARK
13	0406968		1889-07-16	TESLA	DYNAMO ELECTRIC MACHINE

If you wish to add additional U.S. Patent citation information please click the Add button. [Add](#)

U.S.PATENT APPLICATION PUBLICATIONS

[Remove](#)

Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1					

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Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ² j	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T ⁵
	1							<input type="checkbox"/>

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NON-PATENT LITERATURE DOCUMENTS

[Remove](#)

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	13724287
	Filing Date	2012-12-21
	First Named Inventor	JAMES EDWARD JENNINGS
	Art Unit	3766
	Examiner Name	PORTER, GARY A.
	Attorney Docket Number	

Examiner Initials*	Cite No	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, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
	1	Ion-based electronic chip to control muscles: Entirely new circuit technology based on ions and molecules Linköping University, http://www.sciencedaily.com/releases/2012/05/120529113543.htm	<input type="checkbox"/>

If you wish to add additional non-patent literature document citation information please click the Add button **Add**

EXAMINER SIGNATURE

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	13724287
	Filing Date	2012-12-21
	First Named Inventor	JAMES EDWARD JENNINGS
	Art Unit	3766
	Examiner Name	PORTER, GARY A.
	Attorney Docket Number	

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.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

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	/JAMES EDWARD JENNINGS/	Date (YYYY-MM-DD)	2015-06-30
Name/Print	JAMES EDWARD JENNINGS	Registration Number	82669

This collection of information is required by 37 CFR 1.97 and 1.98. 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 1 hour 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.**

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 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 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.

Serial No.: 13/724,287
Filing Date: 12/21/2012
Confirmation No.: 8891
GAU:3766

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: JENNINGS, James Edward

SERIAL NO.: 13/724,287

FILING DATE: 12/21/ 2012

TITLE: INTRINSIC TRANSDUCTION SYSTEM

GROUP ART UNIT: 3766

EXAMINER: Porter, Jr. Gary A.

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

RESPONSE/AMENDMENT

Dear Examiner Porter:

This correspondence is being filed as a Response to the Office Action issued on June 22, 2015.

Applicant requests entry of the amendments indicated below and consideration of the appended remarks.

REMARKS

Applicant claims the invention to be obvious variants. Applicant agrees there is an abundance of inseparable systemic novelty. No new matter has been entered by way of these amendments.

AMENDMENTS TO DRAWINGS: NONE

AMENDMENTS TO CLAIMS: NONE

AMENDMENTS TO SPECIFICATION: NONE

SPIN DISK DEFINITION

A homopolar generator is a DC electrical generator comprising an electrically conductive disc or cylinder rotating in a plane perpendicular to a uniform static magnetic field. A potential difference is created between the center of the disc and the rim (or ends of the cylinder) with an electrical polarity that depends on the direction of rotation and the orientation of the field. It is also known as a unipolar generator, acyclic generator, disk dynamo, or Faraday disc. TESLA US PATENT 406,968 IDS ADDITION.

We have suggested the transistor of negative ions for their health benefits. However, production of positive ions exists in a electro magnetic field, leads serve as electrodes.

ION BASED ELECTRONIC CHIP SOURCE: PLUG

<http://www.sciencedaily.com/releases/2012/05/120529113543.htm>

ARGUMENTS: NONE

Applicant respectfully requests reconsideration of the application and its passage to allowance. Should any impediments to allowance remain, Applicant requests that the Examiner contact the undersigned at the indicated phone number.

Respectfully submitted, James Jennings

/JAMES EDWARD JENNINGS/

Date: 06/30/2015

By: _____

PO Box 270081 Louisville, CO 80027

303.664.1829

Electronic Acknowledgement Receipt

EFS ID:	22784902
Application Number:	13724287
International Application Number:	
Confirmation Number:	8891
Title of Invention:	INTRINSIC TRANSDUCTION SYSTEM
First Named Inventor/Applicant Name:	JAMES EDWARD JENNINGS
Customer Number:	82669
Filer:	James Edward Jennings
Filer Authorized By:	
Attorney Docket Number:	
Receipt Date:	30-JUN-2015
Filing Date:	21-DEC-2012
Time Stamp:	13:17:41
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
------------------------	----

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	13724287_IDS_13.pdf	613029 <small>19e4cff55eb1586c557bf59b9c797f77f93a1c62</small>	no	5

Warnings:

Information:

2	Applicant Arguments/Remarks Made in an Amendment	PIEZOMID_LETTER_SPIN.pdf	34756 3f9893419673bec2852f8f6a126fc1704ae2c584	no	2
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Warnings:

Information:

Total Files Size (in bytes):	647785
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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

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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

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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P.O. Box 1450
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www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/724,287	12/21/2012	JAMES EDWARD JENNINGS		8891

82669 7590 06/22/2015
James Edward Jennings
P.O. Box 270081
Louisville, CO 80027

EXAMINER

PORTER, JR, GARY A

ART UNIT	PAPER NUMBER
----------	--------------

3766

MAIL DATE	DELIVERY MODE
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06/22/2015

PAPER

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.

DETAILED ACTION

1. The present application is being examined under the pre-AIA first to invent provisions.

Response to Arguments

2. Applicant's response received 06/09/2015 has not overcome any of the rejections set forth in the Final Rejection mailed 05/28/2015. Specifically, Applicant's response has not addressed any of the points set forth in the Final Rejection.

3. In order to advance prosecution, the Examiner notes that, at the very least, clarification must be made with regard to the spin piezoelectric transducer and the negative ion transistor. As noted in the Final Rejection, the Examiner contends these terms/structures are not well-known or established structures in the art of energy delivery. The Examiner respectfully requests Applicant submit any pertinent references that disclose that a spin piezoelectric transducer and a negative ion transistor are well-known components or the Examiner respectfully requests Applicant to submit any documentation or explanation detailing how the spin piezoelectric transducer and the negative ion transistor are constructed. The Examiner also notes that a follow-up interview will be held after the submission of this Advisory Action in order to clarify the structure of the spin piezoelectric transducer and the negative ion transistor in hopes of moving this application forward.

Art Unit: 3766

4. Additionally, the Examiner notes the following resources available to Applicant to aid in prosecution of this application, specifically regarding any questions related to any particular statute or procedural matter in the patent application process:

Pro se assistance center info:

<http://www.uspto.gov/patents-getting-started/using-legal-services/pro-se-assistance-program>

Email: IndependentInventor@uspto.gov

Toll free phone number: 1-866-767-3848

Pro Bono Program:

-provides free legal representation if you are eligible and selected into the program. Each state has different requirements, but I have included the link below and recommend checking with the program in your state to see if you qualify and are eligible to receive services. <http://www.uspto.gov/patents-getting-started/using-legal-services/pro-bono>

5. Also attached to this action is a form authorizing email communications. The Examiner suggests signing the authorization form and submitting it at Applicant's earliest convenience.

6. In summary, the Final Rejection is maintained. Before submitting any additional paperwork to the office regarding this application, the Examiner respectfully requests Applicant contact the Examiner to discuss the options going forward.

Art Unit: 3766

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALLEN PORTER, JR whose telephone number is (571)270-5419. The examiner can normally be reached on Monday - Friday, 9AM - 6PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Layno can be reached on (571)272-4949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ALLEN PORTER, JR/
Primary Examiner, Art Unit 3766

Advisory Action Before the Filing of an Appeal Brief	Application No. 13/724,287	Applicant(s) JENNINGS, JAMES EDWARD	
	Examiner ALLEN PORTER, JR	Art Unit 3766	AIA (First Inventor to File) Status No

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

THE REPLY FILED 09 June 2015 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

NO NOTICE OF APPEAL FILED

1. The reply was filed after a final rejection. No Notice of Appeal has been filed. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114 if this is a utility or plant application. Note that RCEs are not permitted in design applications. The reply must be filed within one of the following time periods:

- a) The period for reply expires _____ months from the mailing date of the final rejection.
- b) The period for reply expires on: (1) the mailing date of this Advisory Action; or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
- c) A prior Advisory Action was mailed more than 3 months after the mailing date of the final rejection in response to a first after-final reply filed within 2 months of the mailing date of the final rejection. The current period for reply expires _____ months from the mailing date of the prior Advisory Action or SIX MONTHS from the mailing date of the final rejection, whichever is earlier.

Examiner Note: If box 1 is checked, check either box (a), (b) or (c). ONLY CHECK BOX (b) WHEN THIS ADVISORY ACTION IS THE FIRST RESPONSE TO APPLICANT'S FIRST AFTER-FINAL REPLY WHICH WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. ONLY CHECK BOX (c) IN THE LIMITED SITUATION SET FORTH UNDER BOX (c). See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) or (c) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. The proposed amendments filed after a final rejection, but prior to the date of filing a brief, will not be entered because
- a) They raise new issues that would require further consideration and/or search (see NOTE below);
 - b) They raise the issue of new matter (see NOTE below);
 - c) They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
 - d) They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

- 4. The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
- 5. Applicant's reply has overcome the following rejection(s): _____.
- 6. Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
- 7. For purposes of appeal, the proposed amendment(s): (a) will not be entered, or (b) will be entered, and an explanation of how the new or amended claims would be rejected is provided below or appended.

AFFIDAVIT OR OTHER EVIDENCE

- 8. A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.
- 9. The affidavit or other evidence filed after final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
- 10. The affidavit or other evidence filed after the date of filing the Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
- 11. The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

- 12. The request for reconsideration has been considered but does NOT place the application in condition for allowance because: see attached Response to Arguments.
- 13. Note the attached Information *Disclosure Statement(s)*. (PTO/SB/08) Paper No(s). _____
- 14. Other: attached email communication authorization form.

STATUS OF CLAIMS

15. The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: _____
 Claim(s) objected to: _____
 Claim(s) rejected: 7-9.
 Claim(s) withdrawn from consideration: _____

/ALLEN PORTER, JR/
 Primary Examiner, Art Unit 3766

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application Number:

Filing Date:

Title:

Examiner Name: Allen Porter, Jr.

Art Unit: 3766

* * * * *

Date:

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

AUTHORIZATION FOR ELECTRONIC COMMUNICATION

Sir:

Recognizing that Internet communications are not secure, I/we hereby authorize the USPTO to communicate with me/us concerning any subject matter of this application by electronic mail. I/We understand that a copy of these communications will be made of record in the application file.

Respectfully submitted,

By: _____

Printed Name:

Email Address:

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		13724287
	Filing Date		2012-12-21
	First Named Inventor	JAMES EDWARD JENNINGS	
	Art Unit		3766
	Examiner Name	PORTER, GARY A.	
	Attorney Docket Number		

U.S.PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	8627512		2014-01-14	DODD	HINGED PLATES
	2	8894514		2014-11-25	JENNINGS	PIEZOELECTRIC SMART DEVICE
	3	8961733		2015-02-24	DODD	HINGED PLATES
	4	8161826		2012-12-24	TAYLOR	PIEZOELECTRIC MATRIX
	5	7487606		2009-02-10	KOO	ACUPRESSURE SHOE
	6	7309357		2012-12-18	KIM	PROSTHETIC DISK
	7	6703785		2004-03-09	AIKI	NEGATIVE ION GENERATOR
	8	7163545		2007-01-16	YASZEMSKI	SPINAL IMPLANT

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	13724287
Filing Date	2012-12-21
First Named Inventor	JAMES EDWARD JENNINGS
Art Unit	3766
Examiner Name	PORTER, GARY A.
Attorney Docket Number	

9	5500635		1996-03-19	MOTT	PIEZOELECTRIC SHOE
10	1962565		1934-06-12	LAKHOVSKY	OSCILLATING CIRCUITS
11	0609250		1898-08-16	TESLA	ELECTRICAL IGNITER
12	3540823		1970-11-17	EBINE	PIEZOELECTRIC SPARK

If you wish to add additional U.S. Patent citation information please click the Add button. Add

U.S.PATENT APPLICATION PUBLICATIONS

Remove

Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1					

If you wish to add additional U.S. Published Application citation information please click the Add button. Add

FOREIGN PATENT DOCUMENTS

Remove

Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ² j	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T ⁵
	1							<input type="checkbox"/>

If you wish to add additional Foreign Patent Document citation information please click the Add button Add

NON-PATENT LITERATURE DOCUMENTS

Remove

Examiner Initials*	Cite No	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, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		13724287
	Filing Date		2012-12-21
	First Named Inventor	JAMES EDWARD JENNINGS	
	Art Unit		3766
	Examiner Name	PORTER, GARY A.	
	Attorney Docket Number		

1	Ion-based electronic chip to control muscles: Entirely new circuit technology based on ions and molecules Linköping University, http://www.sciencedaily.com/releases/2012/05/120529113543.htm	<input type="checkbox"/>
---	--	--------------------------

If you wish to add additional non-patent literature document citation information please click the Add button **Add**

EXAMINER SIGNATURE

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

***EXAMINER:** Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	13724287
	Filing Date	2012-12-21
	First Named Inventor	JAMES EDWARD JENNINGS
	Art Unit	3766
	Examiner Name	PORTER, GARY A.
	Attorney Docket Number	

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.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

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	/JAMES EDWARD JENNINGS/	Date (YYYY-MM-DD)	2015-06-09
Name/Print	JAMES EDWARD JENNINGS	Registration Number	82669

This collection of information is required by 37 CFR 1.97 and 1.98. 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 1 hour 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.**

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 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 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.



Serial No.: 13/724,287
Filing Date: 12/21/2012
Confirmation No.: 8891
GAU:3766

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: JENNINGS, James Edward

SERIAL NO.: 13/724,287

FILING DATE: 12/21/ 2012

TITLE: INTRINSIC TRANSDUCTION SYSTEM

GROUP ART UNIT: 3766

EXAMINER: Porter, Jr. Gary A.

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

RESPONSE/AMENDMENT

Dear Examiner Porter:

This correspondence is being filed as a Response to the Office Action issued on March 12, 2015.

Applicant requests entry of the amendments indicated below and consideration of the appended remarks.

REMARKS

Applicant claims the invention to be obvious variants. Applicant agrees there is an abundance of inseparable systemic novelty. No new matter has been entered by way of these amendments.

AMENDMENTS TO DRAWINGS: NONE

AMENDMENTS TO CLAIMS: NONE

AMENDMENTS TO SPECIFICATION: NONE

SPARK PLUG (CLEAT/DISK) DEFINITION

A spark plug (sometimes, in British English, a sparking plug, and, colloquially, a plug) is a device for delivering electric current from an ignition system to the combustion chamber of a spark-ignition engine to ignite the compressed fuel/air mixture by an electric spark, while containing combustion pressure within the engine. A spark plug has a metal threaded shell, electrically isolated from a central electrode by a porcelain insulator. Once the voltage exceeds the dielectric strength of the gases, the gases become ionized. The ionized gas becomes a conductor and allows electrons to flow across the gap.

SPARK GAP (CLEAT/DISK) DEFINITION

A spark gap consists of an arrangement of two conducting electrodes separated by a gap usually filled with a gas such as air, designed to allow an electric spark to pass between the conductors. When the voltage difference between the conductors exceeds the breakdown voltage of the gas within the gap, a spark forms, ionizing the gas and drastically reducing its electrical resistance.

REVISED IDS SUBMITTED WITH SPARK PLUG AND PIEZOELECTRIC GAP

ION BASED ELECTRONIC CHIP SOURCE: PLUG

<http://www.sciencedaily.com/releases/2012/05/120529113543.htm>

DRAWINGS: Non black and white depicting SPARK PLUGS.

ARGUMENTS: SPARK PLUGS AND LIGHTERS

There is even a presumption that a patented invention is commercially successful for purposes of nonobviousness "when a patentee can demonstrate commercial success, usually shown by significant sales in a relevant market, and that the successful product is the invention disclosed and claimed in the patent" *Ecolchem, supra*, 227 F.3d at 1377; citing *J.T. Eaton & Co. v. Atlantic Paste & Glue Co.*, 106 F.3d 1563, 1571 (Fed. Cir. 1997).

Applicant respectfully requests reconsideration of the application and its passage to allowance. Should any impediments to allowance remain, Applicant requests that the Examiner contact the undersigned at the indicated phone number.

Respectfully submitted, James Jennings

/JAMES EDWARD JENNINGS/

Date: 06/09/2015

By: _____

PO Box 270081 Louisville, CO 80027

303.664.1829

Electronic Acknowledgement Receipt

EFS ID:	22570885
Application Number:	13724287
International Application Number:	
Confirmation Number:	8891
Title of Invention:	INTRINSIC TRANSDUCTION SYSTEM
First Named Inventor/Applicant Name:	JAMES EDWARD JENNINGS
Customer Number:	82669
Filer:	James Edward Jennings
Filer Authorized By:	
Attorney Docket Number:	
Receipt Date:	09-JUN-2015
Filing Date:	21-DEC-2012
Time Stamp:	00:30:04
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	13724287_IDS_12.pdf	612977 <small>87810831a4519c1155050a71c79fc6f9829d33a3</small>	no	5

Warnings:

Information:

2	Drawings-other than black and white line drawings	SPARK_ART.pdf	203113	no	1
			8dfc9edd1a26e8c55c6a61db805fdcfcb3233efc		

Warnings:

Information:

3	Applicant Arguments/Remarks Made in an Amendment	PIEZOMID_LETTER_SPARK.pdf	32227	no	3
			e0c6f3ae758e24330e1c331460f1163159d5d0f9		

Warnings:

Information:

Total Files Size (in bytes):			848317		
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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 a 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.

SCORE Placeholder Sheet for IFW Content

Application Number: 13724287

Document Date: 06/09/2015

The presence of this form in the IFW record indicates that the following document type was received in electronic format on the date identified above. This content is stored in the SCORE database.

Since this was an electronic submission, there is no physical artifact folder, no artifact folder is recorded in PALM, and no paper documents or physical media exist. The TIFF images in the IFW record were created from the original documents that are stored in SCORE.

- Drawing

At the time of document entry (noted above):

- USPTO employees may access SCORE content via eDAN using the Supplemental Content tab, or via the SCORE web page.
- External customers may access SCORE content via PAIR using the Supplemental Content tab.

Electronic Patent Application Fee Transmittal

Application Number:	13724287			
Filing Date:	21-Dec-2012			
Title of Invention:	INTRINSIC TRANSDUCTION SYSTEM			
First Named Inventor/Applicant Name:	JAMES EDWARD JENNINGS			
Filer:	James Edward Jennings			
Attorney Docket Number:				
Filed as Micro Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension - 1 month with \$0 paid	3251	1	50	50
Miscellaneous:				
Total in USD (\$)				50

Electronic Acknowledgement Receipt

EFS ID:	22530154
Application Number:	13724287
International Application Number:	
Confirmation Number:	8891
Title of Invention:	INTRINSIC TRANSDUCTION SYSTEM
First Named Inventor/Applicant Name:	JAMES EDWARD JENNINGS
Customer Number:	82669
Filer:	James Edward Jennings
Filer Authorized By:	
Attorney Docket Number:	
Receipt Date:	03-JUN-2015
Filing Date:	21-DEC-2012
Time Stamp:	18:48:20
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$50
RAM confirmation Number	5400
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Fee Worksheet (SB06)	fee-info.pdf	30283 <small>c214e82bbd1c9844a55ab130988c9a4b5b39b41b</small>	no	2

Warnings:

Information:

Total Files Size (in bytes):	30283
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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 a 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

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/724,287	12/21/2012	JAMES EDWARD JENNINGS		8891

82669 7590 05/28/2015
James Edward Jennings
P.O. Box 270081
Louisville, CO 80027

EXAMINER

PORTER, JR, GARY A

ART UNIT	PAPER NUMBER
----------	--------------

3766

MAIL DATE	DELIVERY MODE
-----------	---------------

05/28/2015

PAPER

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.

Office Action Summary	Application No. 13/724,287	Applicant(s) JENNINGS, JAMES EDWARD	
	Examiner ALLEN PORTER, JR	Art Unit 3766	AIA (First Inventor to File) Status No

-- 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 05/13/2015.
 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) 7-9 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) 7-9 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 05/13/2015 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)

- | | |
|--|--|
| <p>1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)</p> <p>2) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)
 Paper No(s)/Mail Date <u>05/13/2015</u></p> | <p>3) <input type="checkbox"/> Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____</p> <p>4) <input type="checkbox"/> Other: _____</p> |
|--|--|

DETAILED ACTION

1. The present application is being examined under the pre-AIA first to invent provisions.
2. An examination of this application reveals that applicant is unfamiliar with patent prosecution procedure. While an applicant may prosecute the application (except that a juristic entity must be represented by a patent practitioner, 37 CFR 1.31), lack of skill in this field usually acts as a liability in affording the maximum protection for the invention disclosed. Applicant is advised to secure the services of a registered patent attorney or agent to prosecute the application, since the value of a patent is largely dependent upon skilled preparation and prosecution. The Office cannot aid in selecting an attorney or agent.

A listing of registered patent attorneys and agents is available at <https://oedci.uspto.gov/OEDCI/>. Applicants may also obtain a list of registered patent attorneys and agents located in their area by writing to the Mail Stop OED, Director of the U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450.

The Examiner further respectfully requests Applicant contact the Examiner or the Examiner's Supervisor, Carl Layno to discuss any future issues or amendments before submitting a response to the Office in order to avoid procedural errors and to expedite prosecution of the application.

Response to Amendment

3. The Examiner notes that numerous responses have been filed by Applicant since the Non-Final Rejection was mailed on 08/26/2014.
4. The Abstract received 10/27/2014 was a proper submission and therefore has been entered into the record.
5. The Claim amendment submitted 12/18/2014 was not entered since the reply was non-responsive. Particularly, Applicant only made amendments to the claims without responding to each and every rejection and objection set forth in Non-Final Rejection (see notice of Non-Compliant Amendment mailed 12/22/2014).
6. The Specification and arguments received 12/26/2014 were not entered since Applicant did not identify in the response the paragraph locations that were or have been amended (see Notice of Non-Compliant Amendment mailed 03/12/2015).
7. The Specification and arguments received 03/22/2015 are also not entered since, again, Applicant has not clearly identified the sections of the specification that have been amended.
8. Likewise, the specification received 05/13/2015 is not entered because Applicant has not clearly identified the sections of the specification that have been amended.
9. The Examiner suggests Applicant begin any new amendments to the specification with the original copy of the specification received 12/21/2012. Any changes Applicant made in the above identified specifications that were not entered need to be incorporated into the original specification by underlining any additions and placing a strikethrough on any deletions. Then Applicant then needs to include an

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accompanying statement clearly identifying each paragraph location within the specification that was amended. Lastly, in addition to submitting the marked-up copy, Applicant needs to submit a clean, un-marked copy (see MPEP §608.01(q), particularly form paragraph 6.28.02; see also 37 CFR 1.125 (c)).

10. For purposes of Examination, the Examiner will refer to the most recent copy of the specification (05/13/2015) since this version resolves some of the issues previously presented in the Non-Final Rejection.

Response to Arguments

11. Applicant's arguments filed 05/13/2015 have been fully considered but they are not persuasive. The definitions provided regarding "sole", "annulus" and "nucleus" are not sufficient to overcome the specification objections. It is not the singular words that create issues in the specification but the combination of descriptors in the specification that makes the specification unclear.

12. For instance, the term "piezoelectric insole 26 embed coupler outsole 42 base member" is quite lengthy and is not clearly described in respect to a shoe, thus making the common definition of "sole" as proved by Applicant moot. Even if it were described explicitly with respect to a shoe, it is still unclear what a piezoelectric insole embed coupler outsole base member is.

13. The biological definition of annulus and nucleus is not persuasive in that the manner in which annulus and nucleus is being used describes man-made structure not

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biological or genetic tissue. Therefore, “nucleus midsole” and “annulus outsole” as stated in the specification are still unclear.

14. Applicant’s arguments received 10/27/2014 regarding the pre-AIA 35 U.S.C. 102(b) rejection of Claims 4-6 as being anticipated by Koo et al. (2006/0235465) have been considered but are not persuasive. Applicant merely asserts that the claims overcome the art without providing a detailed reasoning with respect to the claim elements.

15. Applicant should submit an argument under the heading “Remarks” pointing out disagreements with the examiner’s contentions. Applicant must also discuss the references applied against the claims, explaining how the claims avoid the references or distinguish from them. A simple statement stating that the claims overcome the reference is not sufficient.

Information Disclosure Statement

16. The information disclosure statement filed 05/13/2015 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. Therefore, the non-patent literature cited therein has not been considered.

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Claim Objections

17. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 4, 5 and 6 been renumbered 7, 8 and 9.

19. Particularly, Applicant made changes to the language of claims 4-6 in the claim set received 5/13/2015 without underlining any additions and striking through any deletions. To expedite prosecution, the Examiner suggests providing a claim amendment that indicates claims 4-6 are cancelled and renumbers the currently presented claims as "New".

Specification

20. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

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21. 35 U.S.C. 112(a) or pre-AIA 35 U.S.C. 112, requires the specification to be written in “full, clear, concise, and exact terms.” The specification is replete with terms which are not clear, concise and exact. The specification should be revised carefully in order to comply with 35 U.S.C. 112(a) or pre-AIA 35 U.S.C. 112. Examples of some unclear, inexact or verbose terms used in the specification are: “piezoelectric insole 26 embed coupler outsole 42 base member (par. [0032])”, “mid 30-out 42 molded transducer disc prosthesis 46, 48 (par. [0032])”, “nucleus midsole 30 (par. [0032])”, “annulus outsole 42 (par. [0032])”, etc. These terms are not common terms in the art and Applicant has failed to describe exactly what structure these terms encompass.

22. Applicant cited definitions for “nucleus” and “annulus” in the response received 12/26/2014. However, the definition provided for “nucleus” does not overcome the issue raised above. Particularly, the term “nucleus” in the specification is relating to a man-made structure and not a cell or other generic material. The term “nucleus midsole 30” in par. [0032] therefor remains unclear. Likewise, while annulus may mean “little ring”, it is unclear what Applicant is defining by the term “annulus outsole”. By substituting “little ring” for “annulus” one would obtain the term “little ring outsole” which is likewise indefinite and unclear. Applicant has not addressed the meaning or clarity of the other cited phrases “piezoelectric insole 26 embed coupler outsole 42 base member” in par. [0032] and “mid 30-out 42 molded transducer disc prosthesis 46, 48” in par. [0032]).

23. These are but a few examples of the confusing and unclear wording of the specification. Other examples include: “out 42 plate transducers 35”, “transistors nucleus”, “molded intervertebral mid 30-out 42 discs”, “athletic apparel transducers

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head to toe garments”, “spark transducer mid 30 out 42 cleats 72”, and “transducer 35 shoe mid 30-out 42 sole”.

24. Clarification of these terms and descriptors is respectfully requested. Currently, it is unclear exactly what type of structure these terms are describing.

Claim Rejections - 35 USC § 112

25. 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.

26. Claims 7-9 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 enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

27. As noted in the interview held 05/13/2015 and as further noted in the interview summary mailed 05/14/2015, Applicant’s specification and claims contain two structural elements that have not been described in the specification in enough detail to allow one

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skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

28. The first term is the claimed “impact/spin-sensing element” (Claim 7), which is labeled in the specification as “spin Piezoelectric transducer 33.” Applicant indicated in the interview that this structure comprises a bowl or dish with two quarters or presumably quarter-sized metal elements located therein. Applicant referred to Fig. 1 as showing this construction. However, as noted in the interview, Applicant has not described any structural details that would allow a spinning movement of said quarters or quarter-sized elements in the dish to be converted to electrical energy. While the specification and claims broadly state that the device is made from a piezoelectric material, this does not clearly describe how said piezoelectric material is incorporated into the device to transform mechanical energy from the spinning quarters or quarter-sized elements into electrical energy or more specifically ion energy.

29. The second term that is not enabled is a “negative ion transistor 99” (see Fig. 21; Claim 7). The Examiner notes that while transistors are well-known in the art, such as MOSFET, CMOS, BJT etc., a “negative ion transistor” is not a commonly defined type of transistor. The Examiner is unfamiliar with this type of transistor and a search of “negative ion transistors” or “ion transistor” in ebscohost and the EAST patent database failed to produce any standard definition or structural configuration of a “negative ion transistor.” The most pertinent art found was Aiki et al. (2003/0011956) which disclose a negative ion generator that requires a highly specified configuration, such as a positive ion detecting circuit, air passage 10, fan 11, electrode 12, etc. None of these

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components singularly or in combination can reasonably be considered a “transistor” as is known in the art.

30. It appears from the IDS submitted 05/13/2015 that Applicant cited an article titled “Ion-based electronic chip to control muscles” presumably to address concerns raised in the interview held 05/13/2015 regarding the negative ion transistor. However, the Examiner notes that a chip is not a transistor and Applicant has not further commented or described in an argument or remark stating how said reference is pertinent to the current invention. The Examiner suggests providing a copy of the article along with any Remarks describing how said chip is pertinent to the current invention.

31. In summary, the term “negative ion transistor” is not a commonly known and well-defined structure in the art. Since Applicant has not provided the details regarding this structure, one skilled in the art to which it pertains, or with which it is most nearly connected, cannot make and/or use the invention

32. Claims 7-9 are rejected under 35 U.S.C. 112(a) or 35 U.S.C. 112 (pre-AIA), first paragraph, because the specification, while being enabling for either a prosthetic disc located in or near the spine or a shoe, does not reasonably provide enablement for a system that combines function and or components of the prosthetic disc with the shoe. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

33. The following is a quotation of 35 U.S.C. 112(b):

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(b) CONCLUSION.—The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.

The following is a quotation of 35 U.S.C. 112 (pre-AIA), second paragraph:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

34. Claims 7-9 are rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor, or for pre-AIA the applicant regards as the invention.

35. The claim(s) are narrative in form and replete with indefinite language. The structure which goes to make up the device must be clearly and positively specified. The structure must be organized and correlated in such a manner as to present a complete operative device. The claim(s) must be in one sentence form only. Note the format of the claims in the patent(s) cited.

36. First, Claim 7 recites the limitations "the negative ion transducer" and "the therapeutic fluid." There is insufficient antecedent basis for these limitations in the claim.

37. Claim 9 contains similar issues.

38. Additionally, Claim 7 states "an intrinsic transduction system comprising" a series of discrete parts that are not clearly connected to form a singular system. Instead, the claims read as a parts list with no clear cooperative or structural relationship amongst the parts. Claims 8 and 9 contain the same issue. The Examiner suggests amending

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the claims to clearly connect and associate the subcomponents in order to clearly define the intrinsic transduction system.

Claim Rejections - 35 USC § 102

39. The following is a quotation of the appropriate paragraphs of pre-AIA 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 –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

40. Claims 7-9 are rejected under pre-AIA 35 U.S.C. 102(b) as being anticipated by Koo et al. (2006/0235465).

41. The Examiner notes the following rejection is made with respect to the Examiner's best understanding of the invention in light of the numerous 35 U.S.C. §112 (a) and (b) rejections above.

42. Regarding Claims 4-6, Koo discloses a shoe comprising and outsole 1 containing a battery 110, a micro-current generating circuit 100, 120 and an acupressure component 200 (Fig. 10). The micro-current generating circuit 100, 120 contains a piezoelectric actuator that provides positive and negative charges to a crystalline plate in proportion to an external force, such external force being applied to the crystalline plate (par. [0104]). The current generated by the piezoelectric actuator is passed through conduction part 300 to acupressure component 200 to apply current to a patient at a desired acupuncture/acupressure point (par. [0099]). Lastly, Koo discloses the

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micro-current generating circuit 100, 120 and therefore the piezoelectric actuator are disc-shaped (Fig. 11).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALLEN PORTER, JR whose telephone number is (571)270-5419. The examiner can normally be reached on Monday - Friday, 9AM - 6PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Layno can be reached on (571)272-4949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ALLEN PORTER, JR/
Primary Examiner, Art Unit 3766

Notice of References Cited	Application/Control No. 13/724,287	Applicant(s)/Patent Under Reexamination JENNINGS, JAMES EDWARD	
	Examiner ALLEN PORTER, JR	Art Unit 3766	Page 1 of 1

U.S. PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A US-2003/0011956	01-2003	Aiki et al.	361/230
	B US-			
	C US-			
	D US-			
	E US-			
	F US-			
	G US-			
	H US-			
	I US-			
	J US-			
	K US-			
	L US-			
	M US-			


FOREIGN PATENT DOCUMENTS

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

NON-PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	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 MM-YYYY format are publication dates. Classifications may be US or foreign.

<i>Index of Claims</i> 	Application/Control No. 13724287	Applicant(s)/Patent Under Reexamination JENNINGS, JAMES EDWARD
	Examiner ALLEN PORTER, JR	Art Unit 3766

✓	Rejected
=	Allowed

-	Cancelled
÷	Restricted

N	Non-Elected
I	Interference

A	Appeal
O	Objected

Claims renumbered in the same order as presented by applicant
 CPA
 T.D.
 R.1.47

CLAIM		DATE							
Final	Original	05/02/2014	08/22/2014	05/27/2015					
	1	÷	-	-					
	2	÷	-	-					
	3	÷	-	-					
	4		✓	-					
	5		✓	-					
	6		✓	-					
	7			✓					
	8			✓					
	9			✓					

Receipt date: 05/13/2015

Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

13724287 - GAI: 3766

Approved for use through 07/31/2012. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		13724287
	Filing Date		2012-12-21
	First Named Inventor	JAMES EDWARD JENNINGS	
	Art Unit	3766	
	Examiner Name	PORTER, GARY A.	
	Attorney Docket Number		

U.S.PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	8627512		2014-01-14	DODD	HINGED PLATES
	2	8894514		2014-11-25	JENNINGS	PIEZOELECTRIC SMART DEVICE
	3	8961733		2015-02-24	DODD	HINGED PLATES
	4	8161826		2012-12-24	TAYLOR	PIEZOELECTRIC MATRIX
	5	7487606		2009-02-10	KOO	ACUPRESSURE SHOE
	6	7309357		2012-12-18	KIM	PROSTHETIC DISK
	7	6703785		2004-03-09	AIKI	NEGATIVE ION GENERATOR
	8	7163545		2007-01-16	YASZEMSKI	SPINAL IMPLANT

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	13724287	13724287 - GAU: 3766
	Filing Date	2012-12-21	
	First Named Inventor	JAMES EDWARD JENNINGS	
	Art Unit	3766	
	Examiner Name	PORTER, GARY A.	
	Attorney Docket Number		

	9	5500635		1996-03-19	MOTT	PIEZOELECTRIC SHOE
	10	1962565		1934-06-12	LAKHOVSKY	OSCILLATING CIRCUITS

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	1							<input type="checkbox"/>

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Examiner Initials*	Cite No	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, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
	1	Ion-based electronic chip to control muscles: Entirely new circuit technology based on ions and molecules Linköping University, http://www.sciencedaily.com/releases/2012/05/120529113543.htm	<input type="checkbox"/>

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	13724287	13724287 - GAU: 3766
	Filing Date	2012-12-21	
	First Named Inventor	JAMES EDWARD JENNINGS	
	Art Unit	3766	
	Examiner Name	PORTER, GARY A.	
	Attorney Docket Number		

EXAMINER SIGNATURE			
Examiner Signature	/Gary Porter, Jr/	Date Considered	05/27/2015

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	13724287	13724287 - GAU: 3766
	Filing Date	2012-12-21	
	First Named Inventor	JAMES EDWARD JENNINGS	
	Art Unit	3766	
	Examiner Name	PORTER, GARY A.	
	Attorney Docket Number		

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.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

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	/JAMES EDWARD JENNINGS/	Date (YYYY-MM-DD)	2015-05-13
Name/Print	JAMES EDWARD JENNINGS	Registration Number	82669

This collection of information is required by 37 CFR 1.97 and 1.98. 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 1 hour 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.**


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 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 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.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /G.P./

Search Notes 	Application/Control No. 13724287	Applicant(s)/Patent Under Reexamination JENNINGS, JAMES EDWARD
	Examiner ALLEN PORTER, JR	Art Unit 3766

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
607	2, 46, 48, 49, 62	8/22/2014	GAP
606	204	8/22/2014	GAP
310	800	8/22/2014	GAP
36	43	8/22/2014	GAP
128	898	8/22/2014	GAP

SEARCH NOTES		
Search Notes	Date	Examiner
EAST search with inventor name search	8/22/2014	GAP
searched EAST and EBSCOhost for "negative ion transistor" or "ion transistor"	5/27/2015	GAP

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner

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EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	467	(negative ion transistor) or (ion transistor)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2015/05/27 11:12
L2	9	(negative ion transistor)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2015/05/27 11:12
L3	3	"20060235465"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2015/05/27 11:49
L4	9	"20060122677"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2015/05/27 11:49
L5	5	"20080039905"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2015/05/27 11:49
L6	0	4 and piezoelectric	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2015/05/27 11:50
L7	0	5 and piezoelectric	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2015/05/27 11:50
L8	11	("20040111924" "20060185196"	US-PGPUB;	ADJ	ON	2015/05/27

		"20080005936" "20080066343" "20080132811" "5860229" "7069672" "7231730" "7347831").PN. OR ("7487606").URPN.	USPAT; USOCR			11:53
L9	0	8 and piezoelectric	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2015/05/27 11:54
L10	22	US-8627512-\$.DID. OR US-8894514- \$.DID. OR DE-38961733-\$.DID. OR US- 8961733-\$.DID. OR US-8161826-\$.DID. OR US-7487606-\$.DID. OR US-7309357- \$.DID. OR US-6703785-\$.DID. OR US- 7163545-\$.DID. OR US-5500635-\$.DID. OR US-1962565-\$.DID. OR US-1331018- \$.DID.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2015/05/27 12:00

5/ 27/ 2015 12:05:07 PM

C:\Users\gporter1\Documents\EAST\Workspaces\Workspaces\Workspaces\13-724-287-stim-garment.wsp



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/724,287	12/21/2012	JAMES EDWARD JENNINGS		8891

82669 7590 05/14/2015
James Edward Jennings
P.O. Box 270081
Louisville, CO 80027

EXAMINER

PORTER, JR, GARY A

ART UNIT	PAPER NUMBER
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3766

MAIL DATE	DELIVERY MODE
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05/14/2015

PAPER

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.

Examiner-Initiated Interview Summary	Application No. 13/724,287	Applicant(s) JENNINGS, JAMES EDWARD	
	Examiner ALLEN PORTER, JR	Art Unit 3766	

All participants (applicant, applicant's representative, PTO personnel):

- (1) ALLEN PORTER, JR. (3) JAMES JENNINGS.
(2) CARL LAYNO. (4) _____.

Date of Interview: 13 May 2015.

Type: Telephonic Video Conference
 Personal [copy given to: applicant applicant's representative]

Exhibit shown or demonstration conducted: Yes No.
If Yes, brief description: _____.

Issues Discussed 101 112 102 103 Others
(For each of the checked box(es) above, please describe below the issue and detailed description of the discussion)

Claim(s) discussed: 4-6.

Identification of prior art discussed: n/a.

Substance of Interview

(For each issue discussed, provide a detailed description and indicate if agreement was reached. Some topics may include: identification or clarification of a reference or a portion thereof, claim interpretation, proposed amendments, arguments of any applied references etc...)

See Continuation Sheet.

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.

Attachment

/ALLEN PORTER, JR/
Primary Examiner, Art Unit 3766

Continuation of Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Discussed the format of the specification. The Examiner noted that the same reference numbers were used to describe different parts in different embodiments (such as reference number 30 which is referred to as mid, middisk, midsole, etc.). The Examiner suggested amending the specification to create subsections for each different embodiment and then use different reference numbers to identify the parts of each embodiment. The reference numbers used to describe a shoe embodiment should not be used to describe a spinal disk and vice-versa. Additionally, there are two structures in the specification that are unclear and not properly disclosed. First, Applicant's specification uses the term "spin Piezoelectric transducer." However, as noted in the interview, this is not a standard structure in the art and it is unclear how to make/reproduce such a transducer without further clarification in the specification. In other words, the structure of a spin Piezoelectric transducer is not enabled by the specification and creates issues in the claims regarding 35 U.S.C. §112, first paragraph. The second structure in question is a "negative ion transistor." Again, this is not a common or standard structure in the art and is not described in the specification in enough detail to allow one skilled in the art to make or use the claimed invention. In other words, this term also raises issues under 35 U.S.C. §112, first paragraph for not being enabled by the specification. The Examiner suggests amending the specification to give the basic structural arrangements of these components. Lastly, the Examiner noted the "means for" language in the claims creates numerous 35 U.S.C. §112 issues, particularly since the language is modified by structure in the claims. Applicant indicated that an amendment would be submitted that removes the "means for" language in the claims.

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Filing Date: 12/21/2012
Confirmation No.: 8891
GAU:1629
PAGES 1-5

1.-3. (CANCELED)

4.(PREVIOUSLY PRESENTED) An intrinsic transduction system comprising:

a piezoelectric molded part having a nerve stimulating unit, circuit and/or a midsole disk device at least partially molded therein;

an impact/spin-sensing element made from a polymeric piezoelectric material, a battery capacitors, a stimulus device and/or an information display device and a circuit connected to said piezoelectric material;

a piezoelectric response to electrical energy produced upon impact/spin, which permits the nerve stimulus device to be energized from the battery and/or any information displaying device to be activated;

a piezoelectric molded oscillation part having a nerve stimulating unit and/or a impact/spin battery/capacitor midsole disk device at least partially molded therein;

a charging the negative ion transistor circuit and battery;

a delivery of an electrical signal and/or to deliver the therapeutic fluid;

a molded part having a nerve stimulating unit and/or a midsole disk device at least partially molded therein a shoe and a prosthetic;

a piezoelectric lead attachment to an upper/garment disk;

a charging battery, capacitor, oscillate circuit;

a piezoelectric outsole/midsole disk device;

a transducer system comprising an athletic apparel circuit provides impact/spin and oscillating disk shoes, disk cleats, disk garments and prosthetics;

a transducer system comprising a piezoelectric circuit for an impact/spin disks subsystem circuit of athletic prosthetics, garments, spark cleats and shoes;

a transducer system comprising a piezoelectric circuit for an oscillating disks subsystem circuit of athletic prosthetics, garments, spark cleats and shoes; and

a therapeutic ion frequency of piezoelectric disks.

5. (PREVIOUSLY PRESENTED) The intrinsic transduction system in accordance with claim **4**, comprising:

wherein said piezoelectric transducer molded part having a nerve stimulating unit, circuit and/or a midsole disk device at least partially molded therein comprises an outsole disk;

wherein said transducer comprises an impact/spin-sensing element made from a polymeric piezoelectric material, a battery capacitor, a stimulus device and/or an information display device and a circuit connected to said piezoelectric material comprises a midsole disk;

wherein said piezoelectric transducer response to electrical energy produced upon impact/spin which permits the nerve stimulus device to be energized from the battery and/or any information

displaying device to be activated comprises a stimulus unit;

wherein said charging the negative ion transistor and battery comprises an oscillating circuit;

wherein said delivers an electrical signal, ion frequency and/or to deliver the therapeutic fluid comprises a therapeutic lead;

wherein said system comprises a molded part having a nerve stimulating unit and/or a midsole disk device at least partially molded therein a shoe and a prosthetic;

wherein said transducer voltage comprises a piezoelectric molded oscillation part having a nerve stimulating unit and/or an impact/spin battery/capacitor midsole disk device at least partially molded therein;

wherein said athletic prosthetic is an oscillating disk lead attachable lead garment;

wherein said athletic shoe is an oscillating disk lead attachable lead upper garment;

wherein said outsole/midsole disk device shoe is a lead attached to oscillating disk garment;

wherein said outsole/midsole disk device shoe and prosthetic is attached to lead garment;

wherein said transducer stimulus comprises a negative ion chip and disk spark cleat;

wherein said stimulation comprises a therapeutic electric signal and ion frequency; and

wherein said therapeutic subsystem comprises a reservoir for fluid delivery lead;

6. (PREVIOUSLY PRESENTED) An intrinsic transduction system comprising:

an outsole disk, a piezoelectric molded part having a nerve stimulating unit, circuit and/or a midsole disk device at least partially molded therein;

a midsole disk, a sensing element made from a polymeric piezoelectric material, a battery capacitor, a stimulus device and/or an information display device and a circuit connected to said piezoelectric material;

a stimulus unit, for piezoelectric response to electrical energy produced upon impact/spin which permits the nerve stimulus device to be energized from the battery and/or any information displaying device to be activated;

an oscillating disk circuit, for charging the negative ion transistor and battery;

a therapeutic lead, for electrical signal and/or delivery of therapeutic fluid;

an outsole disk, a molded part having a nerve stimulating unit and/or a midsole device at least partially molded therein a shoe and a prosthetic;

an upper/garment, for piezoelectric lead attached oscillate circuit and impact/spin disk device;

an outsole, for voltage comprises a piezoelectric molded oscillation part having a nerve stimulating unit and/or an impact/spin battery/capacitor midsole disk device at least partially molded therein;

a transducer system comprising a negative ion circuit, piezoelectric impact/spin disks and oscillating disks;

a transducer system comprising a piezoelectric circuit, impact/spin subsystem circuit of disks prosthetics, disks garments, disks spark cleats and disks shoes;

a transducer system comprising a piezoelectric circuit, oscillation subsystem circuit of disks prosthetics, disks garments, disks spark cleats and disks shoes;

an intrinsic transducer system prosthetic vertebrae disc comprising midsole disk, outsole disk, disk bladders, leads, and having a textile portion touchscreen;

an intrinsic transducer system wherein the piezoelectric circuit comprises therapeutic disks, leads, controllers, resistors, bladders, display and catheters;

an intrinsic transducer system for an athletic garments circuit comprising piezoelectric disks and therapeutic leads;

an intrinsic transducer system for an athletic prosthetic comprises a midsole/outsole disk.

an athletic apparel circuit provides negative ion transistor, impact and spin oscillating disk shoes, disk cleats, disk garments;

a piezoelectric transducer circuit, negative ion subsystem, and impact/spin disks subsystem circuit of athletic prosthetics, garments, spark cleats and shoes; and

a piezoelectric transducer, ion frequency circuit, impact/spin oscillating disks sub circuit of athletic prosthetics, garments, spark cleats and shoes.

Serial No.: 13/724,287
Filing Date: 12/21/2012
Confirmation No.: 8891
GAU:3766

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: JENNINGS, James Edward

SERIAL NO.: 13/724,287

FILING DATE: 12/21/ 2012

TITLE: INTRINSIC TRANSDUCTION SYSTEM

GROUP ART UNIT: 3766

EXAMINER: Porter, Jr. Gary A.

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

RESPONSE/AMENDMENT

Dear Examiner Porter:

This correspondence is being filed as a Response to the Office Action issued on March 12, 2015.

Applicant requests entry of the amendments indicated below and consideration of the appended remarks.

REMARKS

Applicant claims the invention to be obvious variants. Applicant agrees there is an abundance of inseparable systemic novelty. No new matter has been entered by way of these amendments.

AMENDMENTS TO DRAWINGS: revised drawings pages 2 and 8.

AMENDMENTS TO CLAIMS: removal of “means for”

AMENDMENTS TO SPECIFICATION: all mid elements revised to midsole.

SOLE DEFINITION

- 1. bottom or under surface of the foot.**
- 2. corresponding under part of a shoe, boot, or the like, or this part exclusive of the heel.**
- 3. bottom, under surface, or lower part of anything.**
- 4. Carpentry, the underside of a plane, soleplate.**

BIOLOGY DEFINITIONS

Each intervertebral fibrocartilage is composed, at its circumference, of laminae of fibrous tissue and fibrocartilage, forming the anulus fibrosus disci intervertebralis. The lamellae are stiff and sustain compressive loads. The stiffness of the anulus fibrosus works in concert with the gel-like nucleus pulposus to equalise pressure across the disc. This prevents development of stress concentrations which could cause damage to the underlying vertebrae or vertebral endplates.

ANNULUS: Latin for little ring

NUCLEUS: a dense organelle present in most eukaryotic cells, typically a single rounded structure bounded by a double membrane, containing the genetic material.

IDS SUBMITTED WITH ION BASED ELECTRONIC CHIP SOURCE:

<http://www.sciencedaily.com/releases/2012/05/120529113543.htm>

Applicant respectfully requests reconsideration of the application and its passage to allowance.
Should any impediments to allowance remain, Applicant requests that the Examiner contact the undersigned at the indicated phone number.

Respectfully submitted, James Jennings

/JAMES EDWARD JENNINGS/

Date: 05/13/2015

By: _____

PO Box 270081 Louisville, CO 80027

303.664.1829

Electronic Acknowledgement Receipt

EFS ID:	22330261
Application Number:	13724287
International Application Number:	
Confirmation Number:	8891
Title of Invention:	INTRINSIC TRANSDUCTION SYSTEM
First Named Inventor/Applicant Name:	JAMES EDWARD JENNINGS
Customer Number:	82669
Filer:	James Edward Jennings
Filer Authorized By:	
Attorney Docket Number:	
Receipt Date:	13-MAY-2015
Filing Date:	21-DEC-2012
Time Stamp:	09:27:24
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	13724287_IDS.pdf	612893 <small>c4b0871d5ab315925b60b3a2bd214b1b4a396564</small>	no	5

Warnings:

Information:

2	Drawings-only black and white line drawings	ITS_DRAWINGS_NEW3.pdf	144552 29557138aebc8b4f50c48e92961683d8b81ed7f6	no	2
Warnings:					
Information:					
3	Specification	ITS_SPEC_PIEZO_CLEAN_REV.pdf	78122 9a5aa23e53a3d92cbd66fee85281989b795b6fd6	no	16
Warnings:					
Information:					
4	Amendment Copy Claims/Response to Suggested Claims	PIEZOMID_CLAIMS_REVISE.pdf	34327 1fa9cf7ebfda48c3921d935d6b5b3ff549e78794	no	5
Warnings:					
Information:					
5	Applicant Arguments/Remarks Made in an Amendment	PIEZOMID_LETTER_REVISE.pdf	36695 562c9d40466b0f12ab55d0508b497f01fa467970	no	3
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Total Files Size (in bytes):			906589		

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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 a 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.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		13724287
	Filing Date		2012-12-21
	First Named Inventor	JAMES EDWARD JENNINGS	
	Art Unit		3766
	Examiner Name	PORTER, GARY A.	
	Attorney Docket Number		

U.S.PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	8627512		2014-01-14	DODD	HINGED PLATES
	2	8894514		2014-11-25	JENNINGS	PIEZOELECTRIC SMART DEVICE
	3	8961733		2015-02-24	DODD	HINGED PLATES
	4	8161826		2012-12-24	TAYLOR	PIEZOELECTRIC MATRIX
	5	7487606		2009-02-10	KOO	ACUPRESSURE SHOE
	6	7309357		2012-12-18	KIM	PROSTHETIC DISK
	7	6703785		2004-03-09	AIKI	NEGATIVE ION GENERATOR
	8	7163545		2007-01-16	YASZEMSKI	SPINAL IMPLANT

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

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Filing Date	2012-12-21
First Named Inventor	JAMES EDWARD JENNINGS
Art Unit	3766
Examiner Name	PORTER, GARY A.
Attorney Docket Number	

9	5500635		1996-03-19	MOTT	PIEZOELECTRIC SHOE
10	1962565		1934-06-12	LAKHOVSKY	OSCILLATING CIRCUITS

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	1	Ion-based electronic chip to control muscles: Entirely new circuit technology based on ions and molecules Linköping University, http://www.sciencedaily.com/releases/2012/05/120529113543.htm	<input type="checkbox"/>

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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	13724287
Filing Date	2012-12-21
First Named Inventor	JAMES EDWARD JENNINGS
Art Unit	3766
Examiner Name	PORTER, GARY A.
Attorney Docket Number	

EXAMINER SIGNATURE

Examiner Signature		Date Considered	
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	13724287
	Filing Date	2012-12-21
	First Named Inventor	JAMES EDWARD JENNINGS
	Art Unit	3766
	Examiner Name	PORTER, GARY A.
	Attorney Docket Number	

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.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

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	/JAMES EDWARD JENNINGS/	Date (YYYY-MM-DD)	2015-05-13
Name/Print	JAMES EDWARD JENNINGS	Registration Number	82669

This collection of information is required by 37 CFR 1.97 and 1.98. 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 1 hour 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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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:

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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 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.

REPLACEMENT SHEET

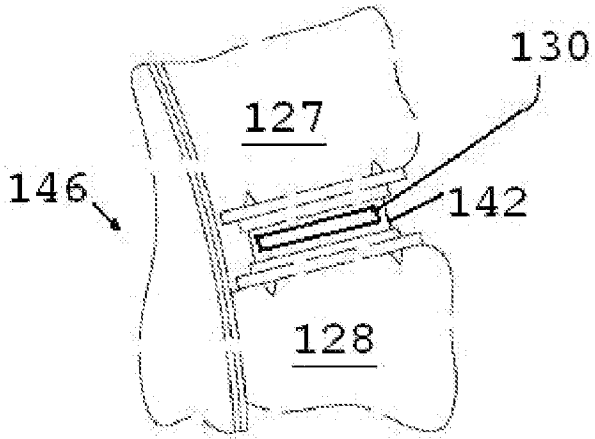


FIG. 7

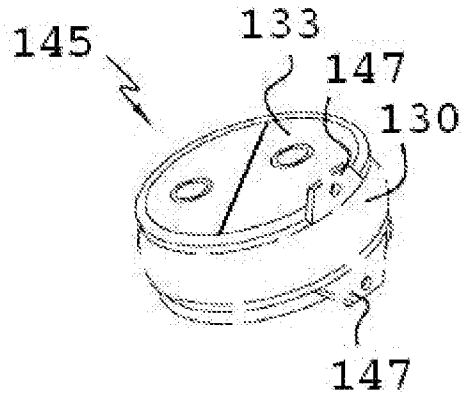


FIG. 8

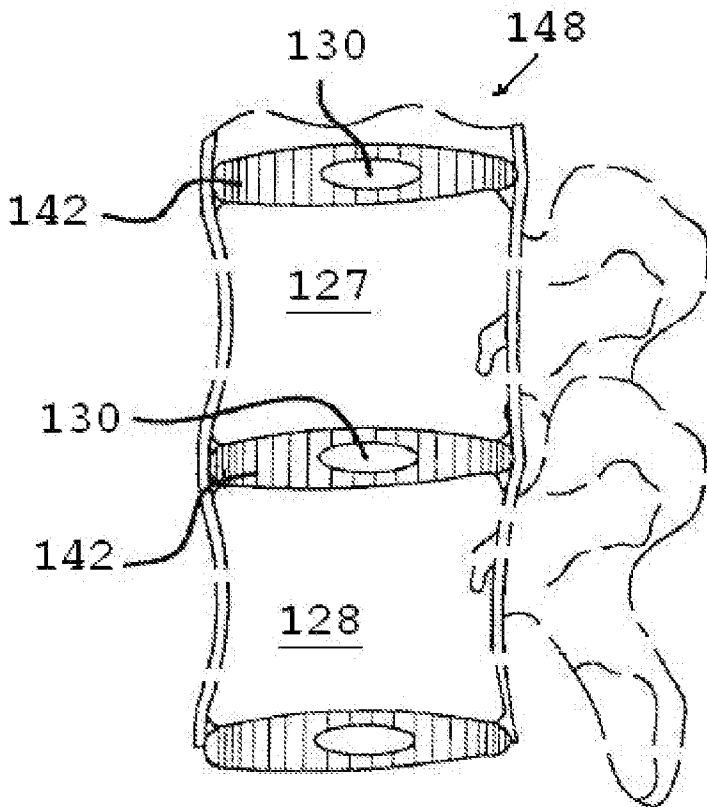


FIG. 9

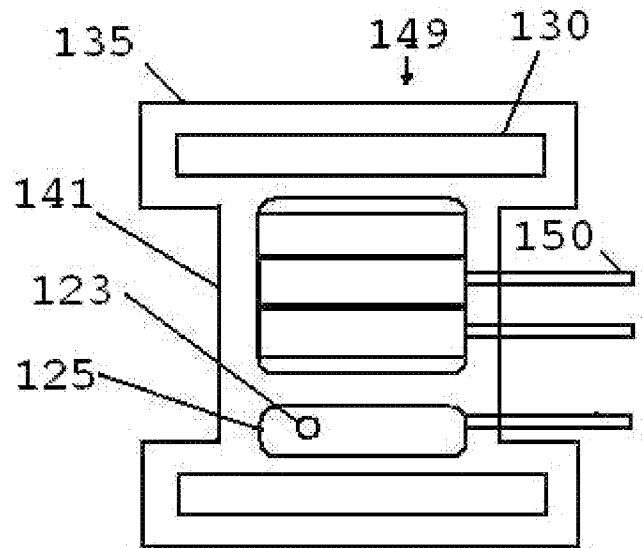


FIG. 10

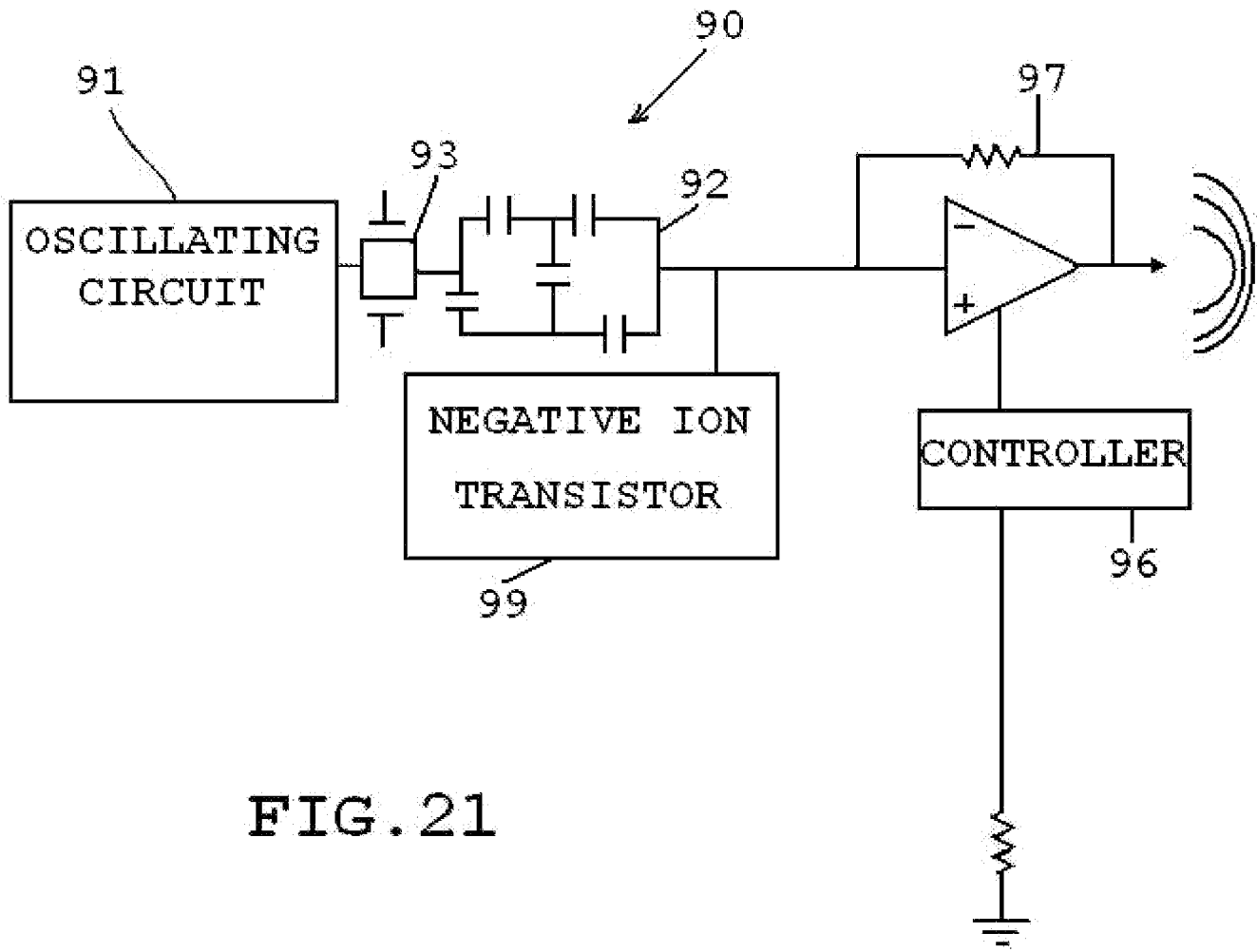


FIG. 21

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

APPLICATION FOR U.S. LETTERS PATENT

TITLE: INTRINSIC TRANSDUCTION SYSTEM

INVENTOR: JENNINGS, James Edward

CROSS REFERENCE TO RELATED APPLICATIONS

[001] NONE

BACKGROUND OF THE INVENTION

Field of the Invention

[002] This invention relates to transduction piezoelectric nerve stimulation and more specifically relates to devices for applying transcutaneous nerve stimulation for physiotherapeutic purposes.

The present disclosure relates generally to systems and methods for causing nerve cells to regenerate and, more particularly, to systems and methods for promoting nerve regeneration in the central and peripheral nervous stimuli systems of humans.

[003] Transcutaneous nerve stimulation, commonly referred to as TENS is the application of a controlled amount of low electrical currents to stimulate nerves and/or muscle tissues in a patient for treating numerous physiological problems such as muscle and joint pain and inflammation. The currents may be provided in a steady flow or in electrical impulses of various wavelength frequencies. The electrical currents primarily stimulate the nerve for the body to produce natural endorphin's to block the perception of pain and also physically cause the muscle tissues at the area of application to tighten and relax repeatedly, and thus increasing the blood circulation to enhance the natural curing process. The TENS currents are provided by a generator and the currents are delivered with application probes to the inflicted locations of a patient's body. The free end of the currents application probes is commonly in the form of a flexible inductive composite pad which must be attached to the patient's body with conductive adhesive gel and/or adhesive tapes in order to deliver the current to the patient's body. However, the curing process is not efficient if it is relying solely on the TENS stimulation.

[004] Peripheral nerve fibers have been classified in order of decreasing size and conduction velocity in a manner which is now standardized. Generally, as the fibre size decreases, the amplitude of electrical stimulation required to elicit an action potential increases. Also, the smaller fibre will require longer pulse durations than large fibre stimuli. These differences in nerve response have been used to selectively stimulate different types of nerve fibers by varying the amplitude, pulse duration, or pulse repetition rate of an electrical stimulating pulse. The desired degree of nerve fibre selectivity, however, has not been achieved in the prior art, with the result that, for example, an elicited touch response resulting from the stimulating pulse is often accompanied by a prickly, stinging, burning, sharp or other unpleasant noxious response.

[005] Therefore, various exemplary embodiments of the invention may provide a nerve regeneration system that may include an interactive diagnostic device configured to measure nerve growth, re-growth, and/or connections between severed or otherwise damaged nerve segments.

[006] To attain the advantages and in accordance with the purpose of the invention, as embodied and broadly described herein, one exemplary aspect of the invention may provide a nerve regeneration system comprising a lead configured to be placed in a body proximate a damaged nerve, a portion of the lead being configured to stimulate the damaged nerve.

[007] According to one exemplary aspect, the stimulation comprises a therapeutic electric signal, and the parameter of the stimulation may comprise a parameter associated with the electric signal. For example, the parameter may comprise one or more of strength, direction, current, or voltage of the electric signal. According to another exemplary aspect, the nerve regeneration system may comprise an electrode coupled to the lead and configured to deliver electric stimulation to the damaged nerve. The electrode may include a plurality of electrodes and the

parameter may comprise one or more of a number, a sequence, or a combination of electrodes to be energized to deliver electric stimulation. The system may also comprise a conductor for connecting the electrode to the control module. According to still another aspect, the control module may be enclosed in a substantially sealed housing with one or more leads extending from the housing. The control module may be configured to communicate with an external device. According to another aspect, the present disclosure is directed toward a nerve regeneration system that comprises a nerve regeneration module comprising at least one lead implanted in a body proximate a damaged nerve. The nerve regeneration module may be configured to administer a nerve regeneration treatment to the damaged nerve and detect a patient response to the nerve regeneration treatment. According to still another aspect, the nerve regeneration system comprises a power supply configured to generate an electromagnetic signal for stimulating the damaged nerve. Accordingly, the at least one lead may comprise one or more electrodes electrically coupled to the power supply, the one or more electrodes being configured to deliver the electromagnetic signal to the damaged nerve. According to one embodiment, the one or more of the electrodes are disposed along a length of the at least one lead.

[008] Additional objects and advantages of the invention will be set forth in part in the description which follows, and in part will be obvious from the description, or may be learned by practice of the invention. The objects and advantages of the invention will be realized and attained by means of the elements and combinations particularly pointed out in the appended claims.

[009] It is to be understood that both the foregoing general description and the following detailed description are exemplary and explanatory only and are not restrictive of the invention, as claimed.

DESCRIPTION OF RELATED ART

[0010] The central nervous system, including the brain, is the primary control system of a body, communicating with one or more parts of the body via a complicated system of interconnected nerves. Nerves are cable-like bundles of axons that carry electrical signals and impulses between one or more neurons and the central nervous system. Thus, nerves play a critical role in communicating sensory and stimulated signals between various parts of the body (e.g., muscles, organs, glands, etc.) and the central nervous system.

[0011] Nerves may be damaged or severed either through trauma or disease. Damaged or severed nerves may inhibit the central nervous system's ability to receive sensory and stimulatory data from individual neurons, potentially limiting the nervous system's control over the body. For example, severe nerve damage may lead to paralysis, such as paraplegia or quadriplegia.

[0012] In the peripheral nervous system, a common treatment to repair damaged nerves involves a surgical procedure to harvest a healthy nerve from another part of the patient's body and graft the harvested nerve to bridge the damaged section. Although surgery can successfully repair damaged nerve cells in many cases, these procedures may have several disadvantages. For instance, in most cases, several invasive surgical procedures are required to find suitable donor nerves. Further, damage to nerves at the donor site is quite common, potentially leading to weakening of donor nerves at the expense of the recipient nerves.

[0013] Some alternatives to surgical repair of damaged nerves have been developed. These systems typically involve surrounding damaged nerves in a sheath and administering therapeutic drugs or electromagnetic energy to the damaged nerve site. The administration of the therapeutic drugs and/or electromagnetic energy may facilitate nerve regeneration, while the sheath guides the nerve to grow in a desired direction.

[0014] Engineer Georges Lakhovsky, believed that people could achieve good health by adjusting the oscillation of their cells. He tapped Tesla to assist him in building the Multiple Wave Oscillator. Lakhovsky claimed the machine would improve health, remove pathogens, and even cure cancer. "The action of the pounding surf creates negative air ions and we also see it immediately after spring thunderstorms when people report lightened moods," says ion researcher Michael Terman, PhD, of Columbia University in New York. The Organic Electronics research group at Linköping University previously developed ion transistors for transport of both positive and negative ions, as well as biomolecules. An advantage of chemical circuits is that the charge carrier consists of chemical substances with various functions. This means that we now have new opportunities to control and regulate the signal paths of cells in the human body.

[0015] Energy in electronic elements: Electric potential energy, or electrostatic potential energy, is a potential energy (measured in joules) that results from conservative Coulomb forces and is associated with the configuration of a particular set of point charges within a defined system. The term "electric potential energy" is used to describe the potential energy in systems with time-variant electric fields, while the term "electrostatic potential energy" is used to describe the potential energy in systems with time-invariant electric fields.

[0016] Capacitance is the ability of a body to store an electrical charge. Any body or structure that is capable of being charged, either with static electricity or by an electric current, exhibits capacitance. A common form of energy storage device is a parallel-plate capacitor. In a parallel plate capacitor, capacitance is directly proportional to the surface area of the conductor plates and inversely proportional to the separation distance between the plates. If the charges on the plates are $+q$ and $-q$, and V gives the voltage between the plates, then the capacitance C is given by $C = q/V$.

[0017] The capacitance is a function only of the physical dimensions (geometry) of the conductors and the permittivity of the dielectric. It is independent of the potential difference between the conductors and the total charge on them.

Piezoelectricity is the combined effect of the electrical behavior of the material:

$$D = \epsilon E$$

where D is the electric charge density displacement (electric displacement), ϵ is permittivity and E is electric field strength, and

$$\text{Hooke's Law: } S = s T$$

where S is strain, s is compliance and T is stress.

Physical Properties of TPU

[0018] TPU possesses a combination of physical properties not available in other thermoplastic materials or synthetic rubbers, including: Superior Abrasion resistance for physically punishing, high-wear applications. Formulated UV resistance prevents yellowing or embrittlement. Elevated tensile strength provides reliability and durability over the life of the product in which the film is used. Good memory retention, Durometers (hardness) from very soft to very hard. High resistance to hydrocarbons, chemicals, ozone, bacteria, and fungus make it ideal for tough industrial environments. Inherently waterproof, for use in performance apparel, bedding, transdermal and wound care applications. Superior resistance to skin oils, yet has good "hand" or "feel" when in contact with the skin. Easily fabricated using thermal bonding, laminating, die cutting, radio frequency (RF) sealing or vacuum forming and Flame-retardant. Typically, when two or more of these properties are required for an application, TPU is the material of choice.

Other TPU Medical Applications

[0019] TPU is typically used for parts requiring a high level of performance. Applications typically require a flexible material with a high degree of flex resistance, wearability and durability. Many of the characteristics of TPU make it ideal for medical use. Medical applications include: IV site dressings, Transdermal patches, Thin film wound dressings, Cast and dressing covers, Surgical gowns & drapes, Puncture-resistant gloves, Incontinence pads, Compression dressings, Orthopedic gel insoles, Medical anti-shock trousers, Gel-filled positioning pads, Inflatable support bladders, Pressure infuser cuffs, Extraction bags, Hospital mattresses, covers, Orthodontic brace aligners.

[0020] Copolymers: Copolymers of PVDF are also used in piezoelectric and electrostrictive applications. One of the most commonly-used copolymers is P(VDF-trifluoroethylene), usually available in ratios of about 50:50 wt% and 65:35 wt% (equivalent to about 56:44 mol% and 70:30 mol%). Another one is P(VDF-tetrafluoroethylene). They improve the piezoelectric response by improving the crystallinity of the material.

[0021] A novel electrospun TPU/PVdF porous fibrous polymer electrolyte for lithium ion batteries. Novel blend-based gel polymer electrolyte (GPE) films of thermoplastic polyurethane (TPU) and poly(vinylidene fluoride) (PVdF) (denoted as TPU/PVdF) have been prepared by electrospinning. The electrospun thermoplastic polyurethane-co-poly (vinylidene fluoride) membranes were activated with a 1M solution of LiClO₄ in EC/PC and showed a high ionic conductivity about 1.6 mS cm⁻¹ at room temperature. The electrochemical stability is at 5.0 V versus Li⁺/Li, making them suitable for practical applications in lithium cells. Cycling tests of Li/GPE/LiFePO₄ cells showed the suitability of the electrospun membranes made of TPU/PVdF (80/20, w/w) for applications in lithium rechargeable batteries.

[0022] A novel high-performance gel polymer electrolyte membrane basing on electrospinning technique for lithium rechargeable batteries. Nonwoven films of composites of thermoplastic polyurethane (TPU) with different proportion of poly(vinylidene fluoride) (PVdF) (80, 50 and 20%, w/w) are prepared by electrospinning 9 wt% polymer solution at room temperature. Then the gel polymer electrolytes (GPEs) are prepared by soaking the electrospun TPU–PVdF blending membranes in 1 M LiClO₄/ethylene carbonate (EC)/propylene carbonate (PC) for 1 h. The gel polymer electrolyte (GPE) shows a maximum ionic conductivity of 3.2×10^{-3} S cm⁻¹ at room temperature and electrochemical stability up to 5.0 V versus Li⁺/Li for the 50:50 blend ratio of TPU:PVdF system. At the first cycle, it shows a first charge–discharge capacity of 168.9 mAh g⁻¹ when the gel polymer electrolyte (GPE) is evaluated in a Li/PE/lithium iron phosphate (LiFePO₄) cell at 0.1 C-rate at 25 °C. TPU–PVdF (50:50, w/w) based gel polymer electrolyte is observed much more suitable than the composite films with other ratios for high-performance lithium rechargeable batteries.

[0023] TPU combines the best properties of rubber and plastic, but has no plasticizers to leach out and cause allergic reactions or embrittle over time. Thus, products made from polyurethane film & sheet, retain long-term flexibility and outstanding shelf life.

[0024] Thus, there is a need for an improved nerve stimuli regeneration system that may overcome one or more of the problems discussed above. In particular, there is a need for an improved nerve regeneration system that can efficiently optimize the treatment parameters, without requiring invasive exploratory techniques.

OBJECTS AND SUMMARY OF THE INVENTION

[0025] The intrinsic transduction system of the present invention provides products, preferably an athletic shoe or athletic apparel, adapted to emit Piezoelectricity energy or information in response to impact. The product comprises a molded part having a Nerve stimulating unit or a midsole device at least partially molded therein. The unit comprises an impact-sensing element made from a polymeric piezoelectric material, a battery means, a stimulus device or an information display device and a circuit connected to said piezoelectric material. The stimulus unit is responsive to electrical energy produced upon impact which permits the nerve stimulus device to be energized from the battery or any information displaying device to be activated. In one embodiment, the electrical energy resulting from each impact is used as a trigger to operate nerve stimulating unit via the circuit incorporated therein, and the amount and/or duration of the stimulus emission can be independently determined/controlled by appropriate design of the circuit.

[0026] The product is preferably a spin disk, garment or shoe, particularly a prosthetic spinal disc, athletic garment or a sports shoe. The molded outsole part is preferably a thermoplastic unit structure, with at least a midsole, the circuit and the transducer stimulus device disposed in or molded into the midsole part of the structure, and with the piezoelectric stimulus-emitting device being arranged to emit energy outwardly from said midsole part and/or by leads. The polymeric piezoelectric material may be molded into the midsole part of the structure, preferably in the region of maximum stress.

[0027] In still another embodiment, the circuit responds to the magnitude of the electrical energy produced by the piezoelectric material and thereby selectively energizes one or more of the nerve stimulating devices depending on the amount of electrical energy produced. In this manner, a

visual indication of the magnitude of the pressure exerted upon the sole can be displayed.

[0028] The present invention provides a stimulating pulse having frequency components falling within predetermined frequency band limits. This pulse reliably elicits a touch response without the heretofore attendant noxious sensation mentioned above. It has been demonstrated that the differential excitation of the touch fibers relative to pain specific fibers inhibits the transmission of pain to the conscious centers. The type of stimulation specified herein, optimizes the differential excitation between touch and pain specific fibers, thus optimizing the inhibition of pain transmission.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a top view of the piezoelectric disk orb control of the present invention;

FIG. 2 is a side view of the piezoelectric disk orb control of the present invention;

FIG. 3 is a top view of the piezoelectric disk orb of the present invention;

FIG. 4 is a side view of the piezoelectric embed disk orb of the present invention with a base;

FIG. 5 is an elevation view of the piezoelectric disk battery capacitor of the present invention;

FIG. 6 is a top view of the piezoelectric disk control of the present invention;

FIG. 7 is a side view of the piezoelectric vertebral disc of the present invention;

FIG. 8 is a perspective view of the piezoelectric vertebral disc of another embodiment;

FIG. 9 is a side view of the midsole-outsole vertebral disc of the present invention;

FIG. 10 is a side view of the battery capacitor vertebral disc of the present invention;

FIG. 11 is a perspective front view of therapeutic garments embodiment of the present invention.

FIG. 12 is a perspective rear view of therapeutic garments embodiment of the present invention.

FIGS. 13 illustrate views of footwear product including features of the present invention;

FIGS. 14 illustrate views of footwear product including features of the present invention;

FIG. 15 is an elevational perspective view of a cleat of the present invention;

FIG. 16 is a perspective top elevation view of shoe insole according to the present invention;

FIG. 17 -19 are side elevations view of shoe sole according to the present invention;

FIG. 20 is a block schematic circuitry diagram of the transducer according to the invention;

FIG. 21 is a schematic circuitry diagram of a negative ion transducer according to the invention.

DETAILED DESCRIPTION OF A PREFERRED EMBODIMENT

[0029] Negative ions are odorless, tasteless, and invisible molecules that we inhale in abundance in certain environments. Think mountains, waterfalls, and beaches. Once they reach our bloodstream, negative ions are believed to produce biochemical reactions that increase levels of the mood chemical serotonin, helping to alleviate depression, relieve stress, and boost our daytime energy.

[0030] Ions are molecules that have gained or lost an electrical charge. . They are created in nature as air molecules break apart due to sunlight, radiation, and moving air and water. You may have experienced the power of negative ions when you last set foot on the beach or walked beneath a waterfall. While part of the euphoria is simply being around these wondrous settings and away from the normal pressures of home and work, the air circulating in the mountains and the beach is said to contain tens of thousands of negative ions -- Much more than the average home or office building, which contain dozens or hundreds, and many register a flat zero.

[0031] Thus, there is an increasing interest in external electrical skin stimulation for such purposes as pain suppression, nuero-muscular stimulation, communication systems, etcetera.

Obviously, many modifications and variations of the present invention are possible in light of the

teaching of devices shown in U.S. Patent Nos. 1,059,090, No. 1,305,725 and No.6,703,785 .

Specifically, there are many alternative ways of transducing the optimized waveforms disclosed herein which do not depart from the intended scope of the application. Accordingly, within the scope of the appended claims, the invention may be practiced otherwise than as specifically described.

DETAILED DESCRIPTION OF THE INVENTION

[0032] **FIGS. 1, FIG. 2 and FIG.3** show the construction of a spin Piezoelectric transducer **33, 35, 37, 39** according to the invention. The illustrated piezoelectric transducer **FIG.1** thru **3** is a module comprising a thin and small case disk housing outsole **42**. **FIG.4** transducer has a insole of piezoelectric **26**, embed coupler outsole **42** base member, accommodated about the midsole **30** casing. **FIG.5** battery transducer **41**, starting from a regular lithium-ion coin battery, replaced the usual divider between electrodes with a polyvinylidene difluoride film whose piezoelectric nature produces a charging action inside that gap through just a little pressure. Further, modified(AL foil **32**, LiCoO₂ **34**, PVDF **36**, TiO₂ NT **38**, Ti foil **40**) with the attachment of a midsole-outsole housing case. **Fig.1 & Fig.6** an oscillating transducer **33,44** incorporates a controller **31** and designs **29** may form an abstract or geometrical pattern, emblem, or a logo or one or more alphanumeric characters constituting, for example, a trademark of the manufacturer. The ends of the fibers at these various points may be colored, e.g. with different colored translucent inks or dyes.

INTERNAL

[0033] Fig.7 and Fig.9 shows two adjacent vertebrae 127 and 128 with midsole 130-outsole 142 molded transducer disc prosthesis 146,148, 149 replacing the natural disc. Disc prosthesis 146 is a representation of the Charité prosthesis modified by the inclusion of outsole 142 plate transducers 135 and or midsole fluid reserve 125, battery capacitor 141, transistors, antenna.

FIG. 8 shows a Bryan similar cervical disc 145. Note that it is only recommended as a prosthesis for the cervical vertebrae. It has a midsole 130 (not visible) between two molded outsole 142 plates 133 transducers (only one shown).

[0034] A flexible midsole disk 130 membrane between the molded outsole disk 142 case housing surrounds the transducers 135 and or midsole fluid reserve 125, battery capacitor 141, transistors nucleus. Applicant understands that current models of the cervical disc do not have the small tabs 147. Fig.9 illustrates vertebral bodies 127 and 128 are separated by molded intervertebral midsole 130 outsole 142 discs. Each disc has a nucleus midsole 130 surrounded by an annulus outsole 142. Fig.10 represents a intervertebral prosthetic housing a battery capacitor 141 and end transducers 135. This embodiment may also house midsole fluid 125 reserve accessible by a catheter aperture 123, battery capacitor 141, transistors and leads 150 to damaged nerve endings.

APPAREL

[0035] Fig.11 and Fig.12 depict athletic apparel transducers head to toe garments according to embodiments of the present invention. Transducer 35 garment 51,55 may be adapted to be worn by a wearer therapeutically. The shoes 60,70 shown in FIG. 13 and FIG. 14 comprises a battery transducer 41, unitary sole-and-heel structure attached by molding or other means to a midsole 30. The transducers 35,44, forefoot sole and heel battery transducer 41 structure may be molded

to the **Fig.16** insole **88** midsole **30** using methods well known in the art. Located or molded within the **Fig.17, Fig.18, Fig.19** sole **81,83** of the forefoot sole **81,82,83** and heel battery transducer **41** structure, preferably adjacent to a point of maximum stress (i.e. near the part corresponding to the ball or heel of the wearer's foot) is a piezoelectric **93** impact battery capacitor **41** comprised of a sheet or layer of polymeric piezoelectric material. This piezoelectric impact battery capacitor **41** preferably comprises polyvinylidene fluoride (PVDF) which has been stretch oriented and electrically polarized to enhance its piezoelectric properties. Such materials are known in the art. Referring to **FIGS. 1 thru 19**, the piezoelectric transducers **33, 35, 37, 39, 44, 135, 145, 146, 148, 149** is electrically conductive to a **Fig.20 & Fig.21** circuits **90,100** which contains a battery capacitor **41,92**. Additional embodiments include but not limited to fluid **25** reserve, controllers **31,96**, touchscreen **57**, CPU **96**, transistor **99** chips, antenna **94**, resistor **97**, oscillator **91** and leads **50, 150**. Said transducer parts communicate with design **29** emboss numerals, letters and emblems including logos, trademarks and fonts.

SPARK CLEAT/SOLE

[0036] **Fig.15** provides spark transducer midsole **30** outsole **42** cleats **72** for athletic shoes, spark cleats **72** have a piezoelectric sole attachment member transducer disk **35** having a longitudinal axis for fitting into sole attachment means in the soles of the shoes and coupled traction edge **73**. **Fig.13-14** and **Fig.16-19** detail various embodiments of the transducer **35** shoe midsole **30**-outsole **42** sole and/or insole **88** including CPU **96**, resistor **97** transistor **99** chips, controllers **31** and battery capacitors **41, 92**.

DIAGRAM SCHEMATICS

[0037] **FIG. 20** is a block circuit diagram showing the transducer, antenna **94**, touchscreen **57**, resistor **97**, controller **96**, transistor **99** and battery **98** capacitor **92**. The transistor **99** has an oscillation **91** using a piezoelectric **93** transducer as oscillating means charges the battery **98** capacitor **92**, transistor **99** boosts, controlled **96** and dispersed. **FIG. 21** is a circuit diagram showing the negative ion transistor **99**. The negative ion transistor **99** has an oscillating circuit **91** using a piezoelectric transducer as oscillating means. The oscillating circuit **91** generates a signal **26** at a frequency **101** of, for instance, 75 kHz as resonant frequency **101** of the piezoelectric **93** transducer **33, 35, 37, 39, 44** (which is determined by the length direction dimension) or the neighborhood (± 5 kHz) of the resonant frequency **101**.

ALTERNATIVE EMBODIMENTS

[0038] Alternatively, send out signals to muscle synapses where chips work with common signaling substances, for example acetylcholine. According to yet another aspect, the **FIG. 10** system may comprise a first lead **150** may configured to deliver an electrical signal, and a second lead **150** configured to deliver the therapeutic fluid **125** to the damaged nerve. The lead may comprise a catheter tube lead **150** in fluid communication with the fluid delivery device and configured to deliver the therapeutic fluid to the damaged nerve. According to still another aspect, the control module may comprise a fluid delivery device configured to provide a therapeutic fluid to the damaged nerve. For example, the control module comprises a fluid port for supplying fluid to the fluid delivery device. All embodiments may be produced with alternative materials, in the art.

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

APPLICATION FOR U.S. LETTERS PATENT

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INVENTOR: JENNINGS, James Edward

CROSS REFERENCE TO RELATED APPLICATIONS

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[005] Therefore, various exemplary embodiments of the invention may provide a nerve regeneration system that may include an interactive diagnostic device configured to measure nerve growth, re-growth, and/or connections between severed or otherwise damaged nerve segments.

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parameter may comprise one or more of a number, a sequence, or a combination of electrodes to be energized to deliver electric stimulation. The system may also comprise a conductor for connecting the electrode to the control module. According to still another aspect, the control module may be enclosed in a substantially sealed housing with one or more leads extending from the housing. The control module may be configured to communicate with an external device. According to another aspect, the present disclosure is directed toward a nerve regeneration system that comprises a nerve regeneration module comprising at least one lead implanted in a body proximate a damaged nerve. The nerve regeneration module may be configured to administer a nerve regeneration treatment to the damaged nerve and detect a patient response to the nerve regeneration treatment. According to still another aspect, the nerve regeneration system comprises a power supply configured to generate an electromagnetic signal for stimulating the damaged nerve. Accordingly, the at least one lead may comprise one or more electrodes electrically coupled to the power supply, the one or more electrodes being configured to deliver the electromagnetic signal to the damaged nerve. According to one embodiment, the one or more of the electrodes are disposed along a length of the at least one lead.

[008] Additional objects and advantages of the invention will be set forth in part in the description which follows, and in part will be obvious from the description, or may be learned by practice of the invention. The objects and advantages of the invention will be realized and attained by means of the elements and combinations particularly pointed out in the appended claims.

[009] It is to be understood that both the foregoing general description and the following detailed description are exemplary and explanatory only and are not restrictive of the invention, as claimed.

DESCRIPTION OF RELATED ART

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[0011] Nerves may be damaged or severed either through trauma or disease. Damaged or severed nerves may inhibit the central nervous system's ability to receive sensory and stimulatory data from individual neurons, potentially limiting the nervous system's control over the body. For example, severe nerve damage may lead to paralysis, such as paraplegia or quadriplegia.

[0012] In the peripheral nervous system, a common treatment to repair damaged nerves involves a surgical procedure to harvest a healthy nerve from another part of the patient's body and graft the harvested nerve to bridge the damaged section. Although surgery can successfully repair damaged nerve cells in many cases, these procedures may have several disadvantages. For instance, in most cases, several invasive surgical procedures are required to find suitable donor nerves. Further, damage to nerves at the donor site is quite common, potentially leading to weakening of donor nerves at the expense of the recipient nerves.

[0013] Some alternatives to surgical repair of damaged nerves have been developed. These systems typically involve surrounding damaged nerves in a sheath and administering therapeutic drugs or electromagnetic energy to the damaged nerve site. The administration of the therapeutic drugs and/or electromagnetic energy may facilitate nerve regeneration, while the sheath guides the nerve to grow in a desired direction.

[0014] Engineer Georges Lakhovsky, believed that people could achieve good health by adjusting the oscillation of their cells. He tapped Tesla to assist him in building the Multiple Wave Oscillator. Lakhovsky claimed the machine would improve health, remove pathogens, and even cure cancer. "The action of the pounding surf creates negative air ions and we also see it immediately after spring thunderstorms when people report lightened moods," says ion researcher Michael Terman, PhD, of Columbia University in New York. The Organic Electronics research group at Linköping University previously developed ion transistors for transport of both positive and negative ions, as well as biomolecules. An advantage of chemical circuits is that the charge carrier consists of chemical substances with various functions. This means that we now have new opportunities to control and regulate the signal paths of cells in the human body.

[0015] Energy in electronic elements: Electric potential energy, or electrostatic potential energy, is a potential energy (measured in joules) that results from conservative Coulomb forces and is associated with the configuration of a particular set of point charges within a defined system. The term "electric potential energy" is used to describe the potential energy in systems with time-variant electric fields, while the term "electrostatic potential energy" is used to describe the potential energy in systems with time-invariant electric fields.

[0016] Capacitance is the ability of a body to store an electrical charge. Any body or structure that is capable of being charged, either with static electricity or by an electric current, exhibits capacitance. A common form of energy storage device is a parallel-plate capacitor. In a parallel plate capacitor, capacitance is directly proportional to the surface area of the conductor plates and inversely proportional to the separation distance between the plates. If the charges on the plates are $+q$ and $-q$, and V gives the voltage between the plates, then the capacitance C is given by $C = q/V$.

[0017] The capacitance is a function only of the physical dimensions (geometry) of the conductors and the permittivity of the dielectric. It is independent of the potential difference between the conductors and the total charge on them.

Piezoelectricity is the combined effect of the electrical behavior of the material:

$$D = \epsilon E$$

where D is the electric charge density displacement (electric displacement), ϵ is permittivity and E is electric field strength, and

$$\text{Hooke's Law: } S = s T$$

where S is strain, s is compliance and T is stress.

Physical Properties of TPU

[0018] TPU possesses a combination of physical properties not available in other thermoplastic materials or synthetic rubbers, including: Superior Abrasion resistance for physically punishing, high-wear applications. Formulated UV resistance prevents yellowing or embrittlement. Elevated tensile strength provides reliability and durability over the life of the product in which the film is used. Good memory retention, Durometers (hardness) from very soft to very hard. High resistance to hydrocarbons, chemicals, ozone, bacteria, and fungus make it ideal for tough industrial environments. Inherently waterproof, for use in performance apparel, bedding, transdermal and wound care applications. Superior resistance to skin oils, yet has good "hand" or "feel" when in contact with the skin. Easily fabricated using thermal bonding, laminating, die cutting, radio frequency (RF) sealing or vacuum forming and Flame-retardant. Typically, when two or more of these properties are required for an application, TPU is the material of choice.

Other TPU Medical Applications

[0019] TPU is typically used for parts requiring a high level of performance. Applications

typically require a flexible material with a high degree of flex resistance, wearability and durability. Many of the characteristics of TPU make it ideal for medical use. Medical applications include: IV site dressings, Transdermal patches, Thin film wound dressings, Cast and dressing covers, Surgical gowns & drapes, Puncture-resistant gloves, Incontinence pads, Compression dressings, Orthopedic gel insoles, Medical anti-shock trousers, Gel-filled positioning pads, Inflatable support bladders, Pressure infuser cuffs, Extraction bags, Hospital mattresses, covers, Orthodontic brace aligners.

[0020] Copolymers: Copolymers of PVDF are also used in piezoelectric and electrostrictive applications. One of the most commonly-used copolymers is P(VDF-trifluoroethylene), usually available in ratios of about 50:50 wt% and 65:35 wt% (equivalent to about 56:44 mol% and 70:30 mol%). Another one is P(VDF-tetrafluoroethylene). They improve the piezoelectric response by improving the crystallinity of the material.

[0021] A novel electrospun TPU/PVdF porous fibrous polymer electrolyte for lithium ion batteries. Novel blend-based gel polymer electrolyte (GPE) films of thermoplastic polyurethane (TPU) and poly(vinylidene fluoride) (PVdF) (denoted as TPU/PVdF) have been prepared by electrospinning. The electrospun thermoplastic polyurethane-co-poly (vinylidene fluoride) membranes were activated with a 1M solution of LiClO₄ in EC/PC and showed a high ionic conductivity about 1.6 mS cm⁻¹ at room temperature. The electrochemical stability is at 5.0 V versus Li⁺/Li, making them suitable for practical applications in lithium cells. Cycling tests of Li/GPE/LiFePO₄ cells showed the suitability of the electrospun membranes made of TPU/PVdF (80/20, w/w) for applications in lithium rechargeable batteries.

[0022] A novel high-performance gel polymer electrolyte membrane basing on electrospinning technique for lithium rechargeable batteries. Nonwoven films of composites of thermoplastic

polyurethane (TPU) with different proportion of poly(vinylidene fluoride) (PVdF) (80, 50 and 20%, w/w) are prepared by electrospinning 9 wt% polymer solution at room temperature. Then the gel polymer electrolytes (GPEs) are prepared by soaking the electrospun TPU–PVdF blending membranes in 1 M LiClO₄/ethylene carbonate (EC)/propylene carbonate (PC) for 1 h. The gel polymer electrolyte (GPE) shows a maximum ionic conductivity of 3.2×10^{-3} S cm⁻¹ at room temperature and electrochemical stability up to 5.0 V versus Li⁺/Li for the 50:50 blend ratio of TPU:PVdF system. At the first cycle, it shows a first charge–discharge capacity of 168.9 mAh g⁻¹ when the gel polymer electrolyte (GPE) is evaluated in a Li/PE/lithium iron phosphate (LiFePO₄) cell at 0.1 C-rate at 25 °C. TPU–PVdF (50:50, w/w) based gel polymer electrolyte is observed much more suitable than the composite films with other ratios for high-performance lithium rechargeable batteries.

[0023] TPU combines the best properties of rubber and plastic, but has no plasticizers to leach out and cause allergic reactions or embrittlement over time. Thus, products made from polyurethane film & sheet, retain long-term flexibility and outstanding shelf life.

[0024] Thus, there is a need for an improved nerve stimuli regeneration system that may overcome one or more of the problems discussed above. In particular, there is a need for an improved nerve regeneration system that can efficiently optimize the treatment parameters, without requiring invasive exploratory techniques.

OBJECTS AND SUMMARY OF THE INVENTION

[0025] The intrinsic transduction system of the present invention provides products, preferably an athletic shoe or athletic apparel, adapted to emit Piezoelectricity energy or information in response to impact. The product comprises a molded part having a Nerve stimulating unit or a midsole device at least partially molded therein. The unit comprises an impact-sensing element

made from a polymeric piezoelectric material, a battery means, a stimulus device or an information display device and a circuit connected to said piezoelectric material. The stimulus unit is responsive to electrical energy produced upon impact which permits the nerve stimulus device to be energized from the battery or any information displaying device to be activated. In one embodiment, the electrical energy resulting from each impact is used as a trigger to operate nerve stimulating unit via the circuit incorporated therein, and the amount and/or duration of the stimulus emission can be independently determined/controlled by appropriate design of the circuit.

[0026] The product is preferably a spin disk, garment or shoe, particularly a prosthetic spinal disc, athletic garment or a sports shoe. The molded outsole part is preferably a thermoplastic unit structure, with at least a midsole, the circuit and the transducer stimulus device disposed in or molded into the midsole part of the structure, and with the piezoelectric stimulus-emitting device being arranged to emit energy outwardly from said mid part and/or by leads. The polymeric piezoelectric material may be molded into the midsole part of the structure, preferably in the region of maximum stress.

[0027] In still another embodiment, the circuit responds to the magnitude of the electrical energy produced by the piezoelectric material and thereby selectively energizes one or more of the nerve stimulating devices depending on the amount of electrical energy produced. In this manner, a visual indication of the magnitude of the pressure exerted upon the sole can be displayed.

[0028] The present invention provides a stimulating pulse having frequency components falling within predetermined frequency band limits. This pulse reliably elicits a touch response without the heretofore attendant noxious sensation mentioned above. It has been demonstrated that the differential excitation of the touch fibers relative to pain specific fibers inhibits the transmission

of pain to the conscious centers. The type of stimulation specified herein, optimizes the differential excitation between touch and pain specific fibers, thus optimizing the inhibition of pain transmission.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a top view of the piezoelectric disk orb control of the present invention;

FIG. 2 is a side view of the piezoelectric disk orb control of the present invention;

FIG. 3 is a top view of the piezoelectric disk orb of the present invention;

FIG. 4 is a side view of the piezoelectric embed disk orb of the present invention with a base;

FIG. 5 is an elevation view of the piezoelectric disk battery capacitor of the present invention;

FIG. 6 is a top view of the piezoelectric disk control of the present invention;

FIG. 7 is a side view of the piezoelectric vertebral disc of the present invention;

FIG. 8 is a perspective view of the piezoelectric vertebral disc of another embodiment;

FIG. 9 is a side view of the mid-out sole vertebral disc of the present invention;

FIG. 10 is a side view of the battery capacitor vertebral disc of the present invention;

FIG. 11 is a perspective front view of therapeutic garments embodiment of the present invention.

FIG. 12 is a perspective rear view of therapeutic garments embodiment of the present invention.

FIGS. 13 illustrate views of footwear product including features of the present invention;

FIGS. 14 illustrate views of footwear product including features of the present invention;

FIG. 15 is an elevational perspective view of a cleat of the present invention;

FIG. 16 is a perspective top elevation view of shoe insole according to the present invention;

FIG. 17 -19 are side elevations view of shoe sole according to the present invention;

FIG. 20 is a block schematic circuitry diagram of the transducer according to the invention;

FIG. 21 is a schematic circuitry diagram of a negative ion transducer according to the invention.

DETAILED DESCRIPTION OF A PREFERRED EMBODIMENT

[0029] Negative ions are odorless, tasteless, and invisible molecules that we inhale in abundance in certain environments. Think mountains, waterfalls, and beaches. Once they reach our bloodstream, negative ions are believed to produce biochemical reactions that increase levels of the mood chemical serotonin, helping to alleviate depression, relieve stress, and boost our daytime energy.

[0030] Ions are molecules that have gained or lost an electrical charge. . They are created in nature as air molecules break apart due to sunlight, radiation, and moving air and water. You may have experienced the power of negative ions when you last set foot on the beach or walked beneath a waterfall. While part of the euphoria is simply being around these wondrous settings and away from the normal pressures of home and work, the air circulating in the mountains and the beach is said to contain tens of thousands of negative ions -- Much more than the average home or office building, which contain dozens or hundreds, and many register a flat zero.

[0031] Thus, there is an increasing interest in external electrical skin stimulation for such purposes as pain suppression, neuro-muscular stimulation, communication systems, etcetera. Obviously, many modifications and variations of the present invention are possible in light of the teaching of devices shown in U.S. Patent Nos. 1,059,090, No. 1,305,725 and No.6,703,785 . Specifically, there are many alternative ways of transducing the optimized waveforms disclosed herein which do not depart from the intended scope of the application. Accordingly, within the scope of the appended claims, the invention may be practiced otherwise than as specifically described.

DETAILED DESCRIPTION OF THE INVENTION

[0032] FIGS. 1, FIG. 2 and FIG.3 show the construction of a spin Piezoelectric transducer 33, 35, 37, 39 according to the invention. The illustrated piezoelectric transducer FIG.1 thru 3 is a module comprising a thin and small case disk housing outsole 42. FIG.4 transducer has a insole of piezoelectric 26, embed coupler outsole 42 base member, accommodated about the midsole 30 casing. FIG.5 battery transducer 41, starting from a regular lithium-ion coin battery, replaced the usual divider between electrodes with a polyvinylidene difluoride film whose piezoelectric nature produces a charging action inside that gap through just a little pressure. Further, modified(AL foil 32, LiCoO₂ 34, PVDF 36, TiO₂ NT 38, Ti foil 40) with the attachment of a mid-out housing case. Fig.1 & Fig.6 an oscillating transducer 33,44 incorporates a controller 31 and designs 29 may form an abstract or geometrical pattern, emblem, or a logo or one or more alphanumeric characters constituting, for example, a trademark of the manufacturer. The ends of the fibers at these various points may be colored, e.g. with different colored translucent inks or dyes. Fig.7 and Fig.9 shows two adjacent vertebrae 27 and 28 with mid 30-out 42 molded transducer disc prosthesis 46,48 replacing the natural disc. Disc prosthesis 46 is a representation of the Charité prosthesis modified by the inclusion of out 42 plate transducers 35 and or mid fluid reserve 25, battery capacitor 41, transistors, antenna. FIG. 8 shows a Bryan similar cervical disc 45. Note that it is only recommended as a prosthesis for the cervical vertebrae. It has a mid 30 (not visible) between two molded out plates transducers 33 (only one shown). A flexible middisk 30 membrane between the molded outdisk 42 case housing surrounds the transducers 35 and or mid fluid reserve 25, battery capacitor 41, transistors nucleus. Applicant understands that current models of the cervical disc do not have the small tabs 47. Fig.9 illustrates vertebral bodies 27 and 28 are separated by molded intervertebral midsole 30-outsole 42 discs. Each disc

has a nucleus midsole **30** surrounded by an annulus outsole **42**. **Fig.10** represents a intervertebral prosthetic housing a battery capacitor **41** and end transducers **35**. This embodiment may also house mid fluid **25** reserve accessible by a catheter aperture **23**, battery capacitor **41**, transistors and leads **50** to damaged nerve endings. **Fig.11** and **Fig.12** depict athletic apparel transducers head to toe garments according to embodiments of the present invention. Transducer **35** garment **51,55** may be adapted to be worn by a wearer therapeutically. The shoes **60,70** shown in **FIG. 13** and **FIG. 14** comprises a battery transducer **41**, unitary sole-and-heel structure attached by molding or other means to a midsole **30**. The transducers **35,44**, forefoot sole and heel battery transducer **41** structure may be molded to the **Fig.16** insole **88** midsole **30** using methods well known in the art. Located or molded within the **Fig.17, Fig.18, Fig.19** sole **81,83** of the forefoot sole **81,82,83** and heel battery transducer **41** structure, preferably adjacent to a point of maximum stress (i.e. near the part corresponding to the ball or heel of the wearer's foot) is a piezoelectric **93** impact battery capacitor **41** comprised of a sheet or layer of polymeric piezoelectric material. This piezoelectric impact battery capacitor **41** preferably comprises polyvinylidene fluoride (PVDF) which has been stretch oriented and electrically polarized to enhance its piezoelectric properties. Such materials are known in the art. Referring to **FIGS. 1** thru **19**, the piezoelectric transducers **33, 35, 37, 39, 44** is electrically conductive to a **Fig.20 & Fig.21** circuits **90,100** which contains a battery capacitor **41,92**. Additional embodiments include but not limited to fluid **25** reserve, controllers **31,96**, touchscreen **57**, CPU **96**, transistor **99** chips, antenna **94**, resistor **97**, oscillator **91** and leads **50**. Said transducer parts communicate with design **29** emboss numerals, letters and emblems including logos, trademarks and fonts. **Fig.15** provides spark transducer mid **30** out **42** cleats **72** for athletic shoes, spark cleats **72** have a piezoelectric sole attachment member transducer disk **35** having a longitudinal axis for fitting into sole attachment

means in the soles of the shoes and coupled traction edge 73. **Fig.13-14** and **Fig.16-19** detail various embodiments of the transducer 35 shoe mid 30-out 42 sole and or insole 88 including CPU 96, resistor 97 transistor 99 chips, controllers 31 and battery capacitors 41,92. **FIG. 20** is a block circuit diagram showing the transducer, antenna 94, touchscreen 57, resistor 97,controller 96, transistor 99 and battery 98 capacitor 92. The transistor 99 has an oscillation 91 using a piezoelectric 93 transducer as oscillating means charges the battery 98 capacitor 92, transistor 99 boosts, controlled 96 and dispersed. **FIG. 21** is a circuit diagram showing the negative ion transistor 99. The negative ion transistor 99 has an oscillating circuit 91 using a piezoelectric transducer as oscillating means. The oscillating circuit 91 generates a signal 26 at a frequency 101 of, for instance, 75 kHz as resonant frequency 101 of the piezoelectric 93 transducer 33, 35, 37, 39, 44 (which is determined by the length direction dimension) or the neighborhood (± 5 kHz) of the resonant frequency 101.

ALTERNATIVE EMBODIMENTS

Alternatively, send out signals to muscle synapses where chips work with common signaling substances, for example acetylcholine. According to yet another aspect, the **FIG. 21** system may comprise a first lead 50 may configured to deliver an electrical signal, and a second lead 50 configured to deliver the therapeutic fluid 25 to the damaged nerve. The lead may comprise a catheter tube lead 50 in fluid communication with the fluid delivery device and configured to deliver the therapeutic fluid to the damaged nerve. According to still another aspect, the control module may comprise a fluid delivery device configured to provide a therapeutic fluid to the damaged nerve. For example, the control module comprises a fluid port for supplying fluid to the fluid delivery device. All embodiments may be produced with alternative materials, in the art.

Serial No.: 13/724,287
Filing Date: 12/21/2012
Confirmation No.: 8891
GAU:3766

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: JENNINGS, James Edward

SERIAL NO.: 13/724,287

FILING DATE: 12/21/ 2012

TITLE: INTRINSIC TRANSDUCTION SYSTEM

GROUP ART UNIT: 3766

EXAMINER: Porter, Jr. Gary A.

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

RESPONSE/AMENDMENT

Dear Examiner Porter:

This correspondence is being filed as a Response to the Office Action issued on March 12, 2015.

Applicant requests entry of the amendments indicated below and consideration of the appended remarks.

REMARKS

Applicant claims the invention to be obvious variants. Applicant agrees there is an abundance of inseparable systemic novelty. No new matter has been entered by way of these amendments.

AMENDMENTS TO DRAWINGS/CLAIMS/ABSTRACT: PREVIOUSLY SUBMITTED

**AMENDMENTS TO SPECIFICATION: NO PARAGRAPHS REMOVED/ 0032 -commas
and midsole 30, outsole 42 previously corrected.**

BIOLOGY DEFINITIONS

Each intervertebral fibrocartilage is composed, at its circumference, of laminae of fibrous tissue and fibrocartilage, forming the anulus fibrosus disci intervertebralis. The lamellae are stiff and sustain compressive loads. The stiffness of the anulus fibrosus works in concert with the gel-like nucleus pulposus to equalise pressure across the disc. This prevents development of stress concentrations which could cause damage to the underlying vertebrae or vertebral endplates.

ANNULUS: Latin for little ring

NUCLEUS: a dense organelle present in most eukaryotic cells, typically a single rounded structure bounded by a double membrane, containing the genetic material.

Applicant respectfully requests reconsideration of the application and its passage to allowance. Should any impediments to allowance remain, Applicant requests that the Examiner contact the undersigned at the indicated phone number.

Respectfully submitted, James Jennings

/JAMES EDWARD JENNINGS/

Date: 03/23/2015

By: _____

PO Box 270081 Louisville, CO 80027

303.664.1829

Electronic Acknowledgement Receipt

EFS ID:	21841645
Application Number:	13724287
International Application Number:	
Confirmation Number:	8891
Title of Invention:	INTRINSIC TRANSDUCTION SYSTEM
First Named Inventor/Applicant Name:	JAMES EDWARD JENNINGS
Customer Number:	82669
Filer:	James Edward Jennings
Filer Authorized By:	
Attorney Docket Number:	
Receipt Date:	22-MAR-2015
Filing Date:	21-DEC-2012
Time Stamp:	18:21:28
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Specification	ITS_SPEC_PIEZO_CLEAN.pdf	81540 file8ac1d6c69914f7e7be5639954b85e6c6c5eeb	no	15

Warnings:

Information:

2	Applicant Arguments/Remarks Made in an Amendment	PIEZOMID_LETTER_NO_PARA.pdf	32761 fb1d1d2ccee203ac5d4a58e4fd971008fe318f30	no	2
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Warnings:

Information:

Total Files Size (in bytes):	114301
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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 a 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.



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82669 e 2015-03-12

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Paper No.

Application No.: 13/724,287 	Date Mailed: 2015-03-12
First Named Inventor: JENNINGS, JAMES, EDWARD	Examiner: PORTER, JR, GARY A
Attorney Docket No.:	Art Unit: 3766
Confirmation No.: 8891	Filing Date: 2012-12-21

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

Commissioner for Patents

Notice of Non-Compliant Amendment (37 CFR 1.121)	Application No. 13/724,287	Applicant(s) JENNINGS, JAMES EDWARD
		Art Unit 3700

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

The amendment document filed on 26 December, 2014 is considered non-compliant because it has failed to meet the requirements of 37 CFR 1.121 or 1.4. In order for the amendment document to be compliant, correction of the following item(s) is required.

THE FOLLOWING MARKED (X) ITEM(S) CAUSE THE AMENDMENT DOCUMENT TO BE NON-COMPLIANT:

- 1. Amendments to the specification:
 - A. Amended paragraph(s) do not include markings.
 - B. New paragraph(s) should not be underlined.
 - C. Other See Continuation Sheet.
- 2. Abstract:
 - A. Not presented on a separate sheet. 37 CFR 1.72.
 - B. Other _____.
- 3. Amendments to the drawings:
 - A. The drawings are not properly identified in the top margin as "Replacement Sheet," "New Sheet," or "Annotated Sheet" as required by 37 CFR 1.121(d).
 - B. The practice of submitting proposed drawing correction has been eliminated. Replacement drawings showing amended figures, without markings, in compliance with 37 CFR 1.84 are required.
 - C. Other _____.
- 4. Amendments to the claims:
 - A. A complete listing of all of the claims is not present.
 - B. The listing of claims does not include the text of all pending claims (including withdrawn claims)
 - C. Each claim has not been provided with the proper status identifier, and as such, the individual status of each claim cannot be identified. Note: the status of every claim must be indicated after its claim number by using one of the following status identifiers: (Original), (Currently amended), (Canceled), (Previously presented), (New), (Not entered), (Withdrawn) and (Withdrawn-currently amended).
 - D. The claims of this amendment paper have not been presented in ascending numerical order.
 - E. Other: _____.
- 5. Other (e.g., the amendment is unsigned or not signed in accordance with 37 CFR 1.4): For further explanation of the amendment format required by 37 CFR 1.121, see MPEP § 714.

TIME PERIODS FOR FILING A REPLY TO THIS NOTICE:

1. Applicant is given **no new time period if the non-compliant amendment is an** after-final amendment or an amendment filed after allowance, or a drawing submission (only) If applicant wishes to resubmit the non-compliant after-final amendment with corrections, the **entire corrected amendment** must be resubmitted.
2. Applicant is given **two months** from the mail date of this notice to supply the correction, if the non-compliant amendment is one of the following: a preliminary amendment, a non-final amendment (including a submission for a request for continued examination (RCE) under 37 CFR 1.114), a supplemental amendment filed within a suspension period under 37 CFR 1.103(a) or (c), and an amendment filed in response to a Quayle action. If any of above boxes 1 to 4 are checked, the correction required is only the corrected section of the non-compliant amendment in compliance with 37 CFR 1.121.

Extensions of time are available under 37 CFR 1.136(a) only if the non-compliant amendment is a non-final amendment or an amendment filed in response to a *Quayle* action.

Failure to timely respond to this notice will result in:

Abandonment of the application if the non-compliant amendment is a non-final amendment or an amendment filed in response to a *Quayle* action; or

Non-entry of the amendment if the non-compliant amendment is a preliminary amendment or supplemental amendment.

Legal Instruments Examiner (LIE), if applicable /LISA FULTON/

Telephone No: (571)272-4348

Continuation of 1. Other: The location of the paragraph or section to be deleted or replaced, or where a new paragraph section is to be added, must be unambiguously identified.

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

APPLICATION FOR U.S. LETTERS PATENT

TITLE: INTRINSIC TRANSDUCTION SYSTEM

INVENTOR: JENNINGS, James Edward

CROSS REFERENCE TO RELATED APPLICATIONS

[001] NONE

BACKGROUND OF THE INVENTION

Field of the Invention

[002] This invention relates to transduction piezoelectric nerve stimulation and more specifically relates to devices for applying transcutaneous nerve stimulation for physiotherapeutic purposes.

The present disclosure relates generally to systems and methods for causing nerve cells to regenerate and, more particularly, to systems and methods for promoting nerve regeneration in the central and peripheral nervous stimuli systems of humans.

[003] Transcutaneous nerve stimulation, commonly referred to as TENS is the application of a controlled amount of low electrical currents to stimulate nerves and/or muscle tissues in a patient for treating numerous physiological problems such as muscle and joint pain and inflammation. The currents may be provided in a steady flow or in electrical impulses of various wavelength frequencies. The electrical currents primarily stimulate the nerve for the body to produce natural endorphin's to block the perception of pain and also physically cause the muscle tissues at the area of application to tighten and relax repeatedly, and thus increasing the blood circulation to enhance the natural curing process. The TENS currents are provided by a generator and the currents are delivered with application probes to the inflicted locations of a patient's body. The free end of the currents application probes is commonly in the form of a flexible inductive composite pad which must be attached to the patient's body with conductive adhesive gel and/or adhesive tapes in order to deliver the current to the patient's body. However, the curing process is not efficient if it is relying solely on the TENS stimulation.

[004] Peripheral nerve fibers have been classified in order of decreasing size and conduction velocity in a manner which is now standardized. Generally, as the fibre size decreases, the amplitude of electrical stimulation required to elicit an action potential increases. Also, the smaller fibre will require longer pulse durations than large fibre stimuli. These differences in nerve response have been used to selectively stimulate different types of nerve fibers by varying the amplitude, pulse duration, or pulse repetition rate of an electrical stimulating pulse. The desired degree of nerve fibre selectivity, however, has not been achieved in the prior art, with the result that, for example, an elicited touch response resulting from the stimulating pulse is often accompanied by a prickly, stinging, burning, sharp or other unpleasant noxious response.

[005] Therefore, various exemplary embodiments of the invention may provide a nerve regeneration system that may include an interactive diagnostic device configured to measure nerve growth, re-growth, and/or connections between severed or otherwise damaged nerve segments.

[006] To attain the advantages and in accordance with the purpose of the invention, as embodied and broadly described herein, one exemplary aspect of the invention may provide a nerve regeneration system comprising a lead configured to be placed in a body proximate a damaged nerve, a portion of the lead being configured to stimulate the damaged nerve.

[007] According to one exemplary aspect, the stimulation comprises a therapeutic electric signal, and the parameter of the stimulation may comprise a parameter associated with the electric signal. For example, the parameter may comprise one or more of strength, direction, current, or voltage of the electric signal. According to another exemplary aspect, the nerve regeneration system may comprise an electrode coupled to the lead and configured to deliver electric stimulation to the damaged nerve. The electrode may include a plurality of electrodes and the

parameter may comprise one or more of a number, a sequence, or a combination of electrodes to be energized to deliver electric stimulation. The system may also comprise a conductor for connecting the electrode to the control module. According to still another aspect, the control module may be enclosed in a substantially sealed housing with one or more leads extending from the housing. The control module may be configured to communicate with an external device. According to another aspect, the present disclosure is directed toward a nerve regeneration system that comprises a nerve regeneration module comprising at least one lead implanted in a body proximate a damaged nerve. The nerve regeneration module may be configured to administer a nerve regeneration treatment to the damaged nerve and detect a patient response to the nerve regeneration treatment. According to still another aspect, the nerve regeneration system comprises a power supply configured to generate an electromagnetic signal for stimulating the damaged nerve. Accordingly, the at least one lead may comprise one or more electrodes electrically coupled to the power supply, the one or more electrodes being configured to deliver the electromagnetic signal to the damaged nerve. According to one embodiment, the one or more of the electrodes are disposed along a length of the at least one lead.

[008] Additional objects and advantages of the invention will be set forth in part in the description which follows, and in part will be obvious from the description, or may be learned by practice of the invention. The objects and advantages of the invention will be realized and attained by means of the elements and combinations particularly pointed out in the appended claims.

[009] It is to be understood that both the foregoing general description and the following detailed description are exemplary and explanatory only and are not restrictive of the invention, as claimed.

DESCRIPTION OF RELATED ART

[0010] The central nervous system, including the brain, is the primary control system of a body, communicating with one or more parts of the body via a complicated system of interconnected nerves. Nerves are cable-like bundles of axons that carry electrical signals and impulses between one or more neurons and the central nervous system. Thus, nerves play a critical role in communicating sensory and stimulatory signals between various parts of the body (e.g., muscles, organs, glands, etc.) and the central nervous system.

[0011] Nerves may be damaged or severed either through trauma or disease. Damaged or severed nerves may inhibit the central nervous system's ability to receive sensory and stimulatory data from individual neurons, potentially limiting the nervous system's control over the body. For example, severe nerve damage may lead to paralysis, such as paraplegia or quadriplegia.

[0012] In the peripheral nervous system, a common treatment to repair damaged nerves involves a surgical procedure to harvest a healthy nerve from another part of the patient's body and graft the harvested nerve to bridge the damaged section. Although surgery can successfully repair damaged nerve cells in many cases, these procedures may have several disadvantages. For instance, in most cases, several invasive surgical procedures are required to find suitable donor nerves. Further, damage to nerves at the donor site is quite common, potentially leading to weakening of donor nerves at the expense of the recipient nerves.

[0013] Some alternatives to surgical repair of damaged nerves have been developed. These systems typically involve surrounding damaged nerves in a sheath and administering therapeutic drugs or electromagnetic energy to the damaged nerve site. The administration of the therapeutic drugs and/or electromagnetic energy may facilitate nerve regeneration, while the sheath guides the nerve to grow in a desired direction.

[0014] Engineer Georges Lakhovsky, believed that people could achieve good health by adjusting the oscillation of their cells. He tapped Tesla to assist him in building the Multiple Wave Oscillator. Lakhovsky claimed the machine would improve health, remove pathogens, and even cure cancer. "The action of the pounding surf creates negative air ions and we also see it immediately after spring thunderstorms when people report lightened moods," says ion researcher Michael Terman, PhD, of Columbia University in New York. The Organic Electronics research group at Linköping University previously developed ion transistors for transport of both positive and negative ions, as well as biomolecules. An advantage of chemical circuits is that the charge carrier consists of chemical substances with various functions. This means that we now have new opportunities to control and regulate the signal paths of cells in the human body.

[0015] Energy in electronic elements: Electric potential energy, or electrostatic potential energy, is a potential energy (measured in joules) that results from conservative Coulomb forces and is associated with the configuration of a particular set of point charges within a defined system. The term "electric potential energy" is used to describe the potential energy in systems with time-variant electric fields, while the term "electrostatic potential energy" is used to describe the potential energy in systems with time-invariant electric fields.

[0016] Capacitance is the ability of a body to store an electrical charge. Any body or structure that is capable of being charged, either with static electricity or by an electric current, exhibits capacitance. A common form of energy storage device is a parallel-plate capacitor. In a parallel plate capacitor, capacitance is directly proportional to the surface area of the conductor plates and inversely proportional to the separation distance between the plates. If the charges on the plates are $+q$ and $-q$, and V gives the voltage between the plates, then the capacitance C is given by $C = q/V$.

[0017] The capacitance is a function only of the physical dimensions (geometry) of the conductors and the permittivity of the dielectric. It is independent of the potential difference between the conductors and the total charge on them.

Piezoelectricity is the combined effect of the electrical behavior of the material:

$$D = \epsilon E$$

where D is the electric charge density displacement (electric displacement), ϵ is permittivity and E is electric field strength, and

$$\text{Hooke's Law: } S = s T$$

where S is strain, s is compliance and T is stress.

Physical Properties of TPU

[0018] TPU possesses a combination of physical properties not available in other thermoplastic materials or synthetic rubbers, including: Superior Abrasion resistance for physically punishing, high-wear applications. Formulated UV resistance prevents yellowing or embrittlement. Elevated tensile strength provides reliability and durability over the life of the product in which the film is used. Good memory retention, Durometers (hardness) from very soft to very hard. High resistance to hydrocarbons, chemicals, ozone, bacteria, and fungus make it ideal for tough industrial environments. Inherently waterproof, for use in performance apparel, bedding, transdermal and wound care applications. Superior resistance to skin oils, yet has good "hand" or "feel" when in contact with the skin. Easily fabricated using thermal bonding, laminating, die cutting, radio frequency (RF) sealing or vacuum forming and Flame-retardant. Typically, when two or more of these properties are required for an application, TPU is the material of choice.

Other TPU Medical Applications

[0019] TPU is typically used for parts requiring a high level of performance. Applications

typically require a flexible material with a high degree of flex resistance, wearability and durability. Many of the characteristics of TPU make it ideal for medical use. Medical applications include: IV site dressings, Transdermal patches, Thin film wound dressings, Cast and dressing covers, Surgical gowns & drapes, Puncture-resistant gloves, Incontinence pads, Compression dressings, Orthopedic gel insoles, Medical anti-shock trousers, Gel-filled positioning pads, Inflatable support bladders, Pressure infuser cuffs, Extraction bags, Hospital mattresses, covers, Orthodontic brace aligners.

[0020] Copolymers: Copolymers of PVDF are also used in piezoelectric and electrostrictive applications. One of the most commonly-used copolymers is P(VDF-trifluoroethylene), usually available in ratios of about 50:50 wt% and 65:35 wt% (equivalent to about 56:44 mol% and 70:30 mol%). Another one is P(VDF-tetrafluoroethylene). They improve the piezoelectric response by improving the crystallinity of the material.

[0021] A novel electrospun TPU/PVdF porous fibrous polymer electrolyte for lithium ion batteries. Novel blend-based gel polymer electrolyte (GPE) films of thermoplastic polyurethane (TPU) and poly(vinylidene fluoride) (PVdF) (denoted as TPU/PVdF) have been prepared by electrospinning. The electrospun thermoplastic polyurethane-co-poly (vinylidene fluoride) membranes were activated with a 1M solution of LiClO₄ in EC/PC and showed a high ionic conductivity about 1.6 mS cm⁻¹ at room temperature. The electrochemical stability is at 5.0 V versus Li⁺/Li, making them suitable for practical applications in lithium cells. Cycling tests of Li/GPE/LiFePO₄ cells showed the suitability of the electrospun membranes made of TPU/PVdF (80/20, w/w) for applications in lithium rechargeable batteries.

[0022] A novel high-performance gel polymer electrolyte membrane basing on electrospinning technique for lithium rechargeable batteries. Nonwoven films of composites of thermoplastic

polyurethane (TPU) with different proportion of poly(vinylidene fluoride) (PVdF) (80, 50 and 20%, w/w) are prepared by electrospinning 9 wt% polymer solution at room temperature. Then the gel polymer electrolytes (GPEs) are prepared by soaking the electrospun TPU–PVdF blending membranes in 1 M LiClO₄/ethylene carbonate (EC)/propylene carbonate (PC) for 1 h. The gel polymer electrolyte (GPE) shows a maximum ionic conductivity of 3.2×10^{-3} S cm⁻¹ at room temperature and electrochemical stability up to 5.0 V versus Li⁺/Li for the 50:50 blend ratio of TPU:PVdF system. At the first cycle, it shows a first charge–discharge capacity of 168.9 mAh g⁻¹ when the gel polymer electrolyte (GPE) is evaluated in a Li/PE/lithium iron phosphate (LiFePO₄) cell at 0.1 C-rate at 25 °C. TPU–PVdF (50:50, w/w) based gel polymer electrolyte is observed much more suitable than the composite films with other ratios for high-performance lithium rechargeable batteries.

[0023] TPU combines the best properties of rubber and plastic, but has no plasticizers to leach out and cause allergic reactions or embrittlement over time. Thus, products made from polyurethane film & sheet, retain long-term flexibility and outstanding shelf life.

[0024] Thus, there is a need for an improved nerve stimuli regeneration system that may overcome one or more of the problems discussed above. In particular, there is a need for an improved nerve regeneration system that can efficiently optimize the treatment parameters, without requiring invasive exploratory techniques.

OBJECTS AND SUMMARY OF THE INVENTION

[0025] The intrinsic transduction system of the present invention provides products, preferably an athletic shoe or athletic apparel, adapted to emit Piezoelectricity energy or information in response to impact. The product comprises a molded part having a Nerve stimulating unit or a midsole device at least partially molded therein. The unit comprises an impact-sensing element

made from a polymeric piezoelectric material, a battery means, a stimulus device or an information display device and a circuit connected to said piezoelectric material. The stimulus unit is responsive to electrical energy produced upon impact which permits the nerve stimulus device to be energized from the battery or any information displaying device to be activated. In one embodiment, the electrical energy resulting from each impact is used as a trigger to operate nerve stimulating unit via the circuit incorporated therein, and the amount and/or duration of the stimulus emission can be independently determined/controlled by appropriate design of the circuit.

[0026] The product is preferably a spin disk, garment or shoe, particularly a prosthetic spinal disc, athletic garment or a sports shoe. The molded outsole part is preferably a thermoplastic unit structure, with at least a midsole, the circuit and the transducer stimulus device disposed in or molded into the midsole part of the structure, and with the piezoelectric stimulus-emitting device being arranged to emit energy outwardly from said mid part and/or by leads. The polymeric piezoelectric material may be molded into the midsole part of the structure, preferably in the region of maximum stress.

[0027] In still another embodiment, the circuit responds to the magnitude of the electrical energy produced by the piezoelectric material and thereby selectively energizes one or more of the nerve stimulating devices depending on the amount of electrical energy produced. In this manner, a visual indication of the magnitude of the pressure exerted upon the sole can be displayed.

[0028] The present invention provides a stimulating pulse having frequency components falling within predetermined frequency band limits. This pulse reliably elicits a touch response without the heretofore attendant noxious sensation mentioned above. It has been demonstrated that the differential excitation of the touch fibers relative to pain specific fibers inhibits the transmission

of pain to the conscious centers. The type of stimulation specified herein, optimizes the differential excitation between touch and pain specific fibers, thus optimizing the inhibition of pain transmission.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a top view of the piezoelectric disk orb control of the present invention;

FIG. 2 is a side view of the piezoelectric disk orb control of the present invention;

FIG. 3 is a top view of the piezoelectric disk orb of the present invention;

FIG. 4 is a side view of the piezoelectric embed disk orb of the present invention with a base;

FIG. 5 is an elevation view of the piezoelectric disk battery capacitor of the present invention;

FIG. 6 is a top view of the piezoelectric disk control of the present invention;

FIG. 7 is a side view of the piezoelectric vertebral disc of the present invention;

FIG. 8 is a perspective view of the piezoelectric vertebral disc of another embodiment;

FIG. 9 is a side view of the mid-out sole vertebral disc of the present invention;

FIG. 10 is a side view of the battery capacitor vertebral disc of the present invention;

FIG. 11 is a perspective front view of therapeutic garments embodiment of the present invention.

FIG. 12 is a perspective rear view of therapeutic garments embodiment of the present invention.

FIGS. 13 illustrate views of footwear product including features of the present invention;

FIGS. 14 illustrate views of footwear product including features of the present invention;

FIG. 15 is an elevational perspective view of a cleat of the present invention;

FIG. 16 is a perspective top elevation view of shoe insole according to the present invention;

FIG. 17 -19 are side elevations view of shoe sole according to the present invention;

FIG. 20 is a block schematic circuitry diagram of the transducer according to the invention;

FIG. 21 is a schematic circuitry diagram of a negative ion transducer according to the invention.

DETAILED DESCRIPTION OF A PREFERRED EMBODIMENT

[0029] Negative ions are odorless, tasteless, and invisible molecules that we inhale in abundance in certain environments. Think mountains, waterfalls, and beaches. Once they reach our bloodstream, negative ions are believed to produce biochemical reactions that increase levels of the mood chemical serotonin, helping to alleviate depression, relieve stress, and boost our daytime energy.

[0030] Ions are molecules that have gained or lost an electrical charge. . They are created in nature as air molecules break apart due to sunlight, radiation, and moving air and water. You may have experienced the power of negative ions when you last set foot on the beach or walked beneath a waterfall. While part of the euphoria is simply being around these wondrous settings and away from the normal pressures of home and work, the air circulating in the mountains and the beach is said to contain tens of thousands of negative ions -- Much more than the average home or office building, which contain dozens or hundreds, and many register a flat zero.

[0031] Thus, there is an increasing interest in external electrical skin stimulation for such purposes as pain suppression, neuro-muscular stimulation, communication systems, etcetera. Obviously, many modifications and variations of the present invention are possible in light of the teaching of devices shown in U.S. Patent Nos. 1,059,090, No. 1,305,725 and No.6,703,785 . Specifically, there are many alternative ways of transducing the optimized waveforms disclosed herein which do not depart from the intended scope of the application. Accordingly, within the scope of the appended claims, the invention may be practiced otherwise than as specifically described.

DETAILED DESCRIPTION OF THE INVENTION

[0032] FIGS. 1, FIG. 2 and FIG.3 show the construction of a spin Piezoelectric transducer 33, 35, 37, 39 according to the invention. The illustrated piezoelectric transducer FIG.1 thru 3 is a module comprising a thin and small case disk housing outsole 42. FIG.4 transducer has a insole of piezoelectric 26, embed coupler outsole 42 base member, accommodated about the midsole 30 casing. FIG.5 battery transducer 41, starting from a regular lithium-ion coin battery, replaced the usual divider between electrodes with a polyvinylidene difluoride film whose piezoelectric nature produces a charging action inside that gap through just a little pressure. Further, modified(AL foil 32, LiCoO₂ 34, PVDF 36, TiO₂ NT 38, Ti foil 40) with the attachment of a mid-out housing case. Fig.1 & Fig.6 an oscillating transducer 33,44 incorporates a controller 31 and designs 29 may form an abstract or geometrical pattern, emblem, or a logo or one or more alphanumeric characters constituting, for example, a trademark of the manufacturer. The ends of the fibers at these various points may be colored, e.g. with different colored translucent inks or dyes. Fig.7 and Fig.9 shows two adjacent vertebrae 27 and 28 with mid 30-out 42 molded transducer disc prosthesis 46,48 replacing the natural disc. Disc prosthesis 46 is a representation of the Charité prosthesis modified by the inclusion of out 42 plate transducers 35 and or mid fluid reserve 25, battery capacitor 41, transistors, antenna. FIG. 8 shows a Bryan similar cervical disc 45. Note that it is only recommended as a prosthesis for the cervical vertebrae. It has a mid 30 (not visible) between two molded out plates transducers 33 (only one shown). A flexible middisk 30 membrane between the molded outdisk 42 case housing surrounds the transducers 35 and or mid fluid reserve 25, battery capacitor 41, transistors nucleus. Applicant understands that current models of the cervical disc do not have the small tabs 47. Fig.9 illustrates vertebral bodies 27 and 28 are separated by molded intervertebral midsole 30-outsole 42 discs. Each disc

has a nucleus midsole **30** surrounded by an annulus outsole **42**. **Fig.10** represents a intervertebral prosthetic housing a battery capacitor **41** and end transducers **35**. This embodiment may also house mid fluid **25** reserve accessible by a catheter aperture **23**, battery capacitor **41**, transistors and leads **50** to damaged nerve endings. **Fig.11** and **Fig.12** depict athletic apparel transducers head to toe garments according to embodiments of the present invention. Transducer **35** garment **51,55** may be adapted to be worn by a wearer therapeutically. The shoes **60,70** shown in **FIG. 13** and **FIG. 14** comprises a battery transducer **41**, unitary sole-and-heel structure attached by molding or other means to a midsole **30**. The transducers **35,44**, forefoot sole and heel battery transducer **41** structure may be molded to the **Fig.16** insole **88** midsole **30** using methods well known in the art. Located or molded within the **Fig.17, Fig.18, Fig.19** sole **81,83** of the forefoot sole **81,82,83** and heel battery transducer **41** structure, preferably adjacent to a point of maximum stress (i.e. near the part corresponding to the ball or heel of the wearer's foot) is a piezoelectric **93** impact battery capacitor **41** comprised of a sheet or layer of polymeric piezoelectric material. This piezoelectric impact battery capacitor **41** preferably comprises polyvinylidene fluoride (PVDF) which has been stretch oriented and electrically polarized to enhance its piezoelectric properties. Such materials are known in the art. Referring to **FIGS. 1** thru **19**, the piezoelectric transducers **33, 35, 37, 39, 44** is electrically conductive to a **Fig.20 & Fig.21** circuits **90,100** which contains a battery capacitor **41,92**. Additional embodiments include but not limited to fluid **25** reserve, controllers **31,96**, touchscreen **57**, CPU **96**, transistor **99** chips, antenna **94**, resistor **97**, oscillator **91** and leads **50**. Said transducer parts communicate with design **29** emboss numerals, letters and emblems including logos, trademarks and fonts. **Fig.15** provides spark transducer mid **30** out **42** cleats **72** for athletic shoes, spark cleats **72** have a piezoelectric sole attachment member transducer disk **35** having a longitudinal axis for fitting into sole attachment

means in the soles of the shoes and coupled traction edge 73. **Fig.13-14** and **Fig.16-19** detail various embodiments of the transducer 35 shoe mid 30-out 42 sole and or insole 88 including CPU 96, resistor 97 transistor 99 chips, controllers 31 and battery capacitors 41,92. **FIG. 20** is a block circuit diagram showing the transducer, antenna 94, touchscreen 57, resistor 97,controller 96, transistor 99 and battery 98 capacitor 92. The transistor 99 has an oscillation 91 using a piezoelectric 93 transducer as oscillating means charges the battery 98 capacitor 92, transistor 99 boosts, controlled 96 and dispersed. **FIG. 21** is a circuit diagram showing the negative ion transistor 99. The negative ion transistor 99 has an oscillating circuit 91 using a piezoelectric transducer as oscillating means. The oscillating circuit 91 generates a signal 26 at a frequency 101 of, for instance, 75 kHz as resonant frequency 101 of the piezoelectric 93 transducer 33, 35, 37, 39, 44 (which is determined by the length direction dimension) or the neighborhood (± 5 kHz) of the resonant frequency 101.

ALTERNATIVE EMBODIMENTS

Alternatively, send out signals to muscle synapses where chips work with common signaling substances, for example acetylcholine. According to yet another aspect, the **FIG. 21** system may comprise a first lead 50 may configured to deliver an electrical signal, and a second lead 50 configured to deliver the therapeutic fluid 25 to the damaged nerve. The lead may comprise a catheter tube lead 50 in fluid communication with the fluid delivery device and configured to deliver the therapeutic fluid to the damaged nerve. According to still another aspect, the control module may comprise a fluid delivery device configured to provide a therapeutic fluid to the damaged nerve. For example, the control module comprises a fluid port for supplying fluid to the fluid delivery device. All embodiments may be produced with alternative materials, in the art.

Serial No.: 13/724,287
Filing Date: 12/21/2012
Confirmation No.: 8891
GAU:3766

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: JENNINGS, James Edward

SERIAL NO.: 13/724,287

FILING DATE: 12/21/ 2012

TITLE: INTRINSIC TRANSDUCTION SYSTEM

GROUP ART UNIT: 3766

EXAMINER: Porter, Jr. Gary A.

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

RESPONSE/AMENDMENT

Dear Examiner Porter:

This correspondence is being filed as a Response to the Office Action issued on August 26, 2014.

Applicant requests entry of the amendments indicated below and consideration of the appended remarks.

REMARKS

Applicant claims the invention to be obvious variants. Applicant agrees there is an abundance of inseparable systemic novelty. No new matter has been entered by way of these amendments.

AMENDMENTS TO THE DRAWINGS: PREVIOUSLY SUBMITTED

AMENDMENTS TO THE CLAIMS: NONE

AMENDMENTS TO THE SPECIFICATION: REVISED

BIOLOGY DEFINITIONS

Each intervertebral fibrocartilage is composed, at its circumference, of laminae of fibrous tissue and fibrocartilage, forming the anulus fibrosus disci intervertebralis. The lamellae are stiff and sustain compressive loads. The stiffness of the anulus fibrosus works in concert with the gel-like nucleus pulposus to equalise pressure across the disc. This prevents development of stress concentrations which could cause damage to the underlying vertebrae or vertebral endplates.

ANNULUS: Latin for little ring

NUCLEUS: a dense organelle present in most eukaryotic cells, typically a single rounded structure bounded by a double membrane, containing the genetic material.

Applicant respectfully requests reconsideration of the application and its passage to allowance. Should any impediments to allowance remain, Applicant requests that the Examiner contact the undersigned at the indicated phone number.

Respectfully submitted, James Jennings

/JAMES EDWARD JENNINGS/

Date: 12/26/2014

By: _____

PO Box 270081 Louisville, CO 80027

303.664.1829

Electronic Acknowledgement Receipt

EFS ID:	21068499
Application Number:	13724287
International Application Number:	
Confirmation Number:	8891
Title of Invention:	INTRINSIC TRANSDUCTION SYSTEM
First Named Inventor/Applicant Name:	JAMES EDWARD JENNINGS
Customer Number:	82669
Filer:	James Edward Jennings
Filer Authorized By:	
Attorney Docket Number:	
Receipt Date:	26-DEC-2014
Filing Date:	21-DEC-2012
Time Stamp:	22:06:20
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Specification	ITS_SPEC_PIEZO.pdf	81735 <small>55b1dcc5ec2efab9ec5336400b358721f69759cf</small>	no	15

Warnings:

Information:

2	Applicant Arguments/Remarks Made in an Amendment	PIEZOMID_LETTER_444.pdf	28311 127f81e4b6c8895c6bdce118a1c7fa0b71154405	no	2
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Warnings:

Information:

Total Files Size (in bytes):	110046
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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 a 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.



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/724,287	12/21/2012	JAMES EDWARD JENNINGS		8891

82669 7590 12/22/2014
James Edward Jennings
P.O. Box 270081
Louisville, CO 80027

EXAMINER

PORTER, JR, GARY A

ART UNIT	PAPER NUMBER
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3766

MAIL DATE	DELIVERY MODE
-----------	---------------

12/22/2014

PAPER

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 Non-Compliant Amendment (37 CFR 1.121)

Application No.	Applicant(s)
13/724,287	JENNINGS, JAMES EDWARD
Examiner	Art Unit
ALLEN PORTER, JR	3766

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

The amendment document filed on 10/27/2014 and 12/18/2014 is considered non-compliant because it has failed to meet the requirements of 37 CFR 1.121 or 1.4. In order for the amendment document to be compliant, correction of the following item(s) is required.

THE FOLLOWING MARKED (X) ITEM(S) CAUSE THE AMENDMENT DOCUMENT TO BE NON-COMPLIANT:

- 1. Amendments to the specification:
 - A. Amended paragraph(s) do not include markings.
 - B. New paragraph(s) should not be underlined.
 - C. Other _____.
- 2. Abstract:
 - A. Not presented on a separate sheet. 37 CFR 1.72.
 - B. Other _____.
- 3. Amendments to the drawings:
 - A. The drawings are not properly identified in the top margin as "Replacement Sheet," "New Sheet," or "Annotated Sheet" as required by 37 CFR 1.121(d).
 - B. The practice of submitting proposed drawing correction has been eliminated. Replacement drawings showing amended figures, without markings, in compliance with 37 CFR 1.84 are required.
 - C. Other _____.
- 4. Amendments to the claims:
 - A. A complete listing of all of the claims is not present.
 - B. The listing of claims does not include the text of all pending claims (including withdrawn claims)
 - C. Each claim has not been provided with the proper status identifier, and as such, the individual status of each claim cannot be identified. Note: the status of every claim must be indicated after its claim number by using one of the following status identifiers: (Original), (Currently amended), (Canceled), (Previously presented), (New), (Not entered), (Withdrawn) and (Withdrawn-currently amended).
 - D. The claims of this amendment paper have not been presented in ascending numerical order.
 - E. Other: _____.
- 5. Other (e.g., the amendment is unsigned or not signed in accordance with 37 CFR 1.4):
See Continuation Sheet

For further explanation of the amendment format required by 37 CFR 1.121, see MPEP § 714.

TIME PERIODS FOR FILING A REPLY TO THIS NOTICE:

1. Applicant is given **no new time period** if the non-compliant amendment is an after-final amendment or an amendment filed after allowance. If applicant wishes to resubmit the non-compliant after-final amendment with corrections, the **entire corrected amendment** must be resubmitted.
2. Applicant is given **two months** from the mail date of this notice to supply the correction, if the non-compliant amendment is one of the following: a preliminary amendment, a non-final amendment (including a submission for a request for continued examination (RCE) under 37 CFR 1.114), a supplemental amendment filed within a suspension period under 37 CFR 1.103(a) or (c), and an amendment filed in response to a *Quayle* action. If any of above boxes 1. to 4. are checked, the correction required is only the **corrected section** of the non-compliant amendment in compliance with 37 CFR 1.121.

Extensions of time are available under 37 CFR 1.136(a) only if the non-compliant amendment is a non-final amendment or an amendment filed in response to a *Quayle* action.

Failure to timely respond to this notice will result in:

Abandonment of the application if the non-compliant amendment is a non-final amendment or an amendment filed in response to a *Quayle* action; or

Non-entry of the amendment if the non-compliant amendment is a preliminary amendment or supplemental amendment.

/ALLEN PORTER, JR/
Primary Examiner, Art Unit 3766

Continuation of 5 Other: While Applicant has amendmend the claims, the response is non-repsonsive in that Applicant has not addressed every rejection and objection set forth in the Non-Final Rejection mailed 8/26/2014. The Examiner attempted to contact Applicant via telephone on 12/16/2014 but was unable to do so. The Examiner encourages Applicant to call and set up a telephonic interview before submitting any further responses..

Serial No.: 13/724,287
Filing Date: 12/21/2012
Confirmation No.: 8891
GAU:1629
PAGES 1-5

1.-3. (CANCELED)

4.(PREVIOUSLY PRESENTED) An intrinsic transduction system ~~method~~ comprising:

an Ion frequency means for ~~comprises~~ a piezoelectric molded part having a nerve stimulating unit, circuit or a mid disk device at least partially molded therein;

an Ion frequency means for ~~comprises~~ an ~~impact~~-sensing element made from a polymeric piezoelectric material, a battery means, a stimulus device or an information display device and a circuit connected to said piezoelectric material;

an Ion frequency means for piezoelectric response to electrical energy produced upon impact, which permits the nerve stimulus device to be energized from the battery or any information displaying device to be activated;

an Ion frequency means for voltage, ~~comprises~~ a piezoelectric molded oscillation part having a nerve stimulating unit or a impact battery/capacitor mid disk device at least partially molded therein;

a frequency means for charging the negative ion transistor circuit and battery;

a frequency means for delivery of an electrical signal or/and to deliver the therapeutic fluid;

a frequency means for comprises a molded part having a nerve stimulating unit or a mid disk device at least partially molded therein a shoe and a prosthetic;_____

_____ a frequency means for piezoelectric lead attachment to an upper/garment disk;

a frequency means for charging battery, capacitor, oscillate circuit;

a frequency means for piezoelectric out/mid disk device;

(a) a ~~method of~~ frequency transducer system comprising an athletic apparel circuit provides impact and oscillating disk shoes, disk cleats, disk garments and prosthetics;

(b) a ~~method of~~ frequency transducer system comprising a piezoelectric circuit means for impact disks subsystem circuit of athletic prosthetics, garments, spark cleats and shoes;

(c) a ~~method of~~ frequency transducer system comprising a piezoelectric circuit means for oscillating disks subsystem circuit of athletic prosthetics, garments, spark cleats and shoes; and

(d) a ~~method of intrinsic transducer system~~ therapeutic means ~~comprises~~ for Ion frequency of piezoelectric disks.

5. (PREVIOUSLY PRESENTED) The intrinsic transduction system ~~method~~ in accordance with claim 4, wherein said means for Ion frequency comprises a piezoelectric molded part having a nerve stimulating unit, circuit or a mid disk device at least partially molded therein comprises an out disk;

wherein said means for Ion frequency comprises an impact-sensing element made from a polymeric piezoelectric material, a battery means, a stimulus device or an information display device and a circuit connected to said piezoelectric material comprises a mid disk;

wherein said means for piezoelectric response to electrical energy produced upon impact which

permits the nerve stimulus device to be energized from the battery or any information displaying device to be activated comprises a stimulus unit;

wherein said means for charging the negative ion transistor and battery comprises an oscillating circuit;

wherein said means for Ion frequency, deliver an electrical signal or/and to deliver the therapeutic fluid comprises a therapeutic lead;

wherein said means for Ion frequency comprises a molded part having a nerve stimulating unit or a mid disk device at least partially molded therein a shoe and a prosthetic;

wherein said means for voltage comprises a piezoelectric molded oscillation part having a nerve stimulating unit or a impact battery/capacitor mid disk device at least partially molded therein;

wherein said means for athletic prosthetic is an oscillating disk lead attachable lead garment;

wherein said means for athletic shoe is an oscillating disk lead attachable lead upper garment;

wherein said means for out/mid disk device shoe is a lead attached to oscillating disk garment;

wherein said means for out/mid disk device shoe and prosthetic is attached to lead garment;

wherein said means for stimulus comprises a negative ion chip and disk spark cleat.

wherein the stimulation comprises a therapeutic electric signal;

wherein the therapeutic system comprises a reservoir for fluid delivery lead;

(a) ~~a method of transducer system comprising~~ an athletic apparel circuit provides negative ion

impact and oscillating disk shoes, disk cleats, disk garments;

(b) ~~a method of transducer system comprising~~ a piezoelectric circuit means for negative ion impact disks subsystem circuit of athletic prosthetics, garments, spark cleats and shoes; and

(c) ~~a method of transducer system comprising~~ a piezoelectric circuit means for a frequency ion impact oscillating disks sub circuit of athletic prosthetics, garments, spark cleats and shoes;

6. (PREVIOUSLY PRESENTED) An intrinsic transduction system ~~method~~ comprising:

an out disk, ~~for comprises~~ a piezoelectric molded part having a nerve stimulating unit, circuit or a mid disk device at least partially molded therein;

a mid disk, ~~for comprises~~ an ~~impact~~-sensing element made from a polymeric piezoelectric material, a battery means, a stimulus device or an information display device and a circuit connected to said piezoelectric material;

a stimulus unit, for piezoelectric response to electrical energy produced upon impact which permits the nerve stimulus device to be energized from the battery or any information displaying device to be activated;

an oscillating disk circuit, for charging the negative ion transistor and battery;

a therapeutic lead, for electrical signal and/or delivery of therapeutic fluid;

an out disk, ~~for comprises~~ a molded part having a nerve stimulating unit or a midsole device at least partially molded therein a shoe and a prosthetic;

an upper/garment, for piezoelectric lead attached oscillate circuit and impact disk device

an out, for voltage comprises a piezoelectric molded oscillation part having a nerve stimulating unit or a impact battery/capacitor mid disk device at least partially molded therein;

(a) a ~~method of~~ transducer system comprising a negative ion circuit means for piezoelectric impact disks and oscillating disks;

(b) a ~~method of~~ transducer system comprising a piezoelectric circuit means for impact subsystem circuit of disks prosthetics, disks garments, disks spark cleats and disks shoes;

(c) a ~~method of~~ transducer system comprising a piezoelectric circuit means for oscillation subsystem circuit of disks prosthetics, disks garments, disks spark cleats and disks shoes;

(d) a ~~method for~~ intrinsic transducer system prosthetic vertebrae disc comprising mid disk, out disk, disk bladders, leads, and having a textile portion touchscreen;

(e) a ~~method for~~ intrinsic transducer system wherein the piezoelectric circuit comprises therapeutic disks, leads, controllers, resistors, bladders, display and catheters;

(f) a ~~method of~~ intrinsic transducer system for an athletic garments circuit comprising piezoelectric disks and therapeutic leads; and

(g) a ~~method of~~ intrinsic transducer system for an athletic prosthetic comprises a mid/out disk.

Serial No.: 13/724,287
Filing Date: 12/21/2012
Confirmation No.: 8891
GAU:1629
PAGES 1-5

1.-3. (CANCELED)

4.(PREVIOUSLY PRESENTED) An intrinsic transduction system comprising:

an Ion frequency means for a piezoelectric molded part having a nerve stimulating unit, circuit or a mid disk device at least partially molded therein;

an Ion frequency means for an impact-sensing element made from a polymeric piezoelectric material, a battery means, a stimulus device or an information display device and a circuit connected to said piezoelectric material;

an Ion frequency means for piezoelectric response to electrical energy produced upon impact, which permits the nerve stimulus device to be energized from the battery or any information displaying device to be activated;

an Ion frequency means for voltage, a piezoelectric molded oscillation part having a nerve stimulating unit or a impact battery/capacitor mid disk device at least partially molded therein;

a frequency means for charging the negative ion transistor circuit and battery;

a frequency means for delivery of an electrical signal or/and to deliver the therapeutic fluid;

a frequency means for comprises a molded part having a nerve stimulating unit or a mid disk device at least partially molded therein a shoe and a prosthetic; _____

_____ a frequency means for piezoelectric lead attachment to an upper/garment disk;

a frequency means for charging battery, capacitor, oscillate circuit;

a frequency means for piezoelectric out/mid disk device;

(a) a frequency transducer system comprising an athletic apparel circuit provides impact and oscillating disk shoes, disk cleats, disk garments and prosthetics;

(b) a frequency transducer system comprising a piezoelectric circuit means for impact disks subsystem circuit of athletic prosthetics, garments, spark cleats and shoes;

(c) a frequency transducer system comprising a piezoelectric circuit means for oscillating disks subsystem circuit of athletic prosthetics, garments, spark cleats and shoes; and

(d) a therapeutic means for Ion frequency of piezoelectric disks.

5. (PREVIOUSLY PRESENTED) The intrinsic transduction system ~~method~~ in accordance with claim 4, wherein said means for Ion frequency comprises a piezoelectric molded part having a nerve stimulating unit, circuit or a mid disk device at least partially molded therein comprises an out disk;

wherein said means for Ion frequency comprises an impact-sensing element made from a polymeric piezoelectric material, a battery means, a stimulus device or an information display device and a circuit connected to said piezoelectric material comprises a mid disk;

wherein said means for piezoelectric response to electrical energy produced upon impact which permits the nerve stimulus device to be energized from the battery or any information displaying device to be activated comprises a stimulus unit;

wherein said means for charging the negative ion transistor and battery comprises an oscillating circuit;

wherein said means for Ion frequency, deliver an electrical signal or/and to deliver the therapeutic fluid comprises a therapeutic lead;

wherein said means for Ion frequency comprises a molded part having a nerve stimulating unit or a mid disk device at least partially molded therein a shoe and a prosthetic;

wherein said means for voltage comprises a piezoelectric molded oscillation part having a nerve stimulating unit or a impact battery/capacitor mid disk device at least partially molded therein;

wherein said means for athletic prosthetic is an oscillating disk lead attachable lead garment;

wherein said means for athletic shoe is an oscillating disk lead attachable lead upper garment;

wherein said means for out/mid disk device shoe is a lead attached to oscillating disk garment;

wherein said means for out/mid disk device shoe and prosthetic is attached to lead garment;

wherein said means for stimulus comprises a negative ion chip and disk spark cleat.

wherein the stimulation comprises a therapeutic electric signal;

wherein the therapeutic system comprises a reservoir for fluid delivery lead;

(a) an athletic apparel circuit provides negative ion impact and oscillating disk shoes, disk cleats, disk garments;

(b) a piezoelectric circuit means for negative ion impact disks subsystem circuit of athletic

prosthetics, garments, spark cleats and shoes; and

(c) a piezoelectric circuit means for a frequency ion impact oscillating disks sub circuit of athletic prosthetics, garments, spark cleats and shoes;

6. (PREVIOUSLY PRESENTED) An intrinsic transduction system comprising:

an out disk, a piezoelectric molded part having a nerve stimulating unit, circuit or a mid disk device at least partially molded therein;

a mid disk, a sensing element made from a polymeric piezoelectric material, a battery means, a stimulus device or an information display device and a circuit connected to said piezoelectric material;

a stimulus unit, for piezoelectric response to electrical energy produced upon impact which permits the nerve stimulus device to be energized from the battery or any information displaying device to be activated;

an oscillating disk circuit, for charging the negative ion transistor and battery;

a therapeutic lead, for electrical signal and/or delivery of therapeutic fluid;

an out disk, a molded part having a nerve stimulating unit or a midsole device at least partially molded therein a shoe and a prosthetic;

an upper/garment, for piezoelectric lead attached oscillate circuit and impact disk device

an out, for voltage comprises a piezoelectric molded oscillation part having a nerve stimulating unit or a impact battery/capacitor mid disk device at least partially molded therein;

- (a) a transducer system comprising a negative ion circuit means for piezoelectric impact disks and oscillating disks;
- (b) a transducer system comprising a piezoelectric circuit means for impact subsystem circuit of disks prosthetics, disks garments, disks spark cleats and disks shoes;
- (c) a transducer system comprising a piezoelectric circuit means for oscillation subsystem circuit of disks prosthetics, disks garments, disks spark cleats and disks shoes;
- (d) an intrinsic transducer system prosthetic vertebrae disc comprising mid disk, out disk, disk bladders, leads, and having a textile portion touchscreen;
- (e) an intrinsic transducer system wherein the piezoelectric circuit comprises therapeutic disks, leads, controllers, resistors, bladders, display and catheters;
- (f) an intrinsic transducer system for an athletic garments circuit comprising piezoelectric disks and therapeutic leads; and
- (g) an intrinsic transducer system for an athletic prosthetic comprises a mid/out disk.

Serial No.: 13/724,287
Filing Date: 12/21/2012
Confirmation No.: 8891
GAU:1629

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: JENNINGS, James Edward

SERIAL NO.: 13/724,287

FILING DATE: 12/21, 2012

TITLE: INTRINSIC TRANSDUCTION SYSTEM

GROUP ART UNIT: 3766

EXAMINER: Porter, Jr. Gary A.

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

RESPONSE/AMENDMENT

Dear Examiner Porter:

This correspondence is being filed as a Response to the Office Action issued on August 26, 2014.

Applicant requests entry of the amendments indicated below and consideration of the appended Remarks.

REMARKS

Applicant claims the invention to be obvious variants. Applicant agrees there is an abundance of inseparable systemic novelty. No new matter has been entered by way of these amendments.

AMENDMENTS TO THE DRAWINGS: NONE

AMENDMENTS TO THE CLAIMS: Ion frequency, strike thru of the word ~~Method~~

Applicant respectfully requests reconsideration of the application and its passage to allowance.
Should any impediments to allowance remain, Applicant requests that the Examiner contact the undersigned at the indicated phone number.

Respectfully submitted, James Jennings

/JAMES EDWARD JENNINGS/

Date: 12/18/2014

By: _____

PO Box 270081 Louisville, CO 80027

303.664.1829

Electronic Acknowledgement Receipt

EFS ID:	20997584
Application Number:	13724287
International Application Number:	
Confirmation Number:	8891
Title of Invention:	INTRINSIC TRANSDUCTION SYSTEM
First Named Inventor/Applicant Name:	JAMES EDWARD JENNINGS
Customer Number:	82669
Filer:	James Edward Jennings
Filer Authorized By:	
Attorney Docket Number:	
Receipt Date:	18-DEC-2014
Filing Date:	21-DEC-2012
Time Stamp:	01:53:23
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Supplemental Response or Supplemental Amendment	PIEZOMID_CLAIMS_44.pdf	34677 <small>178b95bf027021589c62f3056dcba7c9c/d093fa</small>	no	5

Warnings:

Information:

2	Amendment Copy Claims/Response to Suggested Claims	PIEZOMID_CLEAN_44.pdf	33869	no	5
			6efa99bde9268be025f8452f1bc26a93adC51246		

Warnings:

Information:

3	Applicant Arguments/Remarks Made in an Amendment	PIEZOMID_LETTER_44.pdf	29274	no	2
			fd9bd2b3166aa5872108bdd9e320ca2ca6dc3bf2		

Warnings:

Information:

Total Files Size (in bytes):	97820
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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 a 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.

Electronic Patent Application Fee Transmittal

Application Number:	13724287			
Filing Date:	21-Dec-2012			
Title of Invention:	INTRINSIC TRANSDUCTION SYSTEM			
First Named Inventor/Applicant Name:	JAMES EDWARD JENNINGS			
Filer:	James Edward Jennings			
Attorney Docket Number:				
Filed as Micro Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension - 1 month with \$0 paid	3251	1	50	50
Miscellaneous:				
Total in USD (\$)				50

Electronic Acknowledgement Receipt

EFS ID:	20970571
Application Number:	13724287
International Application Number:	
Confirmation Number:	8891
Title of Invention:	INTRINSIC TRANSDUCTION SYSTEM
First Named Inventor/Applicant Name:	JAMES EDWARD JENNINGS
Customer Number:	82669
Filer:	James Edward Jennings
Filer Authorized By:	
Attorney Docket Number:	
Receipt Date:	16-DEC-2014
Filing Date:	21-DEC-2012
Time Stamp:	09:23:59
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$50
RAM confirmation Number	9194
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Fee Worksheet (SB06)	fee-info.pdf	30284 119ee685a9a05d25b3cb55837aedc7c3d8ea39df	no	2

Warnings:

Information:

Total Files Size (in bytes):	30284
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New Applications Under 35 U.S.C. 111

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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.

Serial No.: 13/724,287
Filing Date: 12/21/2012
Confirmation No.: 8891
GAU:1629

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: JENNINGS, James Edward

SERIAL NO.: 13/724,287

FILING DATE: 12/21, 2012

TITLE: INTRINSIC TRANSDUCTION SYSTEM

GROUP ART UNIT: 3766

EXAMINER: Porter, Jr. Gary A.

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

AMENDMENT/RESPONSE/INTERVIEW REQUEST

Dear Examiner Porter:

This correspondence is being filed as a Response to the NON Final Office Action issued on August 26, 2014. Applicant requests entry of the amendments indicated below and consideration of the appended Remarks and Arguments begin on page 2.

Method Steps

Pressure is applied to an oscillation impact disk.

Movement is applied to an oscillation spin disk.

Thereby, generating a + - electron charge.

Amplifying a voltage, capacitor and circuit.

The negative ion transducer is of an electron emission type in which electrons are emitted by spin oscillation and/or impressing a negative ion voltage electric discharge .

A negative ion transistor chip is used for amplifying a voltage from a capacitor and circuit.

REMARKS

Applicant claims the invention to be obvious variants. Applicant agrees there is an abundance of inseparable systemic novelty. Examiner acknowledges a storyline with narrative (duplication) threads. By noticing the repetition of numbers 31 controller, 35 (spin) transducer, 42 outsole and 34 was entered once in Fig.5, 33 and 44 are oscillating transducers. The word out or mid entails a location and function. The terms nucleus and annulus are biological, therefore medical. No new matter has been entered by way of these amendments.

ARGUMENT

Applicant argues the **system** overcomes NON-POLYMERIC Koo US20060235465 and surpasses a pressure point shoe. My invention has the validity of VARDIMAN 2006/0122677 and 2008/0039905 by TOMESCU. Encompasses a Ion Piezoelectric Exo-suit. Powered by **THREE means: impact and spin(0032) transducers; garment spin, prosthetic, shoe -cleat.**

Further, exhibited by vertebrae prosthesis and garment system attachment and/or an Ion therapeutic Suit with spark cleat.

Perhaps, a broad claim preamble similar to my 13/572,679 allowed application will suffice.

“An electronic garment system comprising:”

ABSTRACT (NEW)

Applicant respectfully requests reconsideration of the application and its passage to allowance.

Should any impediments to allowance remain, Applicant requests that the Examiner contact the undersigned at the indicated phone number.

Respectfully submitted, James Jennings

/JAMES EDWARD JENNINGS/

Date: 10/27/2014

By: _____

PO Box 270081 Louisville, CO 80027

303.664.1829

Serial No.: 13/724,287
Filing Date: 12/21/2012
Confirmation No.: 8891
GAU:1629
ABSTRACT (NEW)

Abstract

The System's output of the transducer is a stimulating and/or nerve regenerating frequency having components falling within predetermined frequency band limits so as to optimally excite touch nerve fibers relative to nociceptor or pain receptor nerve fibers. Products, in particular a prosthetic disc, shoe, apparel, a spark cleat, incorporating an impact sensing element made from polymeric piezoelectric material. In response to impact, the piezoelectric material generates an electrical signal to a battery powered negative ion emitting unit or to an information display device which is at least partially molded into or contained in the product, or relayed by antenna. A CPU can be included in the circuitry to provide preprogrammed control of the emitting devices or to evaluate the input from the impact sensing element. A negative ion transducer, permits ready control of a quantity of generated negative ions and resists a size and thickness reduction.

Electronic Acknowledgement Receipt

EFS ID:	20517565
Application Number:	13724287
International Application Number:	
Confirmation Number:	8891
Title of Invention:	INTRINSIC TRANSDUCTION SYSTEM
First Named Inventor/Applicant Name:	JAMES EDWARD JENNINGS
Customer Number:	82669
Filer:	James Edward Jennings
Filer Authorized By:	
Attorney Docket Number:	
Receipt Date:	27-OCT-2014
Filing Date:	21-DEC-2012
Time Stamp:	00:39:11
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Applicant Arguments/Remarks Made in an Amendment	PIEZOMID_LETTER_4.pdf	38706 09deee3ef61b2a30584ad929747e5beb15e d6d68	no	3

Warnings:

Information:

2	Abstract	PIEZOMID_ABSTRACT_4.pdf	20793 48b52e4c3570a24eba8e89d47e1ce90d7f0ab58b	no	1
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Warnings:

Information:

Total Files Size (in bytes):

59499

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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 a 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

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/724,287	12/21/2012	JAMES EDWARD JENNINGS		8891

82669 7590 08/26/2014
James Edward Jennings
P.O. Box 270081
Louisville, CO 80027

EXAMINER

PORTER, JR, GARY A

ART UNIT	PAPER NUMBER
----------	--------------

3766

MAIL DATE	DELIVERY MODE
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08/26/2014

PAPER

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.

DETAILED ACTION

1. The present application is being examined under the pre-AIA first to invent provisions.
2. An examination of this application reveals that applicant is unfamiliar with patent prosecution procedure. While an applicant may prosecute the application (except that a juristic entity must be represented by a patent practitioner, 37 CFR 1.31), lack of skill in this field usually acts as a liability in affording the maximum protection for the invention disclosed. Applicant is advised to secure the services of a registered patent attorney or agent to prosecute the application, since the value of a patent is largely dependent upon skilled preparation and prosecution. The Office cannot aid in selecting an attorney or agent.

A listing of registered patent attorneys and agents is available at <https://oedci.uspto.gov/OEDCI/>. Applicants may also obtain a list of registered patent attorneys and agents located in their area by writing to the Mail Stop OED, Director of the U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450.

Election/Restrictions

3. Applicant's response and amendment received 8/12/2014 have obviated the Restriction Requirement mailed 5/9/2014. Claims 4-6 are now pending.

Art Unit: 3766

Drawings

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because numerous reference characters have been used to designate multiple parts. For example, reference 30 is used for different parts of different embodiments illustrated in Fig. 1-10 and 13-15. Other numbers repeatedly used are 31, 35, 42. The specification also associates a single number with multiple parts. For instance, par. [0032] of Applicant's specification assigns reference number 42 to both a "small case disk housing outsole" and a "coupler outsole." Reference 34 is both LiCoO₂ and an oscillating transducer. The Examiner notes that due to the large number of references numerals that are duplicated, some in need of correction might have inadvertently been omitted from this objection. The Examiner respectfully requests that Applicant review the drawings and correct the numbering errors where present. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

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Specification

5. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

6. The abstract of the disclosure is objected to because the word count exceeds 150 words and the narrative description is disjointed, lacks antecedence for numerous terms (i.e. "the output of the transducer", it is unclear as to what transducer Applicant is referring), does not clearly describe the connections of the components described therein and does not clearly describe the invention disclosed in the specification.

Correction is required. See MPEP § 608.01(b).

7. 35 U.S.C. 112(a) or pre-AIA 35 U.S.C. 112, requires the specification to be written in "full, clear, concise, and exact terms." The specification is replete with terms which are not clear, concise and exact. The specification should be revised carefully in order to comply with 35 U.S.C. 112(a) or pre-AIA 35 U.S.C. 112. Examples of some unclear, inexact or verbose terms used in the specification are: "piezoelectric insole 26 embed coupler outsole 42 base member (par. [0032])", "mid 30-out 42 molded transducer disc prosthesis 46, 48 (par. [0032])", "nucleus midsole 30 (par. [0032])",

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“annulus outsole 42 (par. [0032])”, etc. These terms are not common terms in the art and Applicant has failed to describe exactly what structure these terms encompass.

Claim Rejections - 35 USC § 101

8. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

9. Claim 6 is rejected under 35 U.S.C. 101 because The claimed invention is not directed to patent eligible subject matter. Based upon consideration of all of the relevant factors with respect to the claim as a whole, claim(s) 1 is/are determined to be directed to an abstract idea. The rationale for this determination is explained below: No active method steps are claimed and instead, Applicant has only incorporated structure, i.e. various means. Some of the means having an associated desired function but Applicant has failed to positively recite a method step to be performed. To overcome the current rejection, the Examiner suggests incorporating active method steps into the claim.

10. For example, the limitation:

“ a stimulus unit, for piezoelectric response to electrical energy produced upon impact which permits the nerve stimulus device to be energized from the battery or any information displaying device to be activated”

11. Can be amended to read:

“energizing a stimulus unit in response to a sensed impact from a piezoelectric sensor”

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12. Similar changes need to be made to every structural component included in the method claim.

Claim Rejections - 35 USC § 112

13. 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.

14. Claims 4-6 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 enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

15. Regarding claim 4, Applicant claims " a means for comprises a molded part having a nerve stimulating unit or a mid disk device at least partially molded therein a shoe and a prosthetic. Applicant's specification discloses two embodiments: 1) a shoe having a piezoelectric transducer and stimulator (Fig. 13) and b) a prosthetic disc having a piezoelectric transducer and stimulator (Fig. 7). Applicant fails to disclose or

Art Unit: 3766

describe and embodiment in which a shoe and a prosthetic vertebral disk share a molded part having a nerve stimulating unit or a mid disk. Furthermore, Applicant has not disclosed or described an embodiment that uses both the prosthetic disk and the shoe.

16. Claims 5 and 6 contain the same issue highlighted above.

17. Claims 4-6 are rejected under 35 U.S.C. 112(a) or 35 U.S.C. 112 (pre-AIA), first paragraph, because the specification, while being enabling for either a prosthetic disc or a shoe, does not reasonably provide enablement for a system that combines function and or components of the prosthetic disc with the shoe. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

18. The following is a quotation of 35 U.S.C. 112(f):

(f) Element in Claim for a Combination. – An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

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

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

19. The use of the word “means” (or “step for”) in a claim with functional language creates a rebuttable presumption that the claim element is to be treated in accordance with 35 U.S.C. 112(f) (pre-AIA 35 U.S.C. 112, sixth paragraph). The presumption that

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35 U.S.C. 112(f) (pre-AIA 35 U.S.C. 112, sixth paragraph) is invoked is rebutted when the function is recited with sufficient structure, material, or acts within the claim itself to entirely perform the recited function.

Absence of the word “means” (or “step for”) in a claim creates a rebuttable presumption that the claim element **is not** to be treated in accordance with 35 U.S.C. 112(f) (pre-AIA 35 U.S.C. 112, sixth paragraph). The presumption that 35 U.S.C. 112(f) (pre-AIA 35 U.S.C. 112, sixth paragraph) is not invoked is rebutted when the claim element recites function but fails to recite sufficiently definite structure, material or acts to perform that function.

Claim elements in this application that use the word “means” (or “step for”) are presumed to invoke 35 U.S.C. 112(f) except as otherwise indicated in an Office action. Similarly, claim elements that do not use the word “means” (or “step for”) are presumed not to invoke 35 U.S.C. 112(f) except as otherwise indicated in an Office action.

20. The following is a quotation of 35 U.S.C. 112(b):
(b) CONCLUSION.—The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.

The following is a quotation of 35 U.S.C. 112 (pre-AIA), second paragraph:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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21. Claims 4-6 are rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor, or for pre-AIA the applicant regards as the invention.

22. The claim(s) are narrative in form and replete with indefinite language. The structure which goes to make up the device must be clearly and positively specified. The structure must be organized and correlated in such a manner as to present a complete operative device. The claim(s) must be in one sentence form only. Note the format of the claims in the patent(s) cited.

23. The claims repeatedly use the phrase "means for" or "step for", but it is modified by some structure, material, or acts recited in the claim. It is unclear whether the recited structure, material, or acts are sufficient for performing the claimed function which would preclude application of 35 U.S.C. 112, sixth paragraph, because Applicant has not consistently modified "for" with any function.

For instance, the first four instances of "means for" in claim 4 are purely modified by structure and not a function, thus raising the question what function are these means intended to perform. The remainder of the "means for" limitations are a mixture of proper "means for" language, such as "a means for charging the negative ion transistor circuit and battery" with improper "means for" language, such as "a means for piezoelectric out/mid disk device." As such, the metes and bounds of the claims are not able to be discerned, thus making the claims indefinite.

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The same issues are present in Claims 5 and 6 and need to be addressed in a manner similar to Claim 4 as noted above.

If applicant wishes to have the claim limitation treated under 35 U.S.C. 112, sixth paragraph, applicant is required to amend the claim so that the phrase "means for" or "step for" is clearly **not** modified by sufficient structure, material, or acts for performing the claimed function.

If applicant does **not** wish to have the claim limitation treated under 35 U.S.C. 112, sixth paragraph, applicant is required to amend the claim so that it will clearly not be a means (or step) plus function limitation (e.g., deleting the phrase "means for" or "step for").

24. For the purposes of examination, any proper "means for" limitation will be treated as a 35 U.S.C. 112(f) limitation whereas the "means for" purely modified by structure and not function will be interpreted as being limited to the claimed structure.

25. With this in mind, the Examiner notes the written description fails to clearly link or associate the disclosed structure, material, or acts to the claimed function such that one of ordinary skill in the art would recognize what structure, material, or acts perform the claimed function. The specification does not clearly ascribe the particular structure incorporated by the "means for" language.

Applicant is required to:

(a) Amend the claim so that the claim limitation will no longer be a means (or step) plus function limitation under 35 U.S.C. 112, sixth paragraph; or

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(b) Amend the written description of the specification such that it clearly links or associates the corresponding structure, material, or acts to the claimed function without introducing any new matter (35 U.S.C. 132(a)); or

(c) State on the record where the corresponding structure, material, or acts are set forth in the written description of the specification that perform the claimed function.

For more information, see 37 CFR 1.75(d) and MPEP §§ 608.01(o) and 2181.

26. Claims 5 and 6 contain further issues that fail to particularly point out and distinctly claim the subject matter which the applicant regards as the invention.

27. With respect to Claim 5, the claim is a system claim dependent on Claim 4. However, Applicant has included the language : “(a) a method of transducer system...(b) a method of transducer system”, etc. This creates confusion as to what Applicant is trying to claim. If Applicant is trying to claim a method of using the system, Applicant needs to either a) create an independent method claim that claims the desired method or b) delete the method steps from the claim and create a new dependent claim that is dependent on method claim 6. If Applicant intends to claim the functional capability of the system, Applicant needs to amend the claim to read "a transducer system configured to" or some variant thereof indicating that the various components are configured to perform a claimed function. The actual step of performing a function is improper for a system claim.

28. Regarding Claim 6, Applicant has created a method claim that lacks any actual method steps. Applicant has either recited a desired use in the form of “means for”

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language o uses the language “(a) a method of transducer system” without stating an actual method step. The claimed "methods" are only modified by structure, as can be seen in the following example: “(a) a method of transducer system comprising a negative ion circuit means for piezoelectric impact disks and oscillating disks.” AS can be clearly seen, the method step actually does not includes a method to be performed and instead only lists structure,. It is unclear what method Applicant is trying to claim.

Claim Rejections - 35 USC § 102

29. The following is a quotation of the appropriate paragraphs of pre-AIA 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 –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

30. Claims 4-6 are rejected under pre-AIA 35 U.S.C. 102(b) as being anticipated by Koo et al. (2006/0235465).

31. The Examiner notes the following rejection is made with respect to the Examiner’s best understanding of the invention in light of the numerous 35 U.S.C. §112 (a) and (b) rejections above.

32. Regarding Claims 4-6, Koo discloses a shoe comprising and outsole 1 containing a battery 110, a micro-current generating circuit 100, 120 and an acupressure component 200 (Fig. 10). The micro-current generating circuit 100, 120 contains a piezoelectric actuator that provides positive and negative charges to a crystalline plate in proportion to an external force, such external force being applied to the crystalline

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plate (par. [0104]). The current generated by the piezoelectric actuator is passed through conduction part 300 to acupuncture component 200 to apply current to a patient at a desired acupuncture/acupressure point (par. [0099]). Lastly, Koo discloses the micro-current generating circuit 100, 120 and therefore the piezoelectric actuator are disc-shaped (Fig. 11).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALLEN PORTER, JR whose telephone number is (571)270-5419. The examiner can normally be reached on Monday - Friday, 9AM - 6PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Layno can be reached on (571)272-4949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ALLEN PORTER, JR/
Primary Examiner, Art Unit 3766

Notice of References Cited	Application/Control No. 13/724,287	Applicant(s)/Patent Under Reexamination JENNINGS, JAMES EDWARD	
	Examiner ALLEN PORTER, JR	Art Unit 3766	Page 1 of 1

U.S. PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A US-2006/0235465	10-2006	Koo et al.	606/204
	B US-			
	C US-			
	D US-			
	E US-			
	F US-			
	G US-			
	H US-			
	I US-			
	J US-			
	K US-			
	L US-			
	M US-			


FOREIGN PATENT DOCUMENTS

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

NON-PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	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 MM-YYYY format are publication dates. Classifications may be US or foreign.

<i>Index of Claims</i> 	Application/Control No. 13724287	Applicant(s)/Patent Under Reexamination JENNINGS, JAMES EDWARD
	Examiner ALLEN PORTER, JR	Art Unit 3766

✓	Rejected
=	Allowed

-	Cancelled
÷	Restricted

N	Non-Elected
I	Interference

A	Appeal
O	Objected

Claims renumbered in the same order as presented by applicant
 CPA
 T.D.
 R.1.47


CLAIM		DATE							
Final	Original	05/02/2014	08/22/2014						
	1	÷	-						
	2	÷	-						
	3	÷	-						
	4		✓						
	5		✓						
	6		✓						


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BIB DATA SHEET
CONFIRMATION NO. 8891

SERIAL NUMBER 13/724,287	FILING or 371(c) DATE 12/21/2012 RULE	CLASS 607	GROUP ART UNIT 3766	ATTORNEY DOCKET NO.	
APPLICANTS INVENTORS JAMES EDWARD JENNINGS, Superior, CO; ** CONTINUING DATA ***** ** FOREIGN APPLICATIONS ***** ** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** ** MICRO ENTITY ** 01/24/2013					
Foreign Priority claimed <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 35 USC 119(a-d) conditions met <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Verified and Acknowledged <u>/ALLEN PORTER, JR/</u> Examiner's Signature	<input type="checkbox"/> Met after Allowance Initials _____	STATE OR COUNTRY CO	SHEETS DRAWINGS 8	TOTAL CLAIMS 3	INDEPENDENT CLAIMS 3
ADDRESS James Edward Jennings P.O. Box 270081 Louisville, CO 80027 UNITED STATES					
TITLE INTRINSIC TRANSDUCTION SYSTEM					
FILING FEE RECEIVED 598	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:		<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees (Filing) <input type="checkbox"/> 1.17 Fees (Processing Ext. of time) <input type="checkbox"/> 1.18 Fees (Issue) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit		

Search Notes 	Application/Control No. 13724287	Applicant(s)/Patent Under Reexamination JENNINGS, JAMES EDWARD
	Examiner ALLEN PORTER, JR	Art Unit 3766

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
607	2, 46, 48, 49, 62	8/22/2014	GAP
606	204	8/22/2014	GAP
310	800	8/22/2014	GAP
36	43	8/22/2014	GAP
128	898	8/22/2014	GAP

SEARCH NOTES		
Search Notes	Date	Examiner
EAST search with inventor name search	8/22/2014	GAP

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner

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EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1	13/724287.app.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/08/22 11:33
L2	14	"607".clas. and (piezoelectric same (shoe or sole)) and (nerve same (stimulat\$4))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/08/22 12:15
L3	423	jennings\$-james\$.in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/08/22 12:16
L4	3	3 and piezoelectric	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/08/22 12:16
L5	30	(piezoelectric same (shoe or sole)) and (nerve same (stimulat\$4))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/08/22 12:27
L6	341	606/204.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2014/08/22 13:04
L7	11	("20040111924" "20060185196" "20080005936" "20080066343" "20080132811" "5860229" "7069672" "7231730" "7347831").PN. OR ("7487606").URPN.	US-PGPUB; USPAT; USOCR	ADJ	ON	2014/08/22 13:05
L8	32	("4750499" "4920979" "4934368" "5470341" "5748845" "5861017" "6315721").PN. OR ("7403821").URPN.	US-PGPUB; USPAT; USOCR	ADJ	ON	2014/08/22 13:05

L9	6154	128/898.ccls.	US-PGPUB; USPAT; USOCR	ADJ	ON	2014/08/22 13:07
L10	121	128/907.ccls.	US-PGPUB; USPAT; USOCR	ADJ	ON	2014/08/22 13:07
L11	15	(US-20120016446-\$ or US-20080249587-\$ or US-20070258329-\$ or US-20060235465-\$ or US-20030144710-\$ or US-20080132811-\$ or US-20080066343-\$ or US-20080005936-\$ or US-20060185196-\$ or US-20040111924-\$).did. or (US-8569935-\$ or US-7996089-\$ or US-7487606-\$ or US-7403821-\$ or US-8632481-\$).did.	US-PGPUB; USPAT	ADJ	ON	2014/08/22 13:08
L12	922	607/48.ccls.	US-PGPUB; USPAT	ADJ	ON	2014/08/22 13:08
L13	2537	607/2.ccls.	US-PGPUB; USPAT	ADJ	ON	2014/08/22 13:09
L14	1299	607/46.ccls.	US-PGPUB; USPAT	ADJ	ON	2014/08/22 13:09
L15	152	607/49.ccls.	US-PGPUB; USPAT	ADJ	ON	2014/08/22 13:09
L16	987	607/62.ccls.	US-PGPUB; USPAT	ADJ	ON	2014/08/22 13:09
L17	580	310/800.ccls.	US-PGPUB; USPAT	ADJ	ON	2014/08/22 13:09
L18	1214	36/43.ccls.	US-PGPUB; USPAT	ADJ	ON	2014/08/22 13:10

8/ 22/ 2014 1:18:21 PM

C:\Users\gporter1\Documents\EAST\Workspaces\Workspaces\Workspaces\13-724-287-stim-garment.wsp

Serial No.: 13/724,287
Filing Date: 12/21/2012
Confirmation No.: 8891
GAU:1629
PAGES 1-5

1.-3. (CANCELED)

4.(NEW) An intrinsic transduction system method comprising:

a means for comprises a piezoelectric molded part having a nerve stimulating unit, circuit or a mid disk device at least partially molded therein;

a means for comprises an impact-sensing element made from a polymeric piezoelectric material, a battery means, a stimulus device or an information display device and a circuit connected to said piezoelectric material;

a means for piezoelectric response to electrical energy produced upon impact which permits the nerve stimulus device to be energized from the battery or any information displaying device to be activated;

a means for voltage comprises a piezoelectric molded oscillation part having a nerve stimulating unit or a impact battery/capacitor mid disk device at least partially molded therein;

a means for charging the negative ion transistor circuit and battery;

a means for delivery of an electrical signal or/and to deliver the therapeutic fluid;

a means for comprises a molded part having a nerve stimulating unit or a mid disk device at least partially molded therein a shoe and a prosthetic;

a means for piezoelectric lead attachment to an upper/garment disk;

a means for charging battery, capacitor, oscillate circuit;

a means for piezoelectric out/mid disk device;

(a) a method of transducer system comprising an athletic apparel circuit provides impact and oscillating disk shoes, disk cleats, disk garments and prosthetics;

(b) a method of transducer system comprising a piezoelectric circuit means for impact disks subsystem circuit of athletic prosthetics, garments, spark cleats and shoes;

(c) a method of transducer system comprising a piezoelectric circuit means for oscillating disks subsystem circuit of athletic prosthetics, garments, spark cleats and shoes; and

(d) a method of intrinsic transducer system therapeutic means comprises piezoelectric disks.

5. (NEW) The intrinsic transduction system method in accordance with claim 4, wherein said means for comprises a piezoelectric molded part having a nerve stimulating unit, circuit or a mid disk device at least partially molded therein comprises an out disk;

wherein said means for comprises an impact-sensing element made from a polymeric piezoelectric material, a battery means, a stimulus device or an information display device and a circuit connected to said piezoelectric material comprises a mid disk;

wherein said means for piezoelectric response to electrical energy produced upon impact which permits the nerve stimulus device to be energized from the battery or any information displaying device to be activated comprises a stimulus unit;

wherein said means for charging the negative ion transistor and battery comprises an oscillating

circuit;

wherein said means for deliver an electrical signal or/and to deliver the therapeutic fluid comprises a therapeutic lead;

wherein said means for comprises a molded part having a nerve stimulating unit or a mid disk device at least partially molded therein a shoe and a prosthetic;

wherein said means for voltage comprises a piezoelectric molded oscillation part having a nerve stimulating unit or a impact battery/capacitor mid disk device at least partially molded therein;

wherein said means for athletic prosthetic is an oscillating disk lead attachable lead garment;

wherein said means for athletic shoe is an oscillating disk lead attachable lead upper garment;

wherein said means for out/mid disk device shoe is a lead attached to oscillating disk garment;

wherein said means for out/mid disk device shoe and prosthetic is attached to lead garment;

wherein said means for stimulus comprises a negative ion chip and disk spark cleat.

wherein the stimulation comprises a therapeutic electric signal;

wherein the therapeutic system comprises a reservoir for fluid delivery lead;

(a) a method of transducer system comprising an athletic apparel circuit provides negative ion impact and oscillating disk shoes, disk cleats, disk garments;

(b) a method of transducer system comprising a piezoelectric circuit means for negative ion

impact disks subsystem circuit of athletic prosthetics, garments, spark cleats and shoes; and

(c) a method of transducer system comprising a piezoelectric circuit means for negative ion impact oscillating disks sub circuit of athletic prosthetics, garments, spark cleats and shoes;

6. (NEW) An intrinsic transduction system method comprising:

an out disk, for comprises a piezoelectric molded part having a nerve stimulating unit, circuit or a mid disk device at least partially molded therein;

a mid disk, for comprises an impact-sensing element made from a polymeric piezoelectric material, a battery means, a stimulus device or an information display device and a circuit connected to said piezoelectric material;

a stimulus unit, for piezoelectric response to electrical energy produced upon impact which permits the nerve stimulus device to be energized from the battery or any information displaying device to be activated;

an oscillating disk circuit, for charging the negative ion transistor and battery;

a therapeutic lead, for electrical signal and/or delivery of therapeutic fluid;

an out disk, for comprises a molded part having a nerve stimulating unit or a midsole device at least partially molded therein a shoe and a prosthetic;

an upper/garment, for piezoelectric lead attached oscillate circuit and impact disk device.

an out, for voltage comprises a piezoelectric molded oscillation part having a nerve stimulating unit or a impact battery/capacitor mid disk device at least partially molded therein;

(a) a method of transducer system comprising a negative ion circuit means for piezoelectric

impact disks and oscillating disks;

(b) a method of transducer system comprising a piezoelectric circuit means for impact subsystem circuit of disks prosthetics, disks garments, disks spark cleats and disks shoes;

(c) a method of transducer system comprising a piezoelectric circuit means for oscillation subsystem circuit of disks prosthetics, disks garments, disks spark cleats and disks shoes;

(d) a method for intrinsic transducer system prosthetic vertebrae disc comprising mid disk, out disk, disk bladders, leads, and having a textile portion touchscreen;

(e) a method for intrinsic transducer system wherein the piezoelectric circuit comprises therapeutic disks, leads, controllers, resistors, bladders, display and catheters;

(f) a method of intrinsic transducer system for an athletic garments circuit comprising piezoelectric disks and therapeutic leads; and

(g) a method of intrinsic transducer system for an athletic prosthetic comprises a mid/out disk.

Electronic Acknowledgement Receipt

EFS ID:	19837416
Application Number:	13724287
International Application Number:	
Confirmation Number:	8891
Title of Invention:	INTRINSIC TRANSDUCTION SYSTEM
First Named Inventor/Applicant Name:	JAMES EDWARD JENNINGS
Customer Number:	82669
Filer:	James Edward Jennings
Filer Authorized By:	
Attorney Docket Number:	
Receipt Date:	12-AUG-2014
Filing Date:	21-DEC-2012
Time Stamp:	00:59:24
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Applicant Arguments/Remarks Made in an Amendment	PIEZOMID_LETTER_333.pdf	27437 <small>3098eff5756e2e2dcd681620b8fd915eeca0eef</small>	no	2

Warnings:

Information:

2	Amendment Copy Claims/Response to Suggested Claims	PIEZOMID_CLAIMS_333.pdf	32971 f2579ecc464a07caeb0f32024ac89adba849519	no	5
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Warnings:

Information:

Total Files Size (in bytes):	60408
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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 a 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.

Serial No.: 13/724,287
Filing Date: 12/21/2012
Confirmation No.: 8891
GAU:1629

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: JENNINGS, James Edward

SERIAL NO.: 13/724,287

FILING DATE: 12/21, 2012

TITLE: INTRINSIC TRANSDUCTION SYSTEM

GROUP ART UNIT: 3766

EXAMINER: Porter, Jr. Gary A.

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

RESPONSE/AMENDMENT

Dear Examiner Porter:

This correspondence is being filed as a Response to the Final Office Action issued on July 30, 2014. Applicant requests entry of the amendments indicated below and consideration of the appended Remarks.

REMARKS

Applicant claims the invention to be obvious variants. Applicant agrees there is an abundance of inseparable systemic novelty. No new matter has been entered by way of these amendments.

AMENDMENTS TO THE DRAWINGS: NEW PAGE 2, ELEMENT 41 ADDED TO FIG.10

AMENDMENTS TO THE CLAIMS: CANCEL 1-3

Applicant respectfully requests reconsideration of the application and its passage to allowance.
Should any impediments to allowance remain, Applicant requests that the Examiner contact the undersigned at the indicated phone number.

Respectfully submitted, James Jennings

/JAMES EDWARD JENNINGS/

Date: 8/12/2014

By: _____

PO Box 270081 Louisville, CO 80027

303.664.1829

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 13/724,287	Filing Date 12/21/2012	<input type="checkbox"/> To be Mailed
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ENTITY: LARGE SMALL MICRO

APPLICATION AS FILED – PART I

	(Column 1)	(Column 2)		RATE (\$)	FEE (\$)
FOR	NUMBER FILED	NUMBER EXTRA			
<input type="checkbox"/> BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A		N/A	
<input type="checkbox"/> SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A		N/A	
<input type="checkbox"/> 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 \$	=	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X \$	=	
<input type="checkbox"/> 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).				
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))					
			TOTAL		

* If the difference in column 1 is less than zero, enter "0" in column 2.

APPLICATION AS AMENDED – PART II

	(Column 1)	(Column 2)	(Column 3)	(Column 3)		RATE (\$)	ADDITIONAL FEE (\$)
AMENDMENT	08/12/2014	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA			
	Total (37 CFR 1.16(i))	* 3	Minus	** 20	= 0	X \$20 =	0
	Independent (37 CFR 1.16(h))	* 2	Minus	***3	= 0	X \$105 =	0
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))						
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
						TOTAL ADD'L FEE	0

	(Column 1)	(Column 2)	(Column 3)	(Column 3)		RATE (\$)	ADDITIONAL FEE (\$)
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA			
	Total (37 CFR 1.16(i))	*	Minus	**	=	X \$	=
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X \$	=
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))						
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
						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".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

LIE
/ROSA WEST/

This collection of information is required by 37 CFR 1.16. 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 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.**

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



UNITED STATES PATENT AND TRADEMARK OFFICE

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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/724,287	12/21/2012	JAMES EDWARD JENNINGS		8891

82669 7590 07/30/2014
James Edward Jennings
P.O. Box 270081
Louisville, CO 80027

EXAMINER

PORTER, JR, GARY A

ART UNIT	PAPER NUMBER
3766	

MAIL DATE	DELIVERY MODE
07/30/2014	PAPER

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 Non-Compliant
Amendment (37 CFR 1.121)**

Application No.

13/724,287

Examiner

ALLEN PORTER, JR

Applicant(s)

JENNINGS, JAMES EDWARD

Art Unit

3766

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

The amendment document filed on 27 June 2014 is considered non-compliant because it has failed to meet the requirements of 37 CFR 1.121 or 1.4. In order for the amendment document to be compliant, correction of the following item(s) is required.

THE FOLLOWING MARKED (X) ITEM(S) CAUSE THE AMENDMENT DOCUMENT TO BE NON-COMPLIANT:

- 1. Amendments to the specification:
 - A. Amended paragraph(s) do not include markings.
 - B. New paragraph(s) should not be underlined.
 - C. Other _____.
- 2. Abstract:
 - A. Not presented on a separate sheet. 37 CFR 1.72.
 - B. Other _____.
- 3. Amendments to the drawings:
 - A. The drawings are not properly identified in the top margin as "Replacement Sheet," "New Sheet," or "Annotated Sheet" as required by 37 CFR 1.121(d).
 - B. The practice of submitting proposed drawing correction has been eliminated. Replacement drawings showing amended figures, without markings, in compliance with 37 CFR 1.84 are required.
 - C. Other _____.
- 4. Amendments to the claims:
 - A. A complete listing of all of the claims is not present.
 - B. The listing of claims does not include the text of all pending claims (including withdrawn claims)
 - C. Each claim has not been provided with the proper status identifier, and as such, the individual status of each claim cannot be identified. Note: the status of every claim must be indicated after its claim number by using one of the following status identifiers: (Original), (Currently amended), (Canceled), (Previously presented), (New), (Not entered), (Withdrawn) and (Withdrawn-currently amended).
 - D. The claims of this amendment paper have not been presented in ascending numerical order.
 - E. Other: See Continuation Sheet.
- 5. Other (e.g., the amendment is unsigned or not signed in accordance with 37 CFR 1.4):

For further explanation of the amendment format required by 37 CFR 1.121, see MPEP § 714.

TIME PERIODS FOR FILING A REPLY TO THIS NOTICE:

1. Applicant is given **no new time period** if the non-compliant amendment is an after-final amendment or an amendment filed after allowance. If applicant wishes to resubmit the non-compliant after-final amendment with corrections, the **entire corrected amendment** must be resubmitted.
2. Applicant is given **two months** from the mail date of this notice to supply the correction, if the non-compliant amendment is one of the following: a preliminary amendment, a non-final amendment (including a submission for a request for continued examination (RCE) under 37 CFR 1.114), a supplemental amendment filed within a suspension period under 37 CFR 1.103(a) or (c), and an amendment filed in response to a *Quayle* action. If any of above boxes 1. to 4. are checked, the correction required is only the **corrected section** of the non-compliant amendment in compliance with 37 CFR 1.121.

Extensions of time are available under 37 CFR 1.136(a) only if the non-compliant amendment is a non-final amendment or an amendment filed in response to a *Quayle* action.

Failure to timely respond to this notice will result in:

Abandonment of the application if the non-compliant amendment is a non-final amendment or an amendment filed in response to a *Quayle* action; or

Non-entry of the amendment if the non-compliant amendment is a preliminary amendment or supplemental amendment.

/ALLEN PORTER, JR/
Primary Examiner, Art Unit 3766

Continuation of 4(e) Other: Applicant has not included the claim numbers 1-3 on the claim sheet and has not identified these claims as canceled on the claim sheet.

Serial No.: 13/724,287
Filing Date: 12/21/2012
Confirmation No.: 8891
GAU:1629
PAGES 1-5

4.(NEW) An intrinsic transduction system method comprising:

means for comprises a piezoelectric molded part having a nerve stimulating unit, circuit or a mid disk device at least partially molded therein;

means for comprises an impact-sensing element made from a polymeric piezoelectric material, a battery means, a stimulus device or an information display device and a circuit connected to said piezoelectric material;

means for piezoelectric response to electrical energy produced upon impact which permits the nerve stimulus device to be energized from the battery or any information displaying device to be activated;

means for voltage comprises a piezoelectric molded oscillation part having a nerve stimulating unit or a impact battery/capacitor mid disk device at least partially molded therein;

means for charging the negative ion transistor circuit and battery;

means for delivery of an electrical signal or/and to deliver the therapeutic fluid;

means for comprises a molded part having a nerve stimulating unit or a mid disk device at least partially molded therein a shoe and a prosthetic;

means for piezoelectric lead attachment to an upper/garment disk;

means for charging battery, capacitor, oscillate circuit;

means for piezoelectric out/mid disk device;

(a) a method of transducer system comprising an athletic apparel circuit provides impact and

oscillating disk shoes, disk cleats, disk garments and prosthetics;

(b) a method of transducer system comprising a piezoelectric circuit means for impact disks subsystem circuit of athletic prosthetics, garments, spark cleats and shoes;

(c) a method of transducer system comprising a piezoelectric circuit means for oscillating disks subsystem circuit of athletic prosthetics, garments, spark cleats and shoes; and

(d) a method of intrinsic transducer system therapeutic means comprises piezoelectric disks.

5. (NEW) The intrinsic transduction system method in accordance with claim 4, wherein said means for comprises a piezoelectric molded part having a nerve stimulating unit, circuit or a mid disk device at least partially molded therein comprises an out disk;

wherein said means for comprises an impact-sensing element made from a polymeric piezoelectric material, a battery means, a stimulus device or an information display device and a circuit connected to said piezoelectric material comprises a mid disk;

wherein said means for piezoelectric response to electrical energy produced upon impact which permits the nerve stimulus device to be energized from the battery or any information displaying device to be activated comprises a stimulus unit;

wherein said means for charging the negative ion transistor and battery comprises an oscillating circuit;

wherein said means for deliver an electrical signal or/and to deliver the therapeutic fluid comprises a therapeutic lead;

wherein said means for comprises a molded part having a nerve stimulating unit or a mid disk device at least partially molded therein a shoe and a prosthetic;

wherein said means for voltage comprises a piezoelectric molded oscillation part having a nerve stimulating unit or a impact battery/capacitor mid disk device at least partially molded therein;

wherein said means for athletic prosthetic is an oscillating disk lead attachable lead garment;

wherein said means for athletic shoe is an oscillating disk lead attachable lead upper garment;

wherein said means for out/mid disk device shoe is a lead attached to oscillating disk garment;

wherein said means for out/mid disk device shoe and prosthetic is attached to lead garment;

wherein said means for stimulus comprises a negative ion chip and disk spark cleat.

wherein the stimulation comprises a therapeutic electric signal;

wherein the therapeutic system comprises a reservoir for fluid delivery lead;

(a) a method of transducer system comprising an athletic apparel circuit provides negative ion impact and oscillating disk shoes, disk cleats, disk garments;

(b) a method of transducer system comprising a piezoelectric circuit means for negative ion impact disks subsystem circuit of athletic prosthetics, garments, spark cleats and shoes; and

(c) a method of transducer system comprising a piezoelectric circuit means for negative ion impact oscillating disks sub circuit of athletic prosthetics, garments, spark cleats and shoes;

6. (NEW) An intrinsic transduction system method comprising:

an out disk, for comprises a piezoelectric molded part having a nerve stimulating unit, circuit or a mid disk device at least partially molded therein;

a mid disk, for comprises an impact-sensing element made from a polymeric piezoelectric material, a battery means, a stimulus device or an information display device and a circuit connected to said piezoelectric material;

a stimulus unit, for piezoelectric response to electrical energy produced upon impact which permits the nerve stimulus device to be energized from the battery or any information displaying device to be activated;

an oscillating disk circuit, for charging the negative ion transistor and battery;

a therapeutic lead, for electrical signal and/or delivery of therapeutic fluid;

an out disk, for comprises a molded part having a nerve stimulating unit or a midsole device at least partially molded therein a shoe and a prosthetic;

an upper/garment, for piezoelectric lead attached oscillate circuit and impact disk device.

an out, for voltage comprises a piezoelectric molded oscillation part having a nerve stimulating unit or a impact battery/capacitor mid disk device at least partially molded therein;

(a) a method of transducer system comprising a negative ion circuit means for piezoelectric impact disks and oscillating disks;

(b) a method of transducer system comprising a piezoelectric circuit means for impact subsystem circuit of disks prosthetics, disks garments, disks spark cleats and disks shoes;

(c) a method of transducer system comprising a piezoelectric circuit means for oscillation subsystem circuit of disks prosthetics, disks garments, disks spark cleats and disks shoes;

(d) a method for intrinsic transducer system prosthetic vertebrae disc comprising mid disk, out disk, disk bladders, leads, and having a textile portion touchscreen;

(e) a method for intrinsic transducer system wherein the piezoelectric circuit comprises therapeutic disks, leads, controllers, resistors, bladders, display and catheters;

(f) a method of intrinsic transducer system for an athletic garments circuit comprising piezoelectric disks and therapeutic leads; and

(g) a method of intrinsic transducer system for an athletic prosthetic comprises a mid/out disk.

Electronic Acknowledgement Receipt

EFS ID:	19431725
Application Number:	13724287
International Application Number:	
Confirmation Number:	8891
Title of Invention:	INTRINSIC TRANSDUCTION SYSTEM
First Named Inventor/Applicant Name:	JAMES EDWARD JENNINGS
Customer Number:	82669
Filer:	James Edward Jennings
Filer Authorized By:	
Attorney Docket Number:	
Receipt Date:	27-JUN-2014
Filing Date:	21-DEC-2012
Time Stamp:	10:57:40
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Applicant Arguments/Remarks Made in an Amendment	PIEZOMID_LETTER_33.pdf	27437 e7447d0f42cd1b0bd3c0096f8e78e3068ba8bcf5	no	2

Warnings:

Information:

2	Amendment Copy Claims/Response to Suggested Claims	PIEZOMID_CLAIMS_33.pdf	32073	no	5
			6e0e18740e424e2f62e75ca7f233bd68ccd02b03		

Warnings:

Information:

Total Files Size (in bytes):	59510
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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 a 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.

Serial No.: 13/724,287
Filing Date: 12/21/2012
Confirmation No.: 8891
GAU:1629

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: JENNINGS, James Edward

SERIAL NO.: 13/724,287

FILING DATE: 12/21, 2012

TITLE: INTRINSIC TRANSDUCTION SYSTEM

GROUP ART UNIT: 3766

EXAMINER: Porter, Jr. Gary A.

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

RESPONSE/AMENDMENT

Dear Examiner Porter:

This correspondence is being filed as a Response to the Final Office Action issued on May 5, 2014. Applicant requests entry of the amendments indicated below and consideration of the appended Remarks.

REMARKS

Applicant claims the invention to be obvious variants. Applicant agrees there is an abundance of inseparable systemic novelty. No new matter has been entered by way of these amendments.

AMENDMENTS TO THE DRAWINGS: NEW PAGE 2, ELEMENT 41 ADDED TO FIG.10

AMENDMENTS TO THE CLAIMS: CANCEL 1-3

Applicant respectfully requests reconsideration of the application and its passage to allowance.
Should any impediments to allowance remain, Applicant requests that the Examiner contact the undersigned at the indicated phone number.

Respectfully submitted, James Jennings

/JAMES EDWARD JENNINGS/

Date: 6/27/2014

By: _____

PO Box 270081 Louisville, CO 80027

303.664.1829



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Table with 4 columns: APPLICATION NUMBER, FILING OR 371(C) DATE, FIRST NAMED APPLICANT, ATTY. DOCKET NO./TITLE. Row 1: 13/724,287, 12/21/2012, JAMES EDWARD JENNINGS, CONFIRMATION NO. 8891

82669
James Edward Jennings
P.O. Box 270081
Louisville, CO 80027

PUBLICATION NOTICE



Title:INTRINSIC TRANSDUCTION SYSTEM

Publication No.US-2014-0180376-A1
Publication Date:06/26/2014

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.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently http://www.uspto.gov/patft/.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Office of Public Records. The Office of Public Records can be reached by telephone at (703) 308-9726 or (800) 972-6382, by facsimile at (703) 305-8759, by mail addressed to the United States Patent and Trademark Office, Office of Public Records, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently http://pair.uspto.gov/. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 13/724,287	Filing Date 12/21/2012	<input type="checkbox"/> To be Mailed
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ENTITY: LARGE SMALL MICRO

APPLICATION AS FILED – PART I

FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)
<input type="checkbox"/> BASIC FEE <small>(37 CFR 1.16(a), (b), or (c))</small>	N/A	N/A	N/A	
<input type="checkbox"/> SEARCH FEE <small>(37 CFR 1.16(k), (l), or (m))</small>	N/A	N/A	N/A	
<input type="checkbox"/> EXAMINATION FEE <small>(37 CFR 1.16(o), (p), or (q))</small>	N/A	N/A	N/A	
TOTAL CLAIMS <small>(37 CFR 1.16(i))</small>	minus 20 =	*	X \$ =	
INDEPENDENT CLAIMS <small>(37 CFR 1.16(h))</small>	minus 3 =	*	X \$ =	
<input type="checkbox"/> APPLICATION SIZE FEE <small>(37 CFR 1.16(s))</small>	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).			
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT <small>(37 CFR 1.16(j))</small>				
* 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)	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
AMENDMENT	06/27/2014	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR			
	Total <small>(37 CFR 1.16(i))</small>	* 3	Minus	** 20	= 0	X \$20 = 0
	Independent <small>(37 CFR 1.16(h))</small>	* 2	Minus	***3	= 0	X \$105 = 0
	<input type="checkbox"/> Application Size Fee <small>(37 CFR 1.16(s))</small>					
<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>						
					TOTAL ADD'L FEE	0

	(Column 1)	(Column 2)	(Column 3)	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR			
	Total <small>(37 CFR 1.16(i))</small>	*	Minus	**	=	X \$ =
	Independent <small>(37 CFR 1.16(h))</small>	*	Minus	***	=	X \$ =
	<input type="checkbox"/> Application Size Fee <small>(37 CFR 1.16(s))</small>					
<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>						
					TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
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 *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

LIE
/NINA RATANAVONG/

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UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/724,287	12/21/2012	JAMES EDWARD JENNINGS		8891

82669 7590 05/30/2014
James Edward Jennings
P.O. Box 270081
Louisville, CO 80027

EXAMINER

PORTER, JR, GARY A

ART UNIT	PAPER NUMBER
----------	--------------

3766

MAIL DATE	DELIVERY MODE
-----------	---------------

05/30/2014

PAPER

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

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**Notice of Non-Compliant
Amendment (37 CFR 1.121)**

Application No.

13/724,287

Examiner

ALLEN PORTER, JR

Applicant(s)

JENNINGS, JAMES EDWARD

Art Unit

3766

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

The amendment document filed on 27 May 2014 is considered non-compliant because it has failed to meet the requirements of 37 CFR 1.121 or 1.4. In order for the amendment document to be compliant, correction of the following item(s) is required.

THE FOLLOWING MARKED (X) ITEM(S) CAUSE THE AMENDMENT DOCUMENT TO BE NON-COMPLIANT:

- 1. Amendments to the specification:
 - A. Amended paragraph(s) do not include markings.
 - B. New paragraph(s) should not be underlined.
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 - B. The practice of submitting proposed drawing correction has been eliminated. Replacement drawings showing amended figures, without markings, in compliance with 37 CFR 1.84 are required.
 - C. Other _____.
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 - A. A complete listing of all of the claims is not present.
 - B. The listing of claims does not include the text of all pending claims (including withdrawn claims)
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 - D. The claims of this amendment paper have not been presented in ascending numerical order.
 - E. Other: See Continuation Sheet.
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Abandonment of the application if the non-compliant amendment is a non-final amendment or an amendment filed in response to a *Quayle* action; or

Non-entry of the amendment if the non-compliant amendment is a preliminary amendment or supplemental amendment.

/ALLEN PORTER, JR/
Primary Examiner, Art Unit 3766

Continuation of 4(e) Other: Claims should be presented on a separate page (the signed portion of page 6 needs to be on a separate page).

Serial No.: 13/724,287
Filing Date: 12/21/2012
Confirmation No.: 8891
GAU:1629

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: JENNINGS, James Edward

SERIAL NO.: 13/724,287

FILING DATE: 12/21, 2012

TITLE: INTRINSIC TRANSDUCTION SYSTEM

GROUP ART UNIT: 3766

EXAMINER: Porter, Jr. Gary A.

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

RESPONSE/AMENDMENT

Dear Examiner Porter:

This correspondence is being filed as a Response to the Final Office Action issued on May 5, 2014. Applicant requests entry of the amendments indicated below and consideration of the appended Remarks.

Amendments to the claims begin on Page 2 of this paper.

REMARKS

Applicant claims the invention to be obvious variants. Applicant agrees there is an abundance of inseparable systemic novelty. No new matter has been entered by way of these amendments.

AMENDMENTS TO THE DRAWINGS: NEW PAGE 2, ELEMENT 41 ADDED TO FIG.10

AMENDMENTS TO THE CLAIMS: CANCEL 1-3

4.(NEW) An intrinsic transduction system method comprising:

means for comprises a piezoelectric molded part having a nerve stimulating unit, circuit or a mid disk device at least partially molded therein;

means for comprises an impact-sensing element made from a polymeric piezoelectric material, a battery means, a stimulus device or an information display device and a circuit connected to said piezoelectric material;

means for piezoelectric response to electrical energy produced upon impact which permits the nerve stimulus device to be energized from the battery or any information displaying device to be activated;

means for voltage comprises a piezoelectric molded oscillation part having a nerve stimulating unit or a impact battery/capacitor mid disk device at least partially molded therein;

means for charging the negative ion transistor circuit and battery;

means for delivery of an electrical signal or/and to deliver the therapeutic fluid;

means for comprises a molded part having a nerve stimulating unit or a mid disk device at least partially molded therein a shoe and a prosthetic;

means for piezoelectric lead attachment to an upper/garment disk;

means for charging battery, capacitor, oscillate circuit;

means for piezoelectric out/mid disk device;

(a) a method of transducer system comprising an athletic apparel circuit provides impact and oscillating disk shoes, disk cleats, disk garments and prosthetics;

(b) a method of transducer system comprising a piezoelectric circuit means for impact disks

subsystem circuit of athletic prosthetics, garments, spark cleats and shoes;

(c) a method of transducer system comprising a piezoelectric circuit means for oscillating disks

subsystem circuit of athletic prosthetics, garments, spark cleats and shoes; and

(d) a method of intrinsic transducer system therapeutic means comprises piezoelectric disks.

5. (NEW) The intrinsic transduction system method in accordance with claim 4, wherein said means for comprises a piezoelectric molded part having a nerve stimulating unit, circuit or a mid disk device at least partially molded therein comprises an out disk;

wherein said means for comprises an impact-sensing element made from a polymeric piezoelectric material, a battery means, a stimulus device or an information display device and a circuit connected to said piezoelectric material comprises a mid disk;

wherein said means for piezoelectric response to electrical energy produced upon impact which permits the nerve stimulus device to be energized from the battery or any information displaying device to be activated comprises a stimulus unit;

wherein said means for charging the negative ion transistor and battery comprises an oscillating circuit;

wherein said means for deliver an electrical signal or/and to deliver the therapeutic fluid comprises a therapeutic lead;

wherein said means for comprises a molded part having a nerve stimulating unit or a mid disk device at least partially molded therein a shoe and a prosthetic;

wherein said means for voltage comprises a piezoelectric molded oscillation part having a nerve stimulating unit or a impact battery/capacitor mid disk device at least partially molded therein;

wherein said means for athletic prosthetic is an oscillating disk lead attachable lead garment;

wherein said means for athletic shoe is an oscillating disk lead attachable lead upper garment;

wherein said means for out/mid disk device shoe is a lead attached to oscillating disk garment;

wherein said means for out/mid disk device shoe and prosthetic is attached to lead garment;

wherein said means for stimulus comprises a negative ion chip and disk spark cleat.

wherein the stimulation comprises a therapeutic electric signal;

wherein the therapeutic system comprises a reservoir for fluid delivery lead;

(a) a method of transducer system comprising an athletic apparel circuit provides negative ion impact and oscillating disk shoes, disk cleats, disk garments;

(b) a method of transducer system comprising a piezoelectric circuit means for negative ion impact disks subsystem circuit of athletic prosthetics, garments, spark cleats and shoes; and

(c) a method of transducer system comprising a piezoelectric circuit means for negative ion impact oscillating disks sub circuit of athletic prosthetics, garments, spark cleats and shoes;

6. (NEW) An intrinsic transduction system method comprising:

an out disk, for comprises a piezoelectric molded part having a nerve stimulating unit, circuit or a mid disk device at least partially molded therein;

a mid disk, for comprises an impact-sensing element made from a polymeric piezoelectric material, a battery means, a stimulus device or an information display device and a circuit connected to said piezoelectric material;

a stimulus unit, for piezoelectric response to electrical energy produced upon impact which permits the nerve stimulus device to be energized from the battery or any information displaying device to be activated;

an oscillating disk circuit, for charging the negative ion transistor and battery;

a therapeutic lead, for electrical signal and/or delivery of therapeutic fluid;

an out disk, for comprises a molded part having a nerve stimulating unit or a midsole device at least partially molded therein a shoe and a prosthetic;

an upper/garment, for piezoelectric lead attached oscillate circuit and impact disk device.

an out, for voltage comprises a piezoelectric molded oscillation part having a nerve stimulating unit or a impact battery/capacitor mid disk device at least partially molded therein;

(a) a method of transducer system comprising a negative ion circuit means for piezoelectric impact disks and oscillating disks;

(b) a method of transducer system comprising a piezoelectric circuit means for impact subsystem circuit of disks prosthetics, disks garments, disks spark cleats and disks shoes;

(c) a method of transducer system comprising a piezoelectric circuit means for oscillation subsystem circuit of disks prosthetics, disks garments, disks spark cleats and disks shoes;

(d) a method for intrinsic transducer system prosthetic vertebrae disc comprising mid disk, out disk, disk bladders, leads, and having a textile portion touchscreen;

(e) a method for intrinsic transducer system wherein the piezoelectric circuit comprises therapeutic disks, leads, controllers, resistors, bladders, display and catheters;

(f) a method of intrinsic transducer system for an athletic garments circuit comprising piezoelectric disks and therapeutic leads; and

(g) a method of intrinsic transducer system for an athletic prosthetic comprises a mid/out disk.

Applicant respectfully requests reconsideration of the application and its passage to allowance.

Should any impediments to allowance remain, Applicant requests that the Examiner contact the undersigned at the indicated phone number.

Respectfully submitted, James Jennings

/JAMES EDWARD JENNINGS/

Date: 5/27/2014

By: _____
PO Box 270081 Louisville, CO 80027
303.664.1829

Electronic Acknowledgement Receipt

EFS ID:	19123995
Application Number:	13724287
International Application Number:	
Confirmation Number:	8891
Title of Invention:	INTRINSIC TRANSDUCTION SYSTEM
First Named Inventor/Applicant Name:	JAMES EDWARD JENNINGS
Customer Number:	82669
Filer:	James Edward Jennings
Filer Authorized By:	
Attorney Docket Number:	
Receipt Date:	27-MAY-2014
Filing Date:	21-DEC-2012
Time Stamp:	02:30:10
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Amendment Copy Claims/Response to Suggested Claims	PIEZOMID_CLAIMS_3.pdf	41189 <small>9e7f11033ec42c918b1d0a5071f2a672d443498c</small>	no	6

Warnings:

Information:

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 a 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


UNITED STATES DEPARTMENT OF COMMERCE
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www.uspto.gov

82669 e 2014-05-22

James Edward Jennings
P.O. Box 270081
Louisville, CO 80027

Paper No.

Application No.: 13/724,287 	Date Mailed: 2014-05-22
First Named Inventor: JENNINGS, JAMES, EDWARD	Examiner: PORTER, JR, GARY A
Attorney Docket No.:	Art Unit: 3766
Confirmation No.: 8891	Filing Date: 2012-12-21

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

Commissioner for Patents

Notice of Non-Compliant Amendment (37 CFR 1.121)	Application No. 13/724,287	Applicant(s) JENNINGS, JAMES EDWARD
		Art Unit 3998

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

The amendment document filed on 21 May, 2014 is considered non-compliant because it has failed to meet the requirements of 37 CFR 1.121 or 1.4. In order for the amendment document to be compliant, correction of the following item(s) is required.

THE FOLLOWING MARKED (X) ITEM(S) CAUSE THE AMENDMENT DOCUMENT TO BE NON-COMPLIANT:

- 1. Amendments to the specification:
 - A. Amended paragraph(s) do not include markings.
 - B. New paragraph(s) should not be underlined.
 - C. Other _____.
- 2. Abstract:
 - A. Not presented on a separate sheet. 37 CFR 1.72.
 - B. Other _____.
- 3. Amendments to the drawings:
 - A. The drawings are not properly identified in the top margin as "Replacement Sheet," "New Sheet," or "Annotated Sheet" as required by 37 CFR 1.121(d).
 - B. The practice of submitting proposed drawing correction has been eliminated. Replacement drawings showing amended figures, without markings, in compliance with 37 CFR 1.84 are required.
 - C. Other _____.
- 4. Amendments to the claims:
 - A. A complete listing of all of the claims is not present.
 - B. The listing of claims does not include the text of all pending claims (including withdrawn claims)
 - C. Each claim has not been provided with the proper status identifier, and as such, the individual status of each claim cannot be identified. Note: the status of every claim must be indicated after its claim number by using one of the following status identifiers: (Original), (Currently amended), (Canceled), (Previously presented), (New), (Not entered), (Withdrawn) and (Withdrawn-currently amended).
 - D. The claims of this amendment paper have not been presented in ascending numerical order.
 - E. Other: Claims should be presented on a separate page.
- 5. Other (e.g., the amendment is unsigned or not signed in accordance with 37 CFR 1.4): For further explanation of the amendment format required by 37 CFR 1.121, see MPEP § 714.

TIME PERIODS FOR FILING A REPLY TO THIS NOTICE:

1. Applicant is given **no new time period if the non-compliant amendment is an** after-final amendment or an amendment filed after allowance, or a drawing submission (only) If applicant wishes to resubmit the non-compliant after-final amendment with corrections, the **entire corrected amendment** must be resubmitted.
2. Applicant is given **two months** from the mail date of this notice to supply the correction, if the non-compliant amendment is one of the following: a preliminary amendment, a non-final amendment (including a submission for a request for continued examination (RCE) under 37 CFR 1.114), a supplemental amendment filed within a suspension period under 37 CFR 1.103(a) or (c), and an amendment filed in response to a Quayle action. If any of above boxes 1 to 4 are checked, the correction required is only the corrected section of the non-compliant amendment in compliance with 37 CFR 1.121.

Extensions of time are available under 37 CFR 1.136(a) only if the non-compliant amendment is a non-final amendment or an amendment filed in response to a *Quayle* action.

Failure to timely respond to this notice will result in:

Abandonment of the application if the non-compliant amendment is a non-final amendment or an amendment filed in response to a *Quayle* action; or

Non-entry of the amendment if the non-compliant amendment is a preliminary amendment or supplemental amendment.

Legal Instruments Examiner (LIE), if applicable /CORALIA BETANCOURT/

Telephone No: (571)272-0509

Serial No.: 13/724,287
Filing Date: 12/21/2012
Confirmation No.: 8891
GAU:1629

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: JENNINGS, James Edward

SERIAL NO.: 13/724,287

FILING DATE: 12/21, 2012

TITLE: INTRINSIC TRANSDUCTION SYSTEM

GROUP ART UNIT: 3766

EXAMINER: Porter, Jr. Gary A.

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

RESPONSE/AMENDMENT

Dear Examiner Porter:

This correspondence is being filed as a Response to the Final Office Action issued on May 5, 2014. Applicant requests entry of the amendments indicated below and consideration of the appended Remarks.

Amendments to the claims begin on Page 2 of this paper.

REMARKS

Applicant argues inseparable novelty is not reason for distinction. Applicant agrees there is an abundance of systemic novelty. No new matter has been entered by way of these amendments.

AMENDMENTS TO THE DRAWINGS: NEW PAGE 2, ELEMENT 41 ADDED TO FIG.10

AMENDMENTS TO THE CLAIMS: CANCEL 1-3

4.(NEW) An intrinsic transduction system method comprising:

means for comprises a piezoelectric molded part having a nerve stimulating unit, circuit or a mid disk device at least partially molded therein;

means for comprises an impact-sensing element made from a polymeric piezoelectric material, a battery means, a stimulus device or an information display device and a circuit connected to said piezoelectric material;

means for piezoelectric response to electrical energy produced upon impact which permits the nerve stimulus device to be energized from the battery or any information displaying device to be activated;

means for voltage comprises a piezoelectric molded oscillation part having a nerve stimulating unit or a impact battery/capacitor mid disk device at least partially molded therein;

means for charging the negative ion transistor circuit and battery;

means for delivery of an electrical signal or/and to deliver the therapeutic fluid;

means for comprises a molded part having a nerve stimulating unit or a mid disk device at least partially molded therein a shoe and a prosthetic;

means for piezoelectric lead attachment to an upper/garment disk;

means for charging battery, capacitor, oscillate circuit;

means for piezoelectric out/mid disk device;

(a) a method of transducer system comprising an athletic apparel circuit provides impact and oscillating disk shoes, disk cleats, disk garments and prosthetics;

(b) a method of transducer system comprising a piezoelectric circuit means for impact disks

subsystem circuit of athletic prosthetics, garments, spark cleats and shoes;

(c) a method of transducer system comprising a piezoelectric circuit means for oscillating disks

subsystem circuit of athletic prosthetics, garments, spark cleats and shoes; and

(d) a method of intrinsic transducer system therapeutic means comprises piezoelectric disks.

5. (NEW) The intrinsic transduction system method in accordance with claim 4, wherein said means for comprises a piezoelectric molded part having a nerve stimulating unit, circuit or a mid disk device at least partially molded therein comprises an out disk;

wherein said means for comprises an impact-sensing element made from a polymeric piezoelectric material, a battery means, a stimulus device or an information display device and a circuit connected to said piezoelectric material comprises a mid disk;

wherein said means for piezoelectric response to electrical energy produced upon impact which permits the nerve stimulus device to be energized from the battery or any information displaying device to be activated comprises a stimulus unit;

wherein said means for charging the negative ion transistor and battery comprises an oscillating circuit;

wherein said means for deliver an electrical signal or/and to deliver the therapeutic fluid comprises a therapeutic lead;

wherein said means for comprises a molded part having a nerve stimulating unit or a mid disk device at least partially molded therein a shoe and a prosthetic;

wherein said means for voltage comprises a piezoelectric molded oscillation part having a nerve stimulating unit or a impact battery/capacitor mid disk device at least partially molded therein;

wherein said means for athletic prosthetic is an oscillating disk lead attachable lead garment;

wherein said means for athletic shoe is an oscillating disk lead attachable lead upper garment;

wherein said means for out/mid disk device shoe is a lead attached to oscillating disk garment;

wherein said means for out/mid disk device shoe and prosthetic is attached to lead garment;

wherein said means for stimulus comprises a negative ion chip and disk spark cleat.

wherein the stimulation comprises a therapeutic electric signal;

wherein the therapeutic system comprises a reservoir for fluid delivery lead;

(a) a method of transducer system comprising an athletic apparel circuit provides negative ion impact and oscillating disk shoes, disk cleats, disk garments;

(b) a method of transducer system comprising a piezoelectric circuit means for negative ion impact disks subsystem circuit of athletic prosthetics, garments, spark cleats and shoes; and

(c) a method of transducer system comprising a piezoelectric circuit means for negative ion impact oscillating disks sub circuit of athletic prosthetics, garments, spark cleats and shoes;

6. (NEW) An intrinsic transduction system method comprising:

an out disk, for comprises a piezoelectric molded part having a nerve stimulating unit, circuit or a mid disk device at least partially molded therein;

a mid disk, for comprises an impact-sensing element made from a polymeric piezoelectric material, a battery means, a stimulus device or an information display device and a circuit connected to said piezoelectric material;

a stimulus unit, for piezoelectric response to electrical energy produced upon impact which permits the nerve stimulus device to be energized from the battery or any information displaying device to be activated;

an oscillating disk circuit, for charging the negative ion transistor and battery;

a therapeutic lead, for electrical signal and/or delivery of therapeutic fluid;

an out disk, for comprises a molded part having a nerve stimulating unit or a midsole device at least partially molded therein a shoe and a prosthetic;

an upper/garment, for piezoelectric lead attached oscillate circuit and impact disk device.

an out, for voltage comprises a piezoelectric molded oscillation part having a nerve stimulating unit or a impact battery/capacitor mid disk device at least partially molded therein;

(a) a method of transducer system comprising a negative ion circuit means for piezoelectric impact disks and oscillating disks;

(b) a method of transducer system comprising a piezoelectric circuit means for impact subsystem circuit of disks prosthetics, disks garments, disks spark cleats and disks shoes;

(c) a method of transducer system comprising a piezoelectric circuit means for oscillation subsystem circuit of disks prosthetics, disks garments, disks spark cleats and disks shoes;

(d) a method for intrinsic transducer system prosthetic vertebrae disc comprising mid disk, out disk, disk bladders, leads, and having a textile portion touchscreen;

(e) a method for intrinsic transducer system wherein the piezoelectric circuit comprises therapeutic disks, leads, controllers, resistors, bladders, display and catheters;

(f) a method of intrinsic transducer system for an athletic garments circuit comprising piezoelectric disks and therapeutic leads; and

(g) a method of intrinsic transducer system for an athletic prosthetic comprises a mid/out disk.

Applicant respectfully requests reconsideration of the application and its passage to allowance.

Should any impediments to allowance remain, Applicant requests that the Examiner contact the undersigned at the indicated phone number.

Respectfully submitted, James Jennings

/JAMES EDWARD JENNINGS/

Date: 5/21/2014

By: _____
PO Box 270081 Louisville, CO 80027
303.664.1829

Electronic Acknowledgement Receipt

EFS ID:	19085885
Application Number:	13724287
International Application Number:	
Confirmation Number:	8891
Title of Invention:	INTRINSIC TRANSDUCTION SYSTEM
First Named Inventor/Applicant Name:	JAMES EDWARD JENNINGS
Customer Number:	82669
Filer:	James Edward Jennings
Filer Authorized By:	
Attorney Docket Number:	
Receipt Date:	21-MAY-2014
Filing Date:	21-DEC-2012
Time Stamp:	01:49:10
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Amendment Copy Claims/Response to Suggested Claims	PIEZOMID_CLAIMS_2.pdf	41201 <small>5407c320da79a0d71a1407696e4b605f007d1d1a</small>	no	6

Warnings:

Information:

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 a 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.

REPLACEMENT SHEET

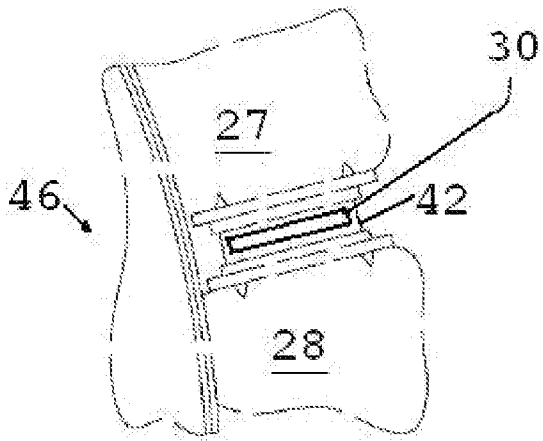


FIG. 7

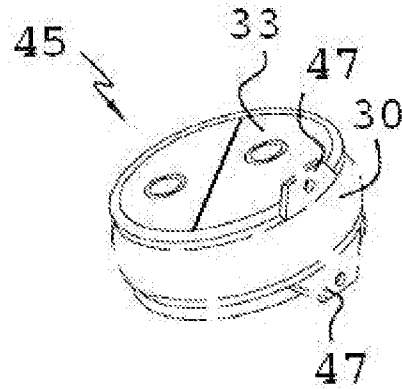


FIG. 8

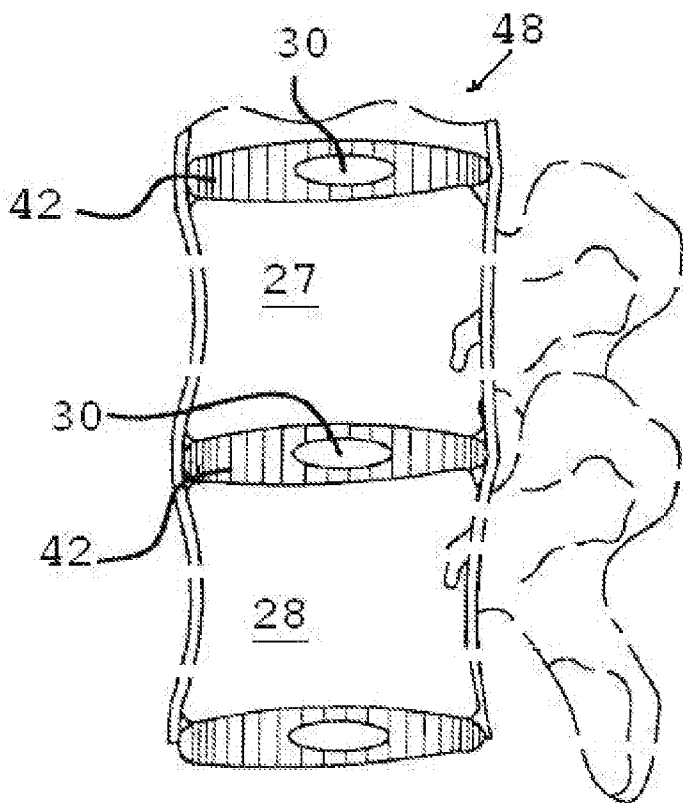


FIG. 9

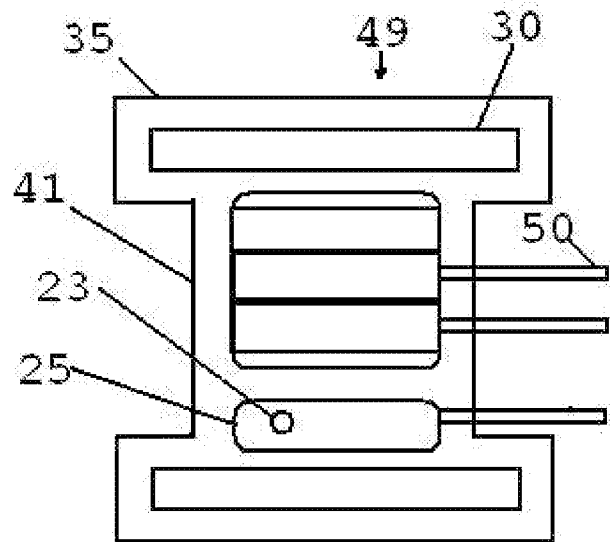


FIG. 10

Electronic Acknowledgement Receipt

EFS ID:	19087630
Application Number:	13724287
International Application Number:	
Confirmation Number:	8891
Title of Invention:	INTRINSIC TRANSDUCTION SYSTEM
First Named Inventor/Applicant Name:	JAMES EDWARD JENNINGS
Customer Number:	82669
Filer:	James Edward Jennings
Filer Authorized By:	
Attorney Docket Number:	
Receipt Date:	21-MAY-2014
Filing Date:	21-DEC-2012
Time Stamp:	11:05:39
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Drawings-only black and white line drawings	ITS_DRAWINGS_NEW2.pdf	98990 <small>d6ce0b0f2e8a0d71a005b38f54fba08809d7a460</small>	no	1

Warnings:

Information:

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

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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.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number	Filing Date	<input type="checkbox"/> To be Mailed
	13/724,287	12/21/2012	

ENTITY: LARGE SMALL MICRO**APPLICATION AS FILED – PART I**

(Column 1)

(Column 2)

FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)
<input type="checkbox"/> BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
<input type="checkbox"/> SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A	
<input type="checkbox"/> 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 \$ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 = *	*	X \$ =	
<input type="checkbox"/> 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).			
<input type="checkbox"/> 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	05/21/2014	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(i))	* 3	Minus	** 20	= 0	X \$20 =	0
Independent (37 CFR 1.16(h))	* 2	Minus	***3	= 0	X \$105 =	0	
<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))							
<input type="checkbox"/> 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 \$ =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	X \$ =		
<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))							
<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
						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".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

LIE
/CORALIA BETANCOURT/

This collection of information is required by 37 CFR 1.16. 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 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.**

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

Serial No.: 13/724,287
Filing Date: 12/21/2012
Confirmation No.: 8891
GAU:1629

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: JENNINGS, James Edward

SERIAL NO.: 13/724,287

FILING DATE: 12/21, 2012

TITLE: INTRINSIC TRANSDUCTION SYSTEM

GROUP ART UNIT: 3766

EXAMINER: Porter, Jr. Gary A.

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

RESPONSE/AMENDMENT

Dear Examiner Porter:

This correspondence is being filed as a Response to the Final Office Action issued on May 5, 2014. Applicant requests entry of the amendments indicated below and consideration of the appended Remarks.

Amendments to the claims begin on Page 2 of this paper.

REMARKS

No new matter has been entered by way of these amendments.

AMENDMENTS TO THE DRAWINGS: NONE

AMENDMENTS TO THE CLAIMS: CANCEL 1-3

4.(NEW) An intrinsic transduction system method providing:

means for comprises a molded part having a nerve stimulating unit or a midsole device at least partially molded therein;

means for comprises an impact-sensing element made from a polymeric piezoelectric material, a battery means, a stimulus device or an information display device and a circuit connected to said piezoelectric material;

means for responsive to electrical energy produced upon impact which permits the nerve stimulus device to be energized from the battery or any information displaying device to be activated;

means for charging the negative ion transistor and battery; and

means for deliver an electrical signal or/and to deliver the therapeutic fluid.

5. (NEW) The intrinsic transduction system method in accordance with claim 4, wherein said means for comprises a molded part having a nerve stimulating unit or a mid device at least partially molded therein comprises an out;

wherein said means for comprises an impact-sensing element made from a polymeric piezoelectric material, a battery means, a stimulus device or an information display device and a circuit connected to said piezoelectric material comprises a mid;

wherein said means for responsive to electrical energy produced upon impact which permits the nerve stimulus device to be energized from the battery or any information displaying device to be activated comprises a stimulus unit;

wherein said means for charging the negative ion transistor and battery comprises an oscillating circuit; and

wherein said means for deliver an electrical signal or/and to deliver the therapeutic fluid comprises a therapeutic lead.

6. (NEW) An intrinsic transduction system method providing:

an out, for comprises a molded part having a nerve stimulating unit or a mid device at least partially molded therein;

a mid, for comprises an impact-sensing element made from a polymeric piezoelectric material, a battery means, a stimulus device or an information display device and a circuit connected to said piezoelectric material;

a stimulus unit, for responsive to electrical energy produced upon impact which permits the nerve stimulus device to be energized from the battery or any information displaying device to be activated;

an oscillating circuit, for charging the negative ion transistor and battery; and

a therapeutic lead, for electrical signal and/or delivery of therapeutic fluid.

Conditional Request For Constructive Assistance

If for any reason this application is not believed to be in full condition for allowance, applicant respectfully request the constructive assistance and suggestions of the examiner pursuant to M.P.E.P. § 2173.02 and § 707.07(j) in order that the undersigned can place this application in allowable condition as soon as possible and without the need for further proceedings.

Applicant respectfully requests reconsideration of the application and its passage to allowance. Should any impediments to allowance remain, Applicant requests that the Examiner contact the undersigned at the indicated phone number.

Respectfully submitted, James Jennings

/JAMES EDWARD JENNINGS/

Date: 5/9/2014

By: _____
PO Box 270081 Louisville, CO 80027
303.664.1829

Electronic Acknowledgement Receipt

EFS ID:	18991939
Application Number:	13724287
International Application Number:	
Confirmation Number:	8891
Title of Invention:	INTRINSIC TRANSDUCTION SYSTEM
First Named Inventor/Applicant Name:	JAMES EDWARD JENNINGS
Customer Number:	82669
Filer:	James Edward Jennings
Filer Authorized By:	
Attorney Docket Number:	
Receipt Date:	09-MAY-2014
Filing Date:	21-DEC-2012
Time Stamp:	15:45:14
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Amendment Copy Claims/Response to Suggested Claims	PIEZOMID_CLAIMS.pdf	36884 5b66455145bbb2ac1dcb2a23f18f92257fce c45	no	4

Warnings:

Information:

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 a 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.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 13/724,287	Filing Date 12/21/2012	<input type="checkbox"/> To be Mailed
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ENTITY: LARGE SMALL MICRO

APPLICATION AS FILED – PART I

FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)
<input type="checkbox"/> BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
<input type="checkbox"/> SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A	
<input type="checkbox"/> 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 \$ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X \$ =	
<input type="checkbox"/> 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).			
<input type="checkbox"/> 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)	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
AMENDMENT	05/09/2014	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR			
	Total (37 CFR 1.16(i))	* 3	Minus	** 20	= 0	X \$20 = 0
	Independent (37 CFR 1.16(h))	* 2	Minus	***3	= 0	X \$105 = 0
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))					
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					
					TOTAL ADD'L FEE	0

	(Column 1)	(Column 2)	(Column 3)	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR			
	Total (37 CFR 1.16(i))	*	Minus	**	=	X \$ =
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X \$ =
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))					
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					
					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".
 The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

LIE
/STELLA LITTLE/

This collection of information is required by 37 CFR 1.16. 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 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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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/724,287	12/21/2012	JAMES EDWARD JENNINGS		8891

82669 7590 05/05/2014
James Edward Jennings
P.O. Box 270081
Louisville, CO 80027

EXAMINER

PORTER, JR, GARY A

ART UNIT	PAPER NUMBER
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3766

MAIL DATE	DELIVERY MODE
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05/05/2014

PAPER

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.

DETAILED ACTION

1. The present application is being examined under the pre-AIA first to invent provisions.

Election/Restrictions

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claim 1, drawn to an intrinsic transducer system method, classified in 607/2.

II. Claim 2, drawn to a method for constructing a transducer prosthetic vertebrae disc sole, classified in 607/144.

III. Claim 3, drawn to a battery transduction oscillation system method of charging or enhancement, classified in 607/64.

The inventions are distinct, each from the other because of the following reasons:

3. Inventions I and II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the combination of Group I does not require a prosthetic transducer implant configured for placement between opposing bones. The subcombination has separate utility such as treating pain instead of promoting nerve regeneration.

Art Unit: 3766

The examiner has required restriction between combination and subcombination inventions. Where applicant elects a subcombination, and claims thereto are subsequently found allowable, any claim(s) depending from or otherwise requiring all the limitations of the allowable subcombination will be examined for patentability in accordance with 37 CFR 1.104. See MPEP § 821.04(a). Applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

4. Inventions I and III are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the combination of Group I does not require the battery disks of Group III. The subcombination has separate utility such as solely providing power to a device and not treating a patient.

The examiner has required restriction between combination and subcombination inventions. Where applicant elects a subcombination, and claims thereto are subsequently found allowable, any claim(s) depending from or otherwise requiring all the limitations of the allowable subcombination will be examined for patentability in accordance with 37 CFR 1.104. See MPEP § 821.04(a). Applicant is advised that if

Art Unit: 3766

any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

5. Inventions II and III are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the combination of Group II does not require the battery disks of Group III. The subcombination has separate utility such as solely providing power to a device and not treating a patient.

The examiner has required restriction between combination and subcombination inventions. Where applicant elects a subcombination, and claims thereto are subsequently found allowable, any claim(s) depending from or otherwise requiring all the limitations of the allowable subcombination will be examined for patentability in accordance with 37 CFR 1.104. See MPEP § 821.04(a). Applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

Art Unit: 3766

6. Restriction for examination purposes as indicated is proper because all these inventions listed in this action are independent or distinct for the reasons given above and there would be a serious search and/or examination burden if restriction were not required because one or more of the following reasons apply:

Each invention is distinct in its construction and uncton and a search for a stimulation system having the garment components of Group I will not overlap in a search for a battery as required in Group II. The Same Applies for Group III.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of an invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable upon the elected invention.

Should applicant traverse on the ground that the inventions are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is

Art Unit: 3766


the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103 or pre-AIA 35 U.S.C. 103(a) of the other invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALLEN PORTER, JR whose telephone number is (571)270-5419. The examiner can normally be reached on Monday - Friday, 9AM - 6PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Layno can be reached on (571)272-4949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ALLEN PORTER, JR/
Primary Examiner, Art Unit 3766

<i>Index of Claims</i> 	Application/Control No. 13724287	Applicant(s)/Patent Under Reexamination JENNINGS, JAMES EDWARD
	Examiner ALLEN PORTER, JR	Art Unit 3766

✓	Rejected
=	Allowed

-	Cancelled
÷	Restricted

N	Non-Elected
I	Interference

A	Appeal
O	Objected

Claims renumbered in the same order as presented by applicant
 CPA
 T.D.
 R.1.47

CLAIM		DATE							
Final	Original	05/02/2014							
	1	÷							
	2	÷							
	3	÷							

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63) <input checked="" type="checkbox"/> Declaration Submitted With Initial Filing OR <input type="checkbox"/> Declaration Submitted After Initial Filing (surcharge (37 CFR 1.16(f)) required)	Attorney Docket Number	
	First Named Inventor	JAMES EDWARD JENNINGS
	<i>COMPLETE IF KNOWN</i>	
	Application Number	13/724,287
	Filing Date	12/21/2012
	Art Unit	1629
Examiner Name		

I hereby declare that: (1) Each inventor's residence, mailing address, and citizenship are as stated below next to their name; and (2) I believe the inventor(s) named below to be the original and first inventor(s) of the subject matter which is claimed and for which a patent is sought on the invention titled:

INTRINSIC TRANSDUCTION SYSTEM

(Title of the Invention)

the application of which

is attached hereto

OR

was filed on (MM/DD/YYYY) _____ as United States Application Number or PCT International Application Number _____ and was amended on (MM/DD/YYYY) _____ (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified application, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

Authorization To Permit Access To Application by Participating Offices

If 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 World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the above-identified patent application is filed access to the above-identified patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, WIPO, or other intellectual property office in which a foreign application claiming priority to the above-identified patent application is filed to have access to the above-identified patent application.

In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the above-identified patent application with respect to: 1) the above-identified patent application-as-filed; 2) any foreign application to which the above-identified patent application claims priority under 35 U.S.C. 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the above-identified patent application; and 3) any U.S. application-as-filed from which benefit is sought in the above-identified patent application.

In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing the Authorization to Permit Access to Application by Participating Offices.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

DECLARATION — Utility or Design Patent Application

Claim of Foreign Priority Benefits

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b) of any foreign application(s) for patent, inventor's or plant breeder's rights certificate(s), or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent, inventor's or plant breeder's rights certificate(s), or any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached?	
				YES	NO
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional foreign application number(s) are listed on a supplemental priority data sheet PTO/SB/02B attached hereto.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

DECLARATION — Utility or Design Patent Application

Direct all correspondence to:	<input checked="" type="checkbox"/>	The address associated with Customer Number:	000082669	OR	<input type="checkbox"/>	Correspondence address below
Name						
Address						
City			State		Zip	
Country		Telephone		Email		
WARNING:						
<p>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. Petitioner/applicant is advised that documents which form the record of a patent application (such as the PTO/SB/01) are placed into the Privacy Act system of records DEPARTMENT OF COMMERCE, COMMERCE-PAT-7, System name: <i>Patent Application Files</i>. Documents not retained in an application file (such as the PTO-2038) are placed into the Privacy Act system of COMMERCE/PAT-TM-10, System name: <i>Deposit Accounts and Electronic Funds Transfer Profiles</i>.</p> <p>I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.</p>						
NAME OF SOLE OR FIRST INVENTOR:			<input type="checkbox"/> A petition has been filed for this unsigned inventor			
Given Name (first and middle [if any])			Family Name or Surname			
JAMES EDWARD			JENNINGS			
Inventor's Signature				Date		
/JAMES E. JENNINGS/				12-21-2012		
Residence: City	State	Country	Citizenship			
SUPERIOR	CO	US	US			
Mailing Address						
PO BOX 270081						
City	State	Zip	Country			
LOUISVILLE	CO	80027	US			
<input type="checkbox"/> Additional inventors or a legal representative are being named on the _____ supplemental sheet(s) PTO/SB/02A or 02LR attached hereto						

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.

Electronic Acknowledgement Receipt

EFS ID:	16570020
Application Number:	13724287
International Application Number:	
Confirmation Number:	8891
Title of Invention:	INTRINSIC TRANSDUCTION SYSTEM
First Named Inventor/Applicant Name:	JAMES EDWARD JENNINGS
Customer Number:	82669
Filer:	James Edward Jennings
Filer Authorized By:	
Attorney Docket Number:	
Receipt Date:	12-AUG-2013
Filing Date:	21-DEC-2012
Time Stamp:	22:56:01
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Oath or Declaration filed	sb0001_ITS.pdf	616316 <small>fc42db00581ed5aab4c3988adf3e7bf22a920ef2</small>	no	4

Warnings:

Information:

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 a 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.

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number
13/724,287

APPLICATION AS FILED - PART I

(Column 1) (Column 2)

FOR	NUMBER FILED	NUMBER EXTRA
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A
TOTAL CLAIMS (37 CFR 1.16(j))	3 minus 20 = *	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3 minus 3 = *	
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))		

SMALL ENTITY

RATE(\$)	FEE(\$)
N/A	
N/A	
N/A	
TOTAL	

OR OTHER THAN SMALL ENTITY

RATE(\$)	FEE(\$)
N/A	0.00
N/A	0.00
N/A	0.00
x 0.00 =	0.00
x 0.00 =	0.00
	0.00
	0.00
TOTAL	0.00

* If the difference in column 1 is less than zero, enter "0" in column 2.

APPLICATION AS AMENDED - PART II

(Column 1) (Column 2) (Column 3)

AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total (37 CFR 1.16(i))	*	Minus	**	=
	Independent (37 CFR 1.16(h))	*	Minus	***	=
	Application Size Fee (37 CFR 1.16(s))				
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))				

SMALL ENTITY

RATE(\$)	ADDITIONAL FEE(\$)
x =	
x =	
TOTAL ADD'L FEE	

OR OTHER THAN SMALL ENTITY

RATE(\$)	ADDITIONAL FEE(\$)
x =	
x =	
TOTAL ADD'L FEE	

(Column 1) (Column 2) (Column 3)

AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total (37 CFR 1.16(i))	*	Minus	**	=
	Independent (37 CFR 1.16(h))	*	Minus	***	=
	Application Size Fee (37 CFR 1.16(s))				
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))				

SMALL ENTITY

RATE(\$)	ADDITIONAL FEE(\$)
x =	
x =	
TOTAL ADD'L FEE	

OR OTHER THAN SMALL ENTITY

RATE(\$)	ADDITIONAL FEE(\$)
x =	
x =	
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".

The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.



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United States Patent and Trademark Office
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www.uspto.gov

Table with 6 columns: APPLICATION NUMBER, FILING or 371(c) DATE, GRP ART UNIT, FIL FEE REC'D, ATTY. DOCKET NO, TOT CLAIMS, IND CLAIMS. Values: 13/724,287, 12/21/2012, 1629, 598, (blank), 3, 3

CONFIRMATION NO. 8891

UPDATED FILING RECEIPT



82669
James Edward Jennings
P.O. Box 270081
Louisville, CO 80027

Date Mailed: 08/06/2013

Receipt is acknowledged of this non-provisional 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 APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections

Inventor(s) JAMES EDWARD JENNINGS, Superior, CO;

Applicant(s) JAMES EDWARD JENNINGS, Superior, CO;

Power of Attorney: None

Domestic Applications for which benefit is claimed - None.

A proper domestic benefit claim must be provided in an Application Data Sheet in order to constitute a claim for domestic benefit. See 37 CFR 1.76 and 1.78.

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.

Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

If Required, Foreign Filing License Granted: 01/24/2013

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is US 13/724,287

Projected Publication Date: 06/26/2014

Non-Publication Request: No

Early Publication Request: No

** MICRO ENTITY **

Title

INTRINSIC TRANSDUCTION SYSTEM

Preliminary Class

514

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

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER
Title 35, United States Code, Section 184
Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

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The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop technology, manufacture products, deliver services, and grow your business, visit <http://www.SelectUSA.gov> or call +1-202-482-6800.



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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/724,287	12/21/2012	JAMES EDWARD JENNINGS	

CONFIRMATION NO. 8891

82669
James Edward Jennings
P.O. Box 270081
Louisville, CO 80027

NOTICE



Date Mailed: 08/06/2013

INFORMATIONAL NOTICE TO APPLICANT

Applicant is notified that the above-identified application contains the deficiencies noted below. No period for reply is set forth in this notice for correction of these deficiencies. However, if a deficiency relates to the inventor's oath or declaration, the applicant must file an oath or declaration in compliance with 37 CFR 1.63, or a substitute statement in compliance with 37 CFR 1.64, executed by or with respect to each actual inventor no later than the expiration of the time period set in the "Notice of Allowability" to avoid abandonment. See 37 CFR 1.53(f).

The item(s) indicated below are also required and should be submitted with any reply to this notice to avoid further processing delays.

A new inventor's oath or declaration that identifies this application (e.g., by Application Number and filing date) is required. The inventor's oath or declaration does not comply with 37 CFR 1.63 in that it:

- does not state that the above-identified application was made or authorized to be made by the person executing the oath or declaration.

CERTIFICATION OF MICRO ENTITY STATUS
 (GROSS INCOME BASIS)

Application Number or Control Number (if applicable): 13/724,287	Patent Number (if applicable):
First Named Inventor: JAMES EDWARD JENNINGS	Title of Invention: INTRINSIC TRANSDUCTION SYSTEM

The applicant hereby certifies the following—

- (1) **SMALL ENTITY REQUIREMENT** - The applicant qualifies as a small entity as defined in 37 CFR 1.27.
- (2) **APPLICATION FILING LIMIT** - Neither the applicant nor the inventor nor a joint inventor has been named as the inventor or a joint inventor on more than four previously filed U.S. patent applications, excluding provisional applications and international applications under the Patent Cooperation Treaty (PCT) for which the basic national fee under 37 CFR 1.492(a) was not paid, and also excluding patent applications for which the applicant has assigned all ownership rights or is obligated to assign all ownership rights as a result of the applicant's previous employment.
- (3) **GROSS INCOME LIMIT ON APPLICANTS AND INVENTORS** - Neither the applicant nor the inventor nor a joint inventor, in the calendar year preceding the calendar year in which the applicable fee is being paid, had a gross income, as defined in section 61(a) of the Internal Revenue Code of 1986 (26 U.S.C. 61(a)), exceeding the "Maximum Qualifying Gross Income" reported on the USPTO website at http://www.uspto.gov/patents/law/micro_entity.jsp which is equal to three times the median household income for that preceding calendar year, as most recently reported by the Bureau of the Census.
- (4) **GROSS INCOME LIMIT ON PARTIES WITH AN "OWNERSHIP INTEREST"** - Neither the applicant nor the inventor nor a joint inventor has assigned, granted, or conveyed, nor is under an obligation by contract or law to assign, grant, or convey, a license or other ownership interest in the application concerned to an entity that, in the calendar year preceding the calendar year in which the applicable fee is being paid, had a gross income, as defined in section 61(a) of the Internal Revenue Code of 1986, exceeding the "Maximum Qualifying Gross Income" reported on the USPTO website at http://www.uspto.gov/patents/law/micro_entity.jsp which is equal to three times the median household income for that preceding calendar year, as most recently reported by the Bureau of the Census.

SIGNATURE by a party set forth in 37 CFR 1.33(b)

Signature	/JAMES EDWARD JENNINGS/				
Name	JAMES EDWARD JENNINGS				
Date	4/1/2013	Telephone	3036641829	Registration No.	82669



There is more than one inventor and I am one of the inventors who are jointly identified as the applicant. Additional certification form(s) signed by the other joint inventor(s) are included with this form.

Electronic Acknowledgement Receipt

EFS ID:	15395318
Application Number:	13724287
International Application Number:	
Confirmation Number:	8891
Title of Invention:	INTRINSIC TRANSDUCTION SYSTEM
First Named Inventor/Applicant Name:	JAMES EDWARD JENNINGS
Customer Number:	82669
Filer:	James Edward Jennings
Filer Authorized By:	
Attorney Docket Number:	
Receipt Date:	01-APR-2013
Filing Date:	21-DEC-2012
Time Stamp:	03:04:36
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Certification of Micro Entity (Gross Income Basis)	sb15a_ITS.pdf	110103 <small>1b1c6348d5ccd7b6c869e7ce49acdbb6cbbfd377</small>	no	1

Warnings:

Information:

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 a 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.

1/8

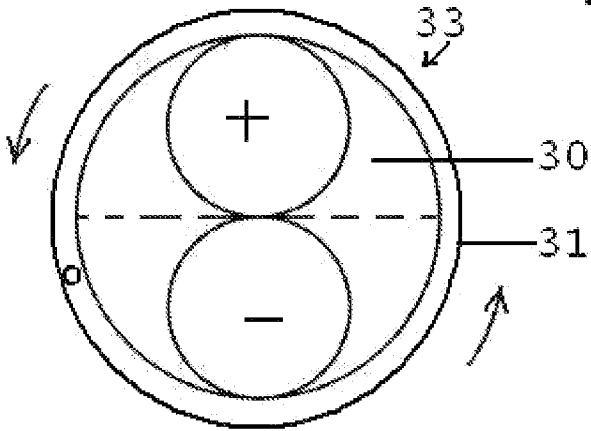


FIG. 1

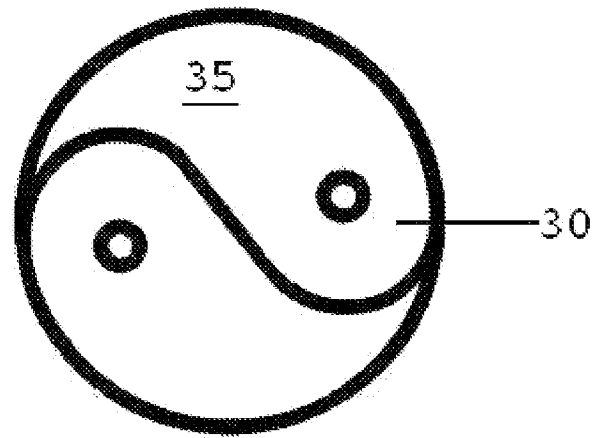


FIG. 3

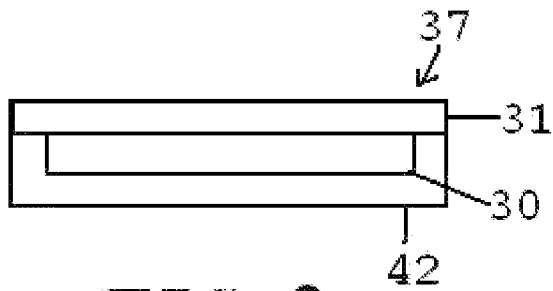


FIG. 2

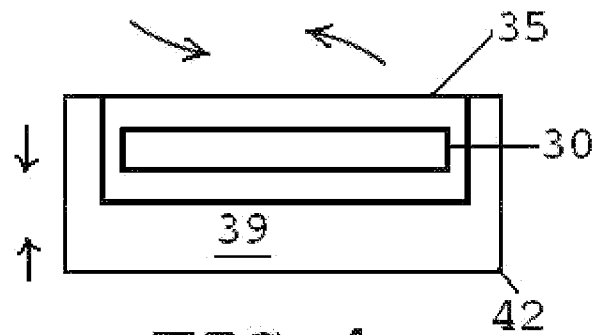


FIG. 4

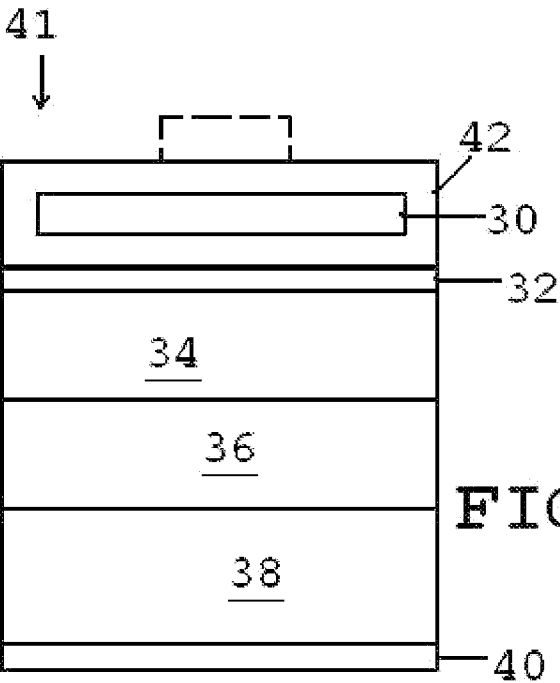


FIG. 5

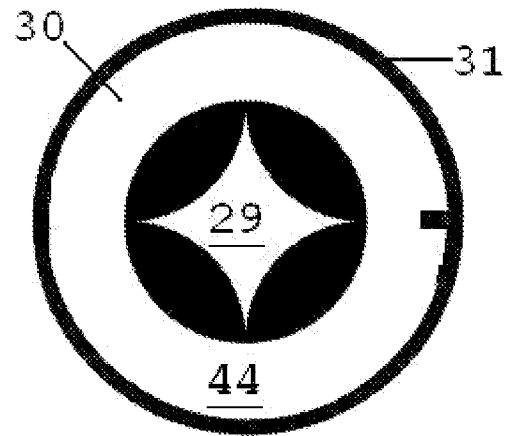


FIG. 6

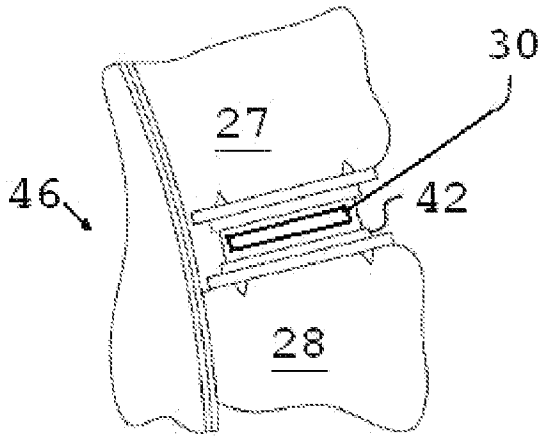


FIG. 7

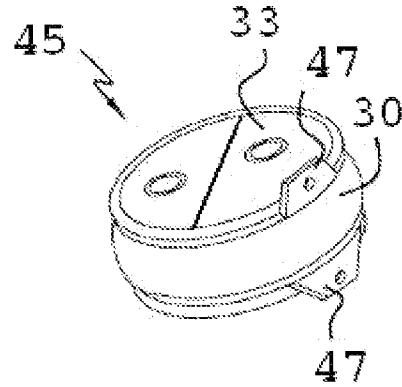


FIG. 8

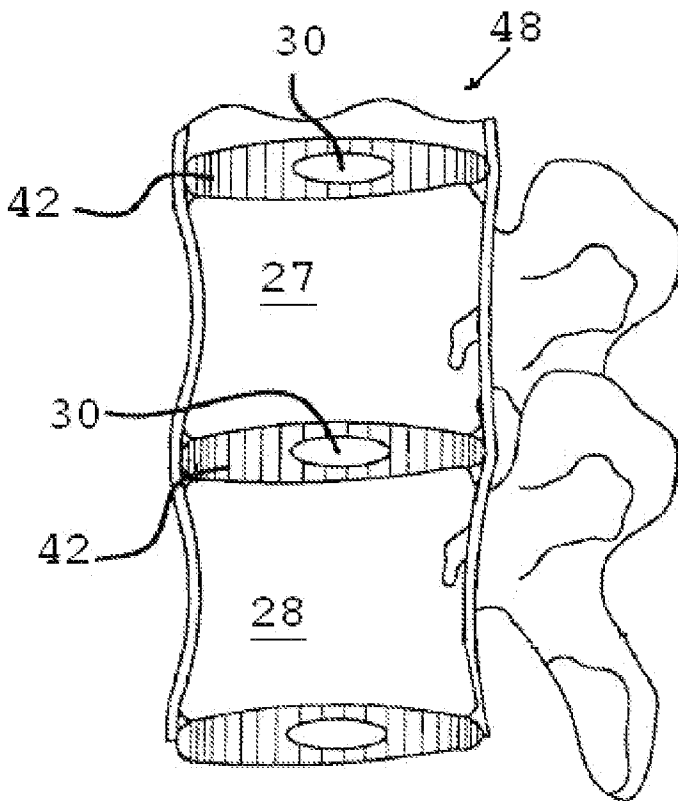


FIG. 9

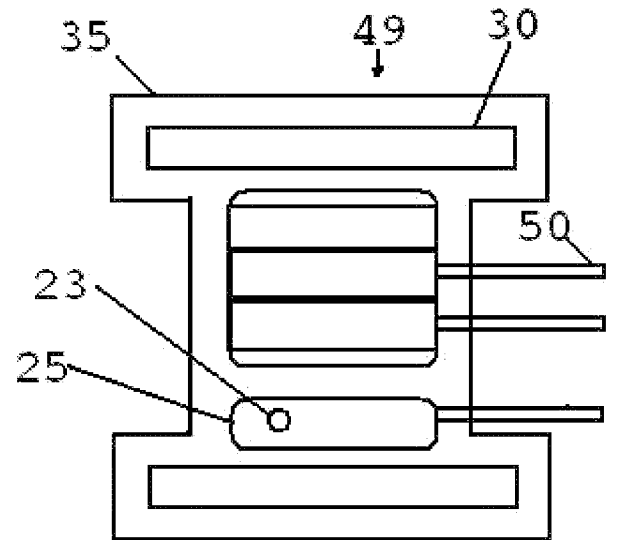


FIG. 10

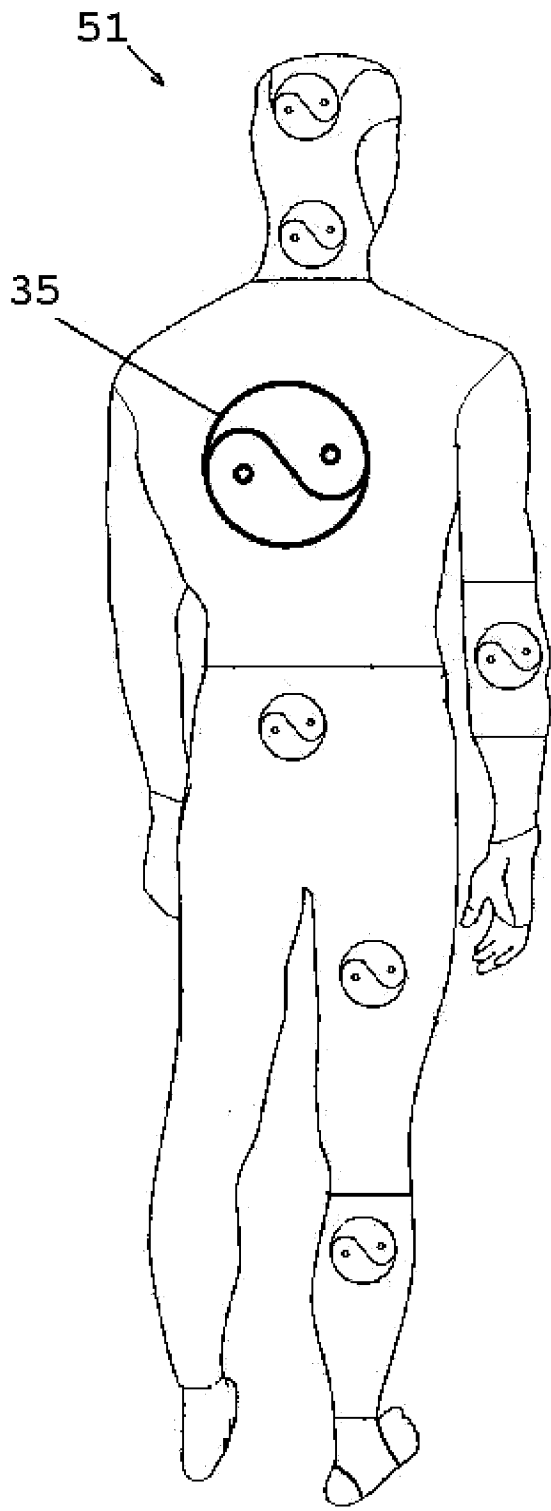


FIG. 11

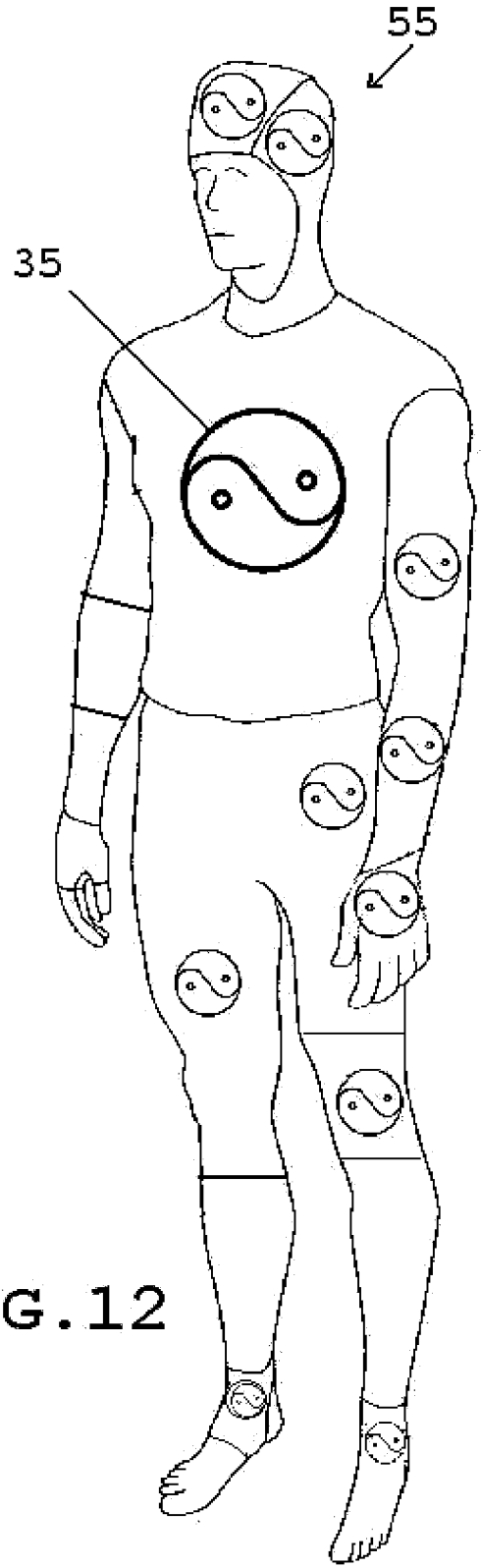


FIG. 12

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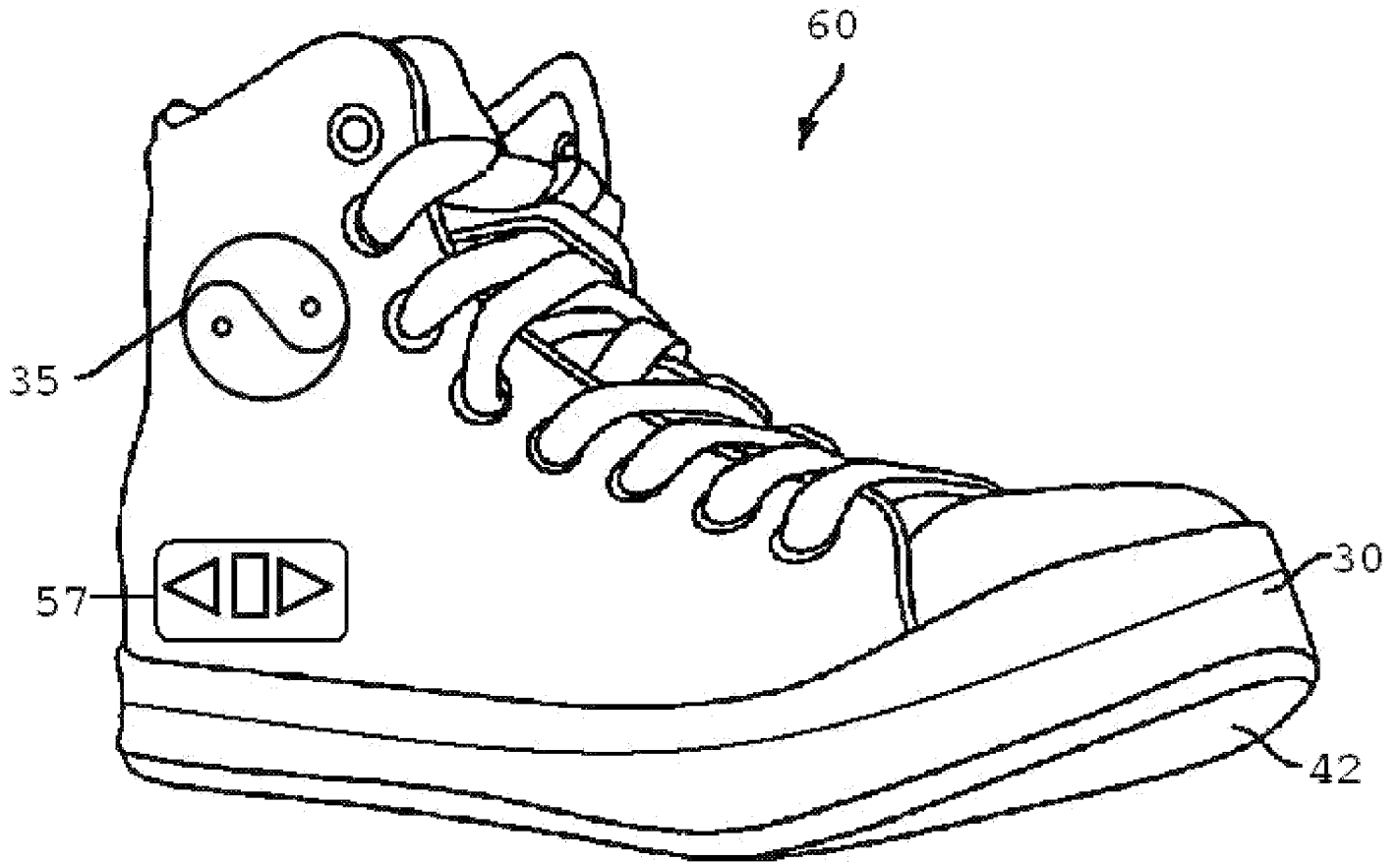


FIG. 13

5/8

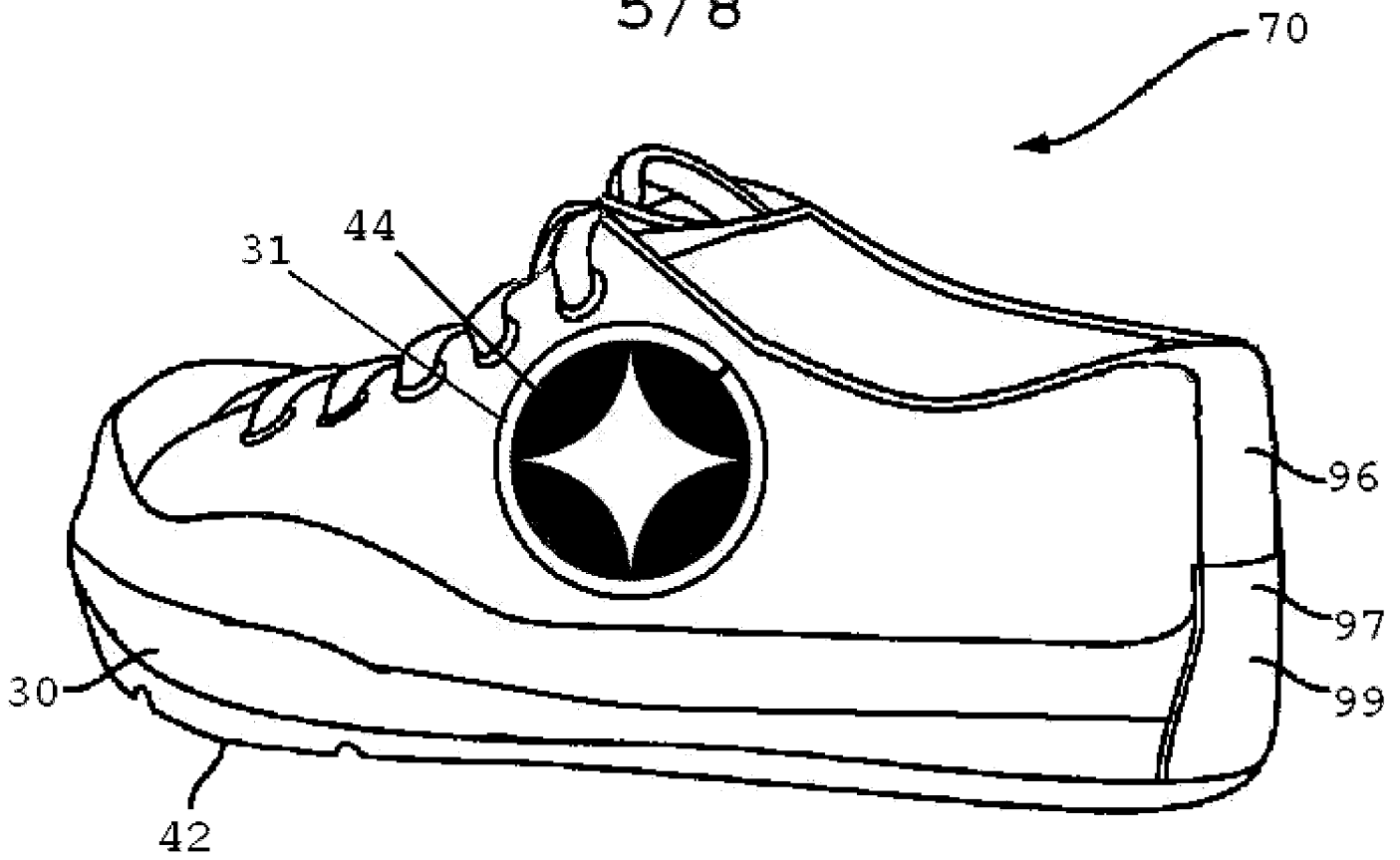


FIG. 14

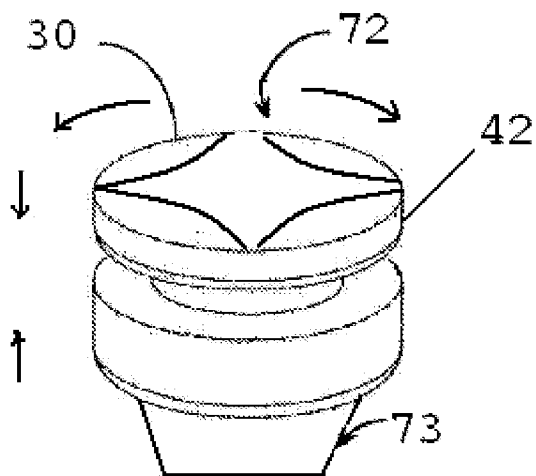


FIG. 15

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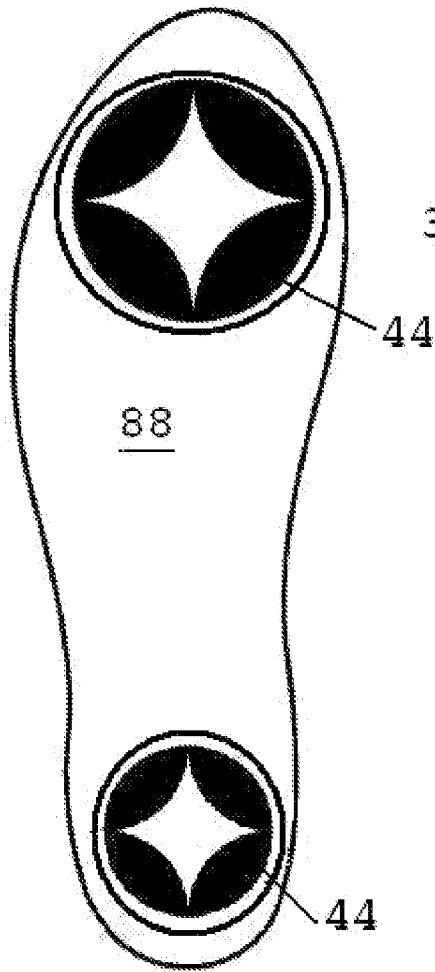


FIG. 16

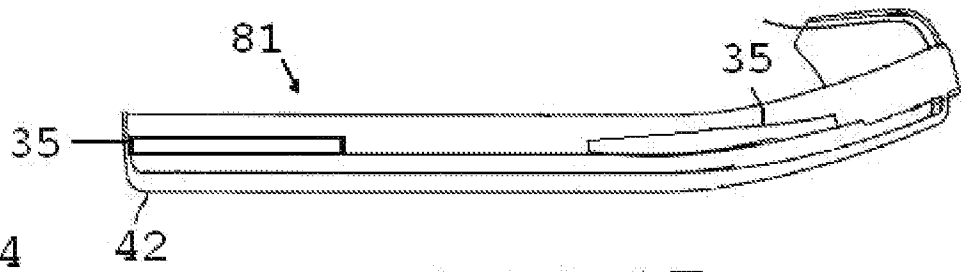


FIG. 17

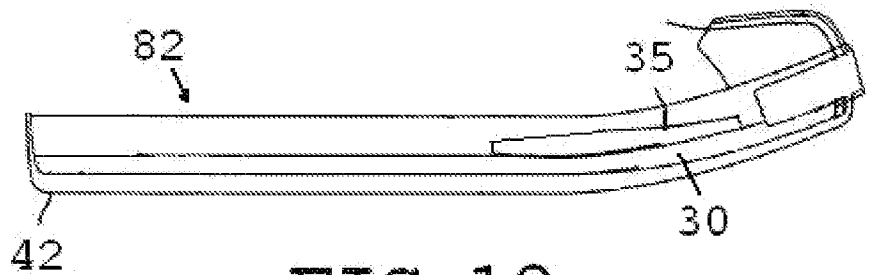


FIG. 18

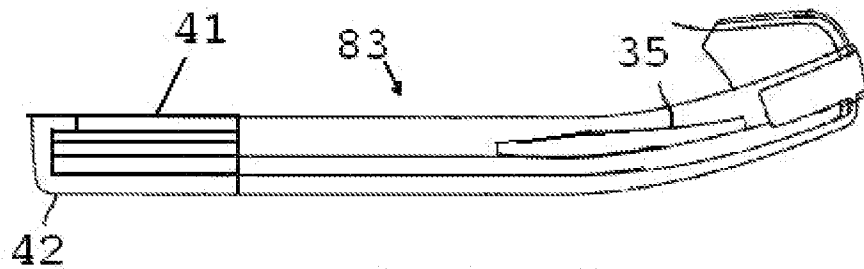
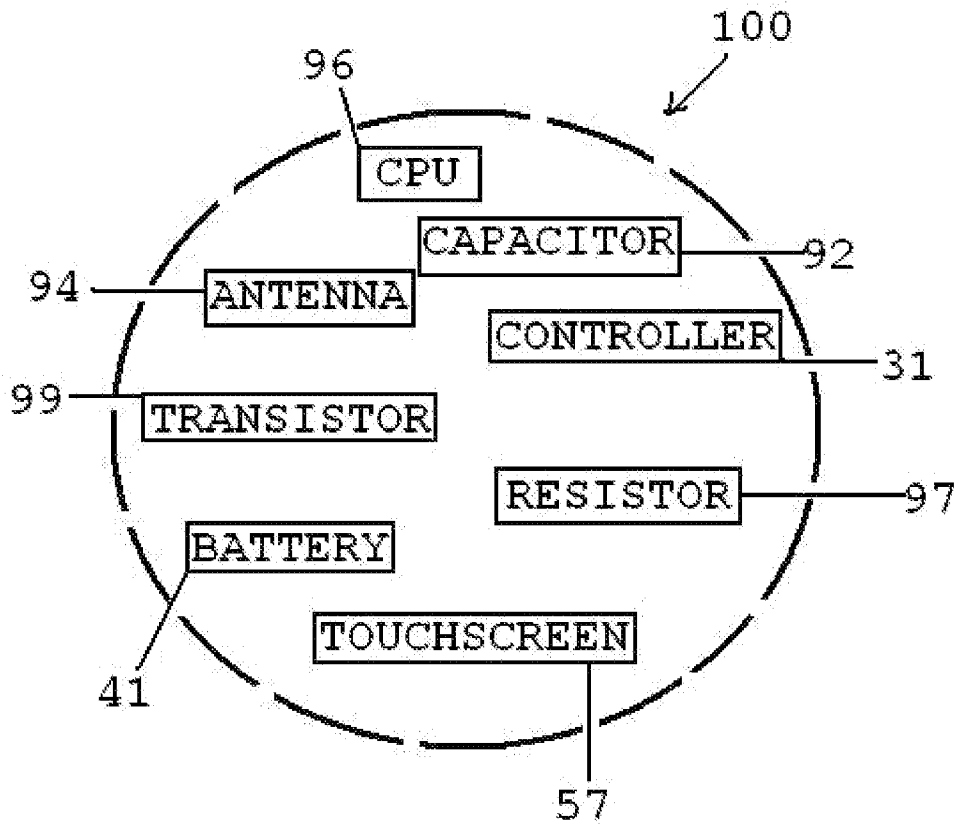


FIG. 19

FIG. 20



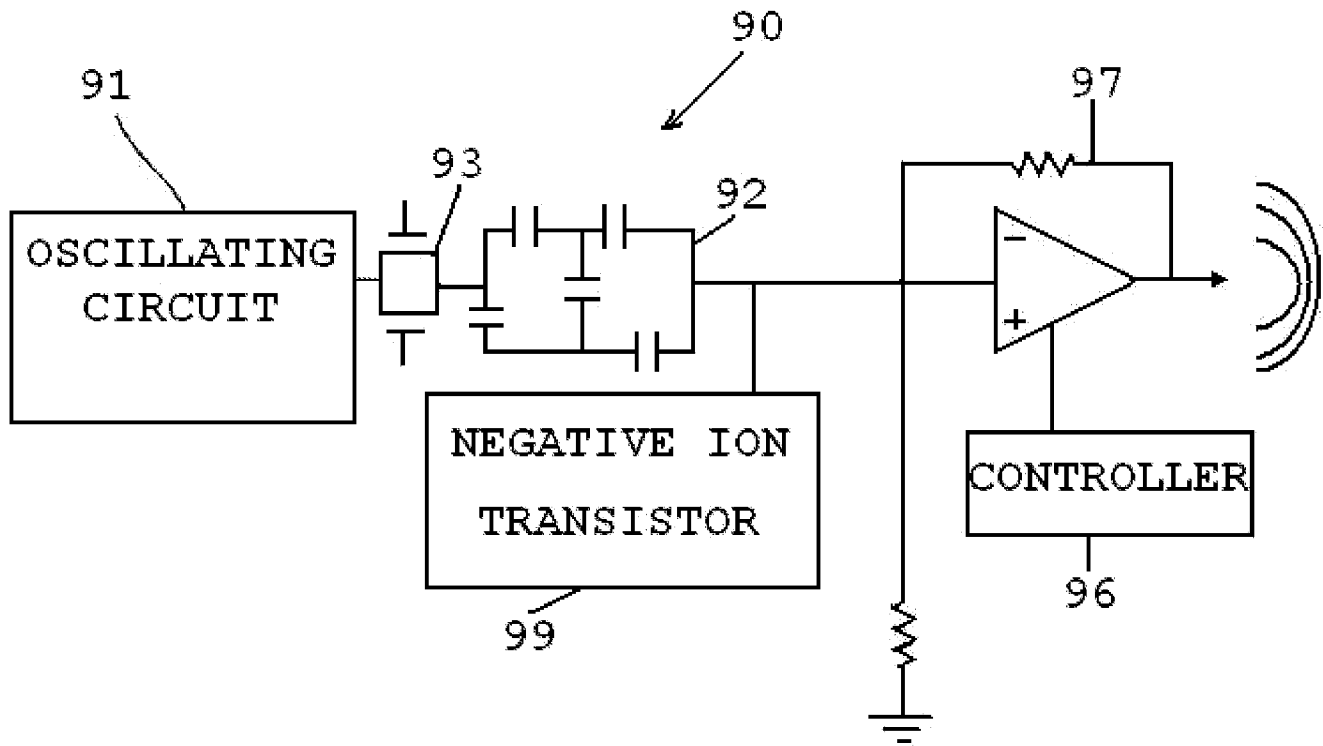


FIG. 21

Serial No.: 13/724,287
Filing Date: 12/21/2012
Confirmation No.: 8891
GAU:1629

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: JENNINGS, James Edward

SERIAL NO.: 13/724,287

FILING DATE: 12/21, 2012

TITLE: INTRINSIC TRANSDUCTION SYSTEM

GROUP ART UNIT: 1629

EXAMINER: NONE

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

RESPONSE/AMENDMENT

Dear Examiner's:

This correspondence is being filed as a Response to the Final Office Action issued on January 29, 2013. Applicant requests entry of the amendments indicated below and consideration of the appended Remarks.

Amendments to the Drawings begin on Page 2 of this paper and include both an attached set of Replacement Sheets and set of Annotated Sheets showing changes. Remarks begin on Page 2 of this paper.

An Appendix including the above referenced Substitute Specification (clean and annotated) and

amended Drawing figures (clean and annotated) is attached following Page 3 of this paper.

AMENDMENTS TO THE DRAWINGS:

All of the Replacement Sheets reflect formal drawings to replace the informal drawings previously submitted.

Attachments: Replacement Sheets (8)

REMARKS

Applicant has amended the Specification in the present Application to comply with the Examiner's request for the same. Applicant has made these amendments by way of the attached Substitute Specification.

Applicant has amended the Drawings in the present Application to formalize the entire set of Figures. In the process, certain amendments to the Drawings were required to clarify the features originally shown in the Drawings. No new matter has been entered by way of these amendments.

Conditional Request For Constructive Assistance

If for any reason this application is not believed to be in full condition for allowance, applicant respectfully request the constructive assistance and suggestions of the examiner pursuant to M.P.E.P. § 2173.02 and § 707.07(j) in order that the undersigned can place this application in allowable condition as soon as possible and without the need for further proceedings.

Applicant respectfully requests reconsideration of the application and its passage to allowance.
Should any impediments to allowance remain, Applicant requests that the Examiner contact the undersigned at the indicated phone number.

Respectfully submitted, James Jennings

/JAMES EDWARD JENNINGS/

Date: 2/18/2013

By: _____
PO Box 270081 Louisville, CO 80027
303.664.1829

Electronic Acknowledgement Receipt

EFS ID:	14982817
Application Number:	13724287
International Application Number:	
Confirmation Number:	8891
Title of Invention:	INTRINSIC TRANSDUCTION SYSTEM
First Named Inventor/Applicant Name:	JAMES EDWARD JENNINGS
Customer Number:	82669
Filer:	James Edward Jennings
Filer Authorized By:	
Attorney Docket Number:	
Receipt Date:	18-FEB-2013
Filing Date:	21-DEC-2012
Time Stamp:	16:32:52
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Drawings-only black and white line drawings	ITS_DRAWINGS_LAST.pdf	358617 <small>2f7b0bc7a86a3abbc3cf8e3143932ef67404901d</small>	no	8

Warnings:

Information:

2	Applicant Arguments/Remarks Made in an Amendment	PIEZOMID_LETTER.pdf	32696 480505369a27b86f374c1fcb5efa7d0e784f4104	no	3
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Warnings:

Information:

Total Files Size (in bytes):	391313
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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 a 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.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 13/724,287	Filing Date 12/21/2012	<input type="checkbox"/> To be Mailed
---	---	----------------------------------	---------------------------------------

ENTITY: LARGE SMALL MICRO

APPLICATION AS FILED – PART I

FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)
<input checked="" type="checkbox"/> BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	0
<input checked="" type="checkbox"/> SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A	0
<input checked="" type="checkbox"/> EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	0
TOTAL CLAIMS (37 CFR 1.16(i))	3 minus 20 =	* 0	x \$0 =	0
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3 minus 3 =	* 0	x \$0 =	0
<input type="checkbox"/> 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).			
<input type="checkbox"/> 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	0

APPLICATION AS AMENDED – PART II

	(Column 1)	(Column 2)	(Column 3)	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
AMENDMENT	02/18/2013	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR			
	Total (37 CFR 1.16(i))	* 3	Minus	** 20	= 0	x \$0 = 0
	Independent (37 CFR 1.16(h))	* 3	Minus	***3	= 0	x \$0 = 0
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))					
<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
					TOTAL ADD'L FEE	0

	(Column 1)	(Column 2)	(Column 3)	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR			
	Total (37 CFR 1.16(i))	*	Minus	**	=	x \$ =
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x \$ =
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))					
<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
					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".
 The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

LDRG
 /ROBERT TALBERT/

**DECLARATION FOR UTILITY OR
DESIGN
PATENT APPLICATION
(37 CFR 1.63)**



Declaration
Submitted
With Initial
Filing

OR



Declaration
Submitted After Initial
Filing (surcharge
(37 CFR 1.16(f))
required)

Attorney Docket
Number

First Named Inventor

JAMES E. JENNINGS

COMPLETE IF KNOWN

Application Number

Filing Date

Art Unit

Examiner Name

I hereby declare that: (1) Each inventor's residence, mailing address, and citizenship are as stated below next to their name; and (2) I believe the inventor(s) named below to be the original and first inventor(s) of the subject matter which is claimed and for which a patent is sought on the invention titled:

INTRINSIC TRANSDUCTION SYSTEM

(Title of the invention)

the application of which



is attached hereto

OR



was filed on (MM/DD/YYYY) _____ as United States Application Number or PCT International

Application Number _____ and was amended on (MM/DD/YYYY) _____ (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified application, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

Authorization To Permit Access To Application by Participating Offices



If 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 World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the above-identified patent application is filed access to the above-identified patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, WIPO, or other intellectual property office in which a foreign application claiming priority to the above-identified patent application is filed to have access to the above-identified patent application.

In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the above-identified patent application with respect to: 1) the above-identified patent application-as-filed; 2) any foreign application to which the above-identified patent application claims priority under 35 U.S.C. 115(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.56 has been filed in the above-identified patent application; and 3) any U.S. application-as-filed from which benefit is sought in the above-identified patent application.

In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing the Authorization to Permit Access to Application by Participating Offices.

[Page 1 of 3]

This collection of information is required by 35 U.S.C. 113 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 21 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 1480, Alexandria, VA 22313-1480. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1480, Alexandria, VA 22313-1480.

Under the Paperwork Reduction Act of 1995, no person are required to respond to a collection of information unless it contains a valid OMB control number.

DECLARATION — Utility or Design Patent Application

Claim of Foreign Priority Benefits

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b) of any foreign application(s) for patent, inventor's or plant breeder's rights certificate(s), or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent, inventor's or plant breeder's rights certificate(s), or any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached?	
				YES	NO
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Additional foreign application number(s) are listed on a supplemental priority data sheet PTO/5802B attached hereto.

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DECLARATION — Utility or Design Patent ApplicationDirect all
correspondence to:The address
associated with
Customer Number:

000082669

OR

Correspondence
address below

Name

Address

City

State

Zip

Country

Telephone

Email

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. Petitioner/applicant is advised that documents which form the record of a patent application (such as the PTO/SB/01) are placed into the Privacy Act system of records DEPARTMENT OF COMMERCE, COMMERCE-PAT-7, System name: Patent Application Files. Documents not retained in an application file (such as the PTO-2038) are placed into the Privacy Act system of COMMERCE/PAT-TM-10, System name: Deposit Accounts and Electronic Funds Transfer Profiles.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

NAME OF SOLE OR FIRST INVENTOR:

A petition has been filed for this unsigned inventor

Given Name (first and middle [if any])

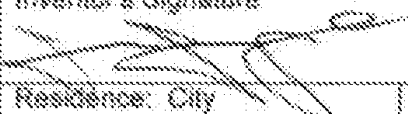
Family Name or Surname

JAMES EDWARD

JENNINGS

Inventor's Signature

Date



12-21-2012

Residence: City

State

Country

Citizenship

SUPERIOR

CO

US

US

Mailing Address

PO BOX 270081

City

State

Zip

Country

LOUISVILLE

CO

80027

US



Additional inventors or a legal representative are being named on the

supplemental sheet(s) PTO/SB/02A or 02LR attached hereto

1/8

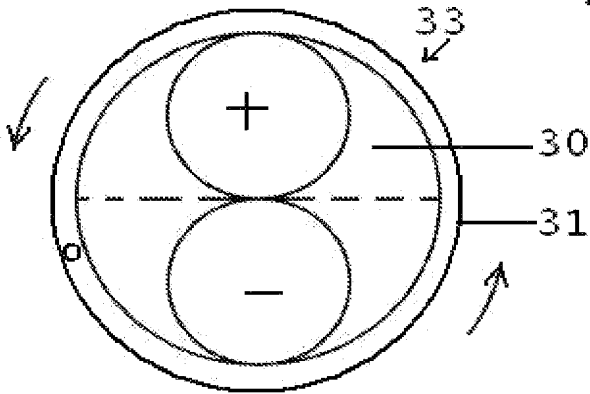


FIG. 1

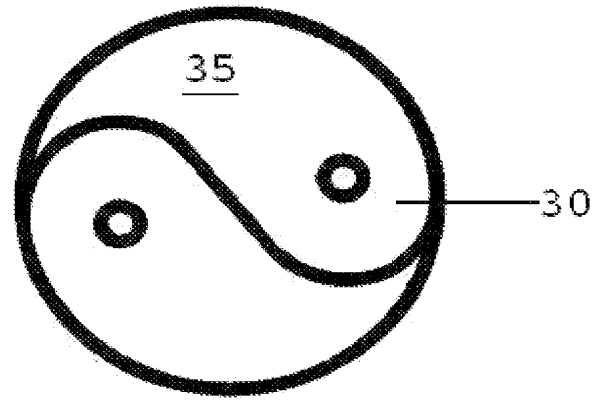


FIG. 3

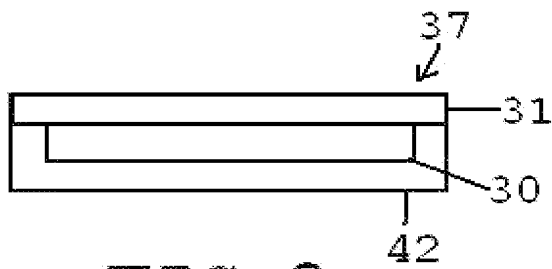


FIG. 2

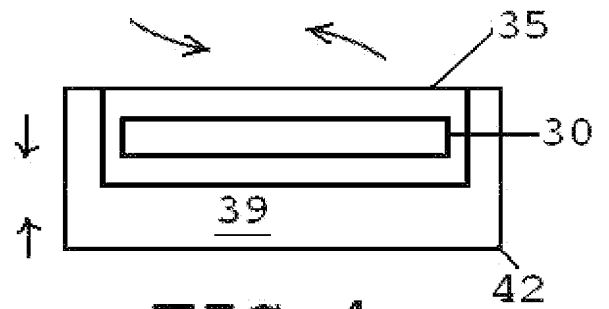


FIG. 4

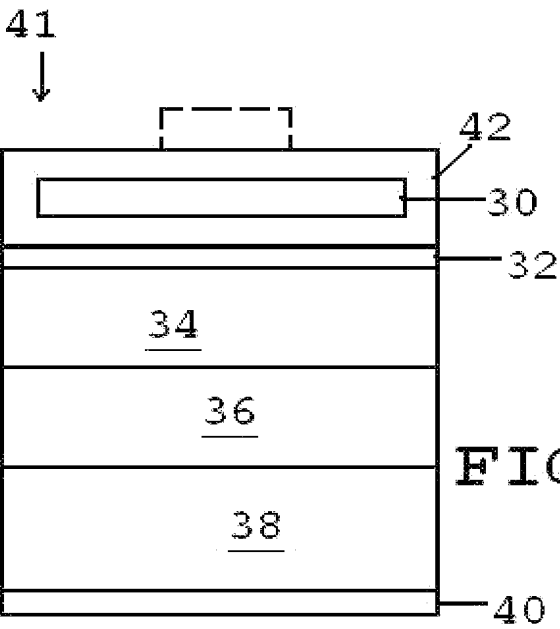


FIG. 5

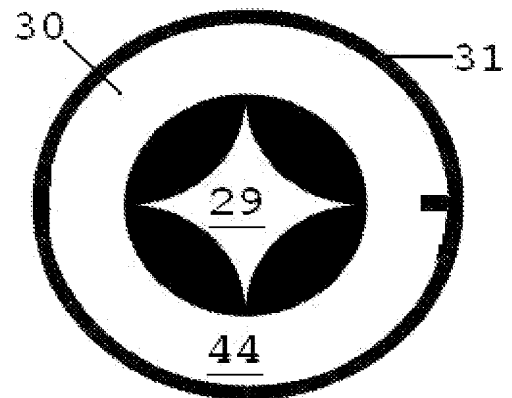


FIG. 6

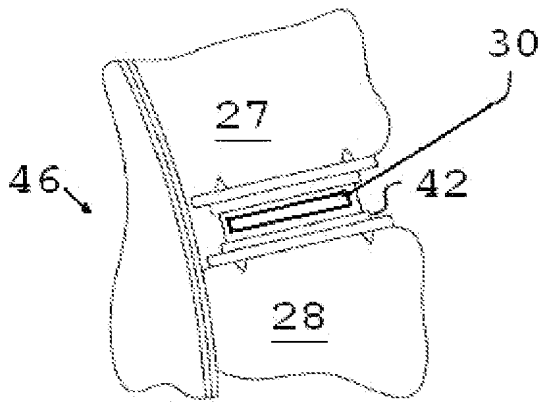


FIG. 7

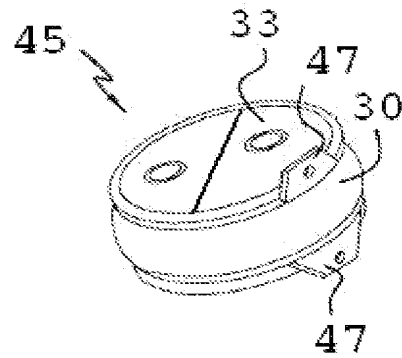


FIG. 8

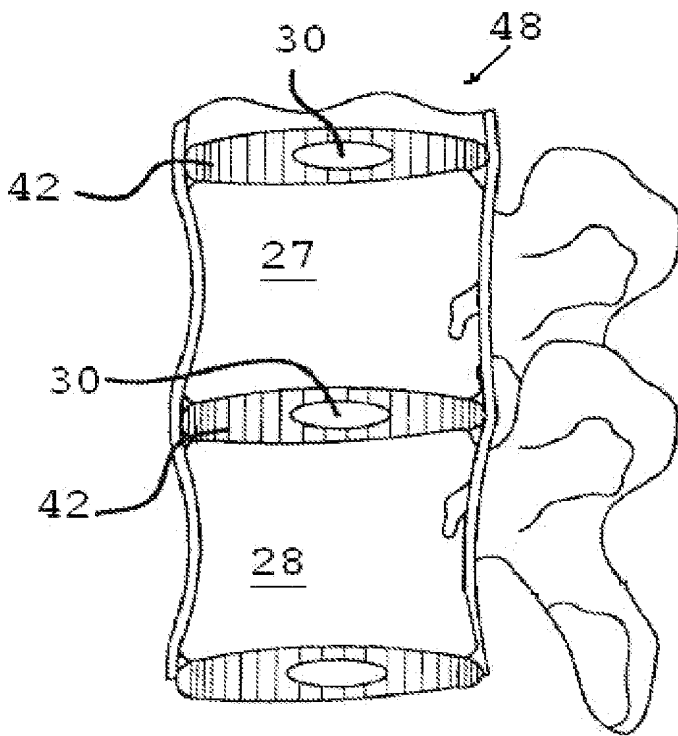


FIG. 9

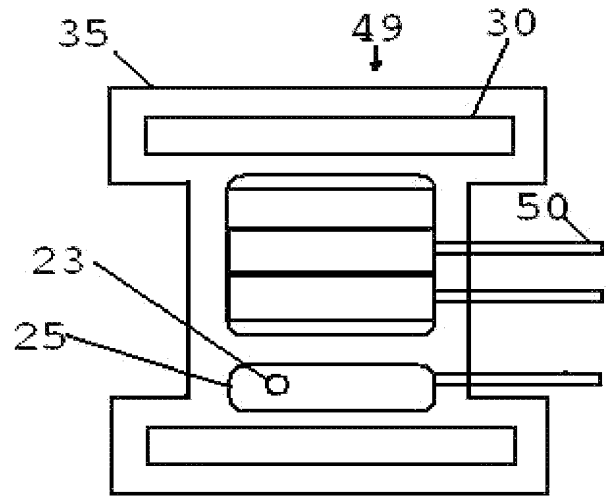


FIG. 10

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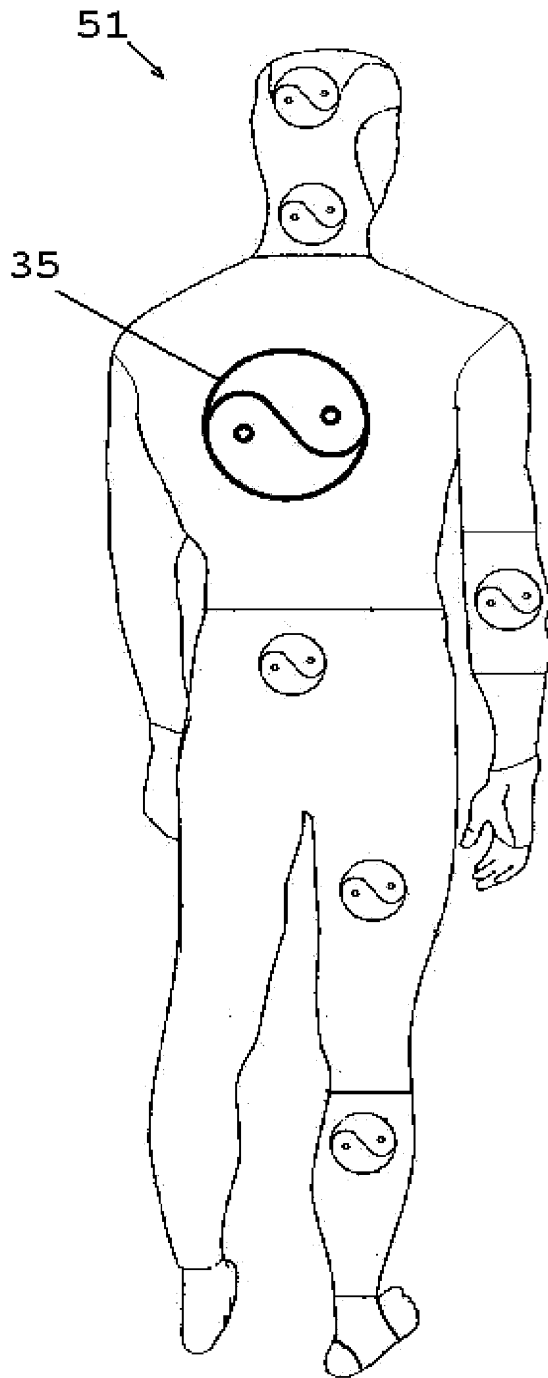


FIG. 11

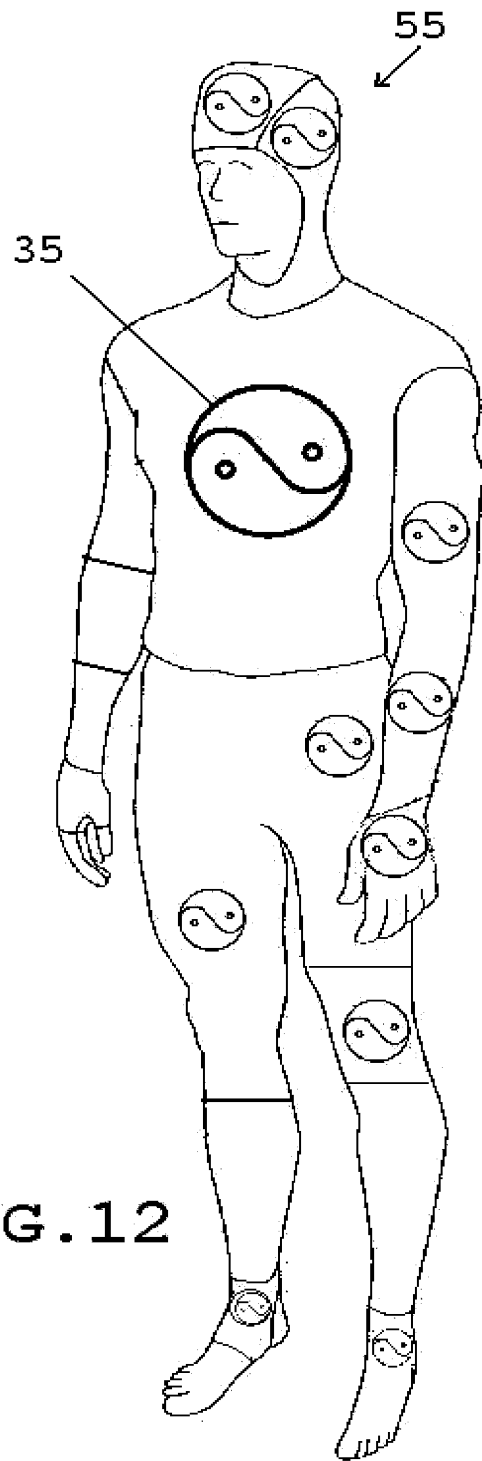


FIG. 12

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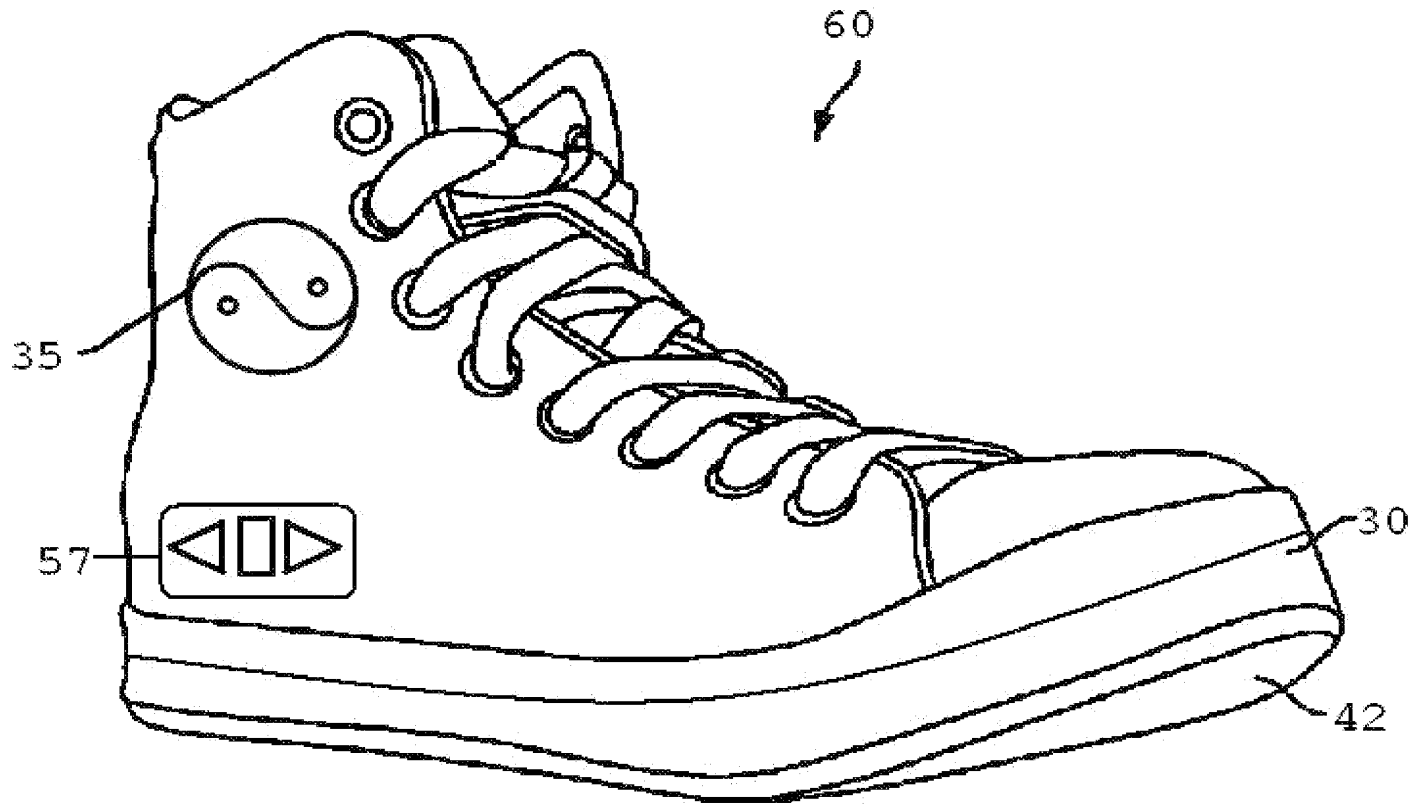


FIG. 13

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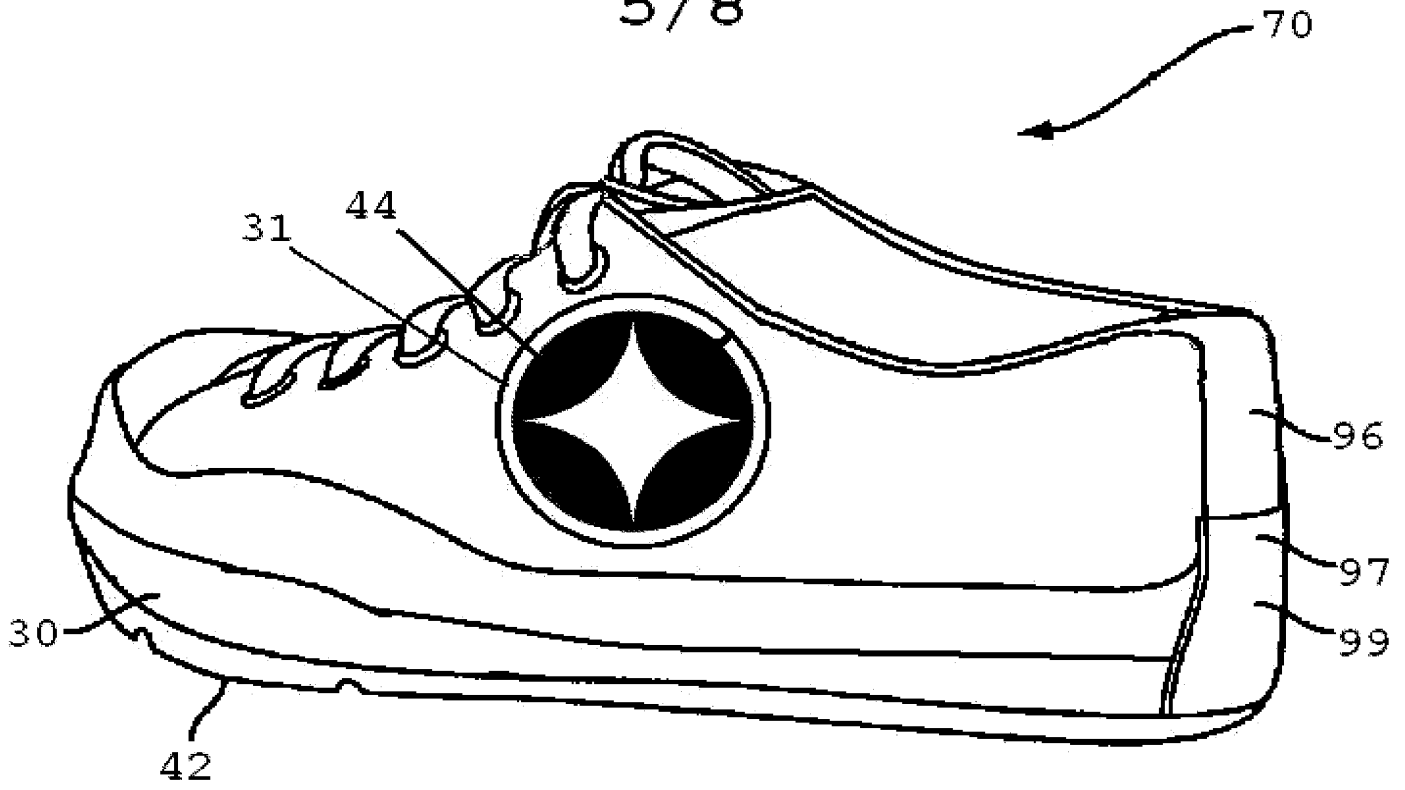


FIG. 14

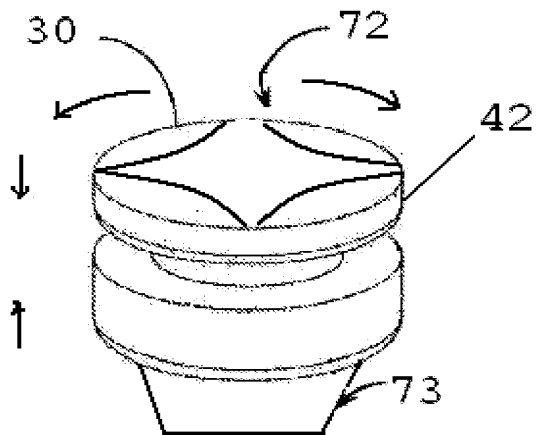


FIG. 15

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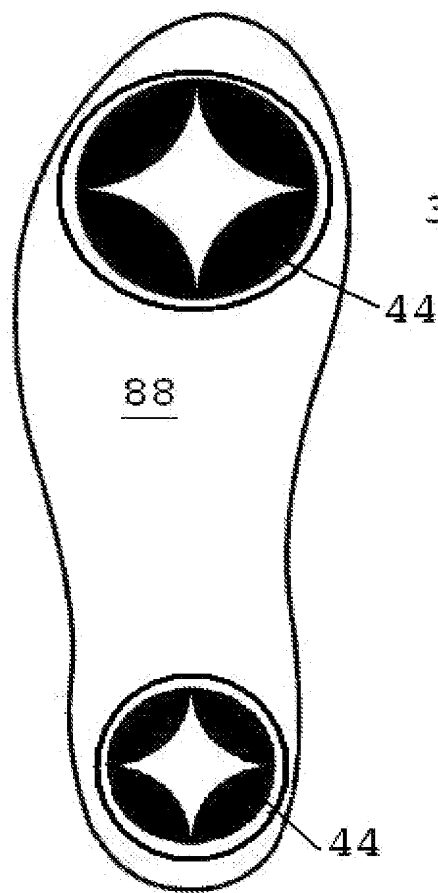


FIG. 16

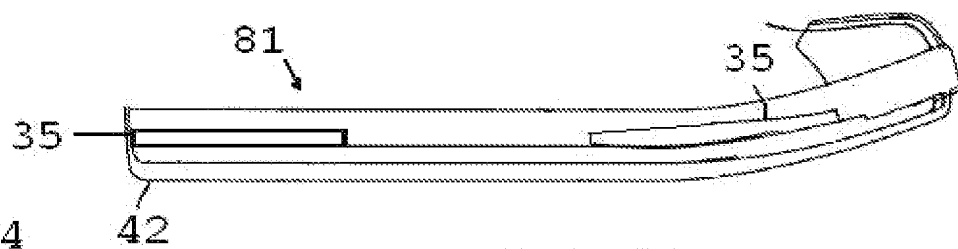


FIG. 17

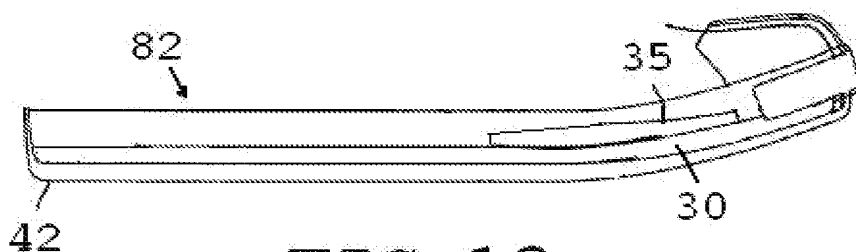


FIG. 18

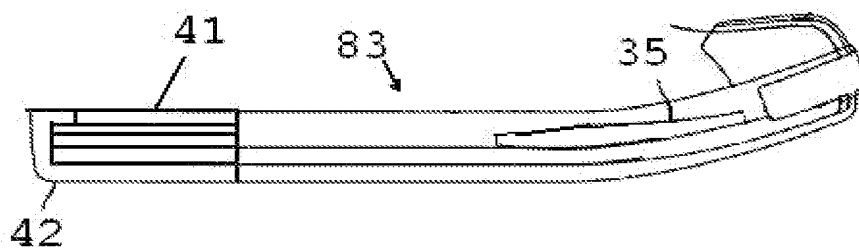
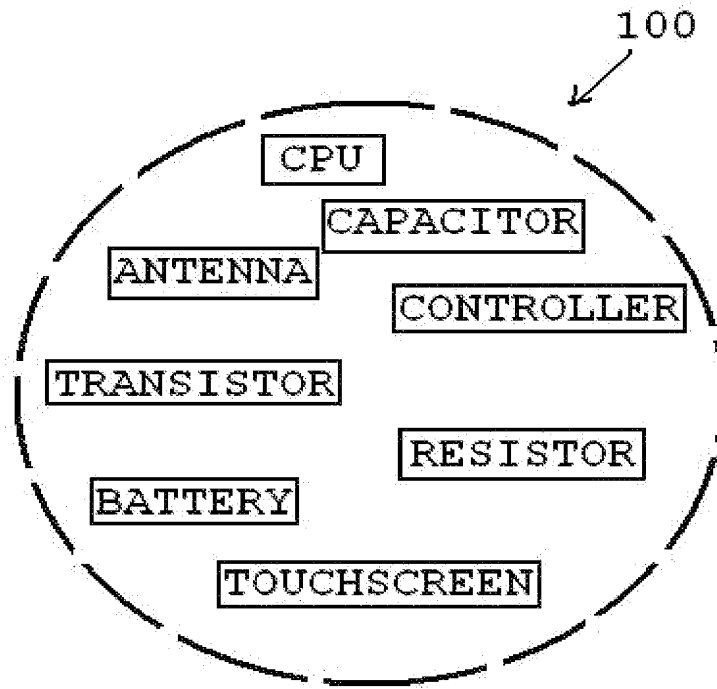


FIG. 19

FIG. 20



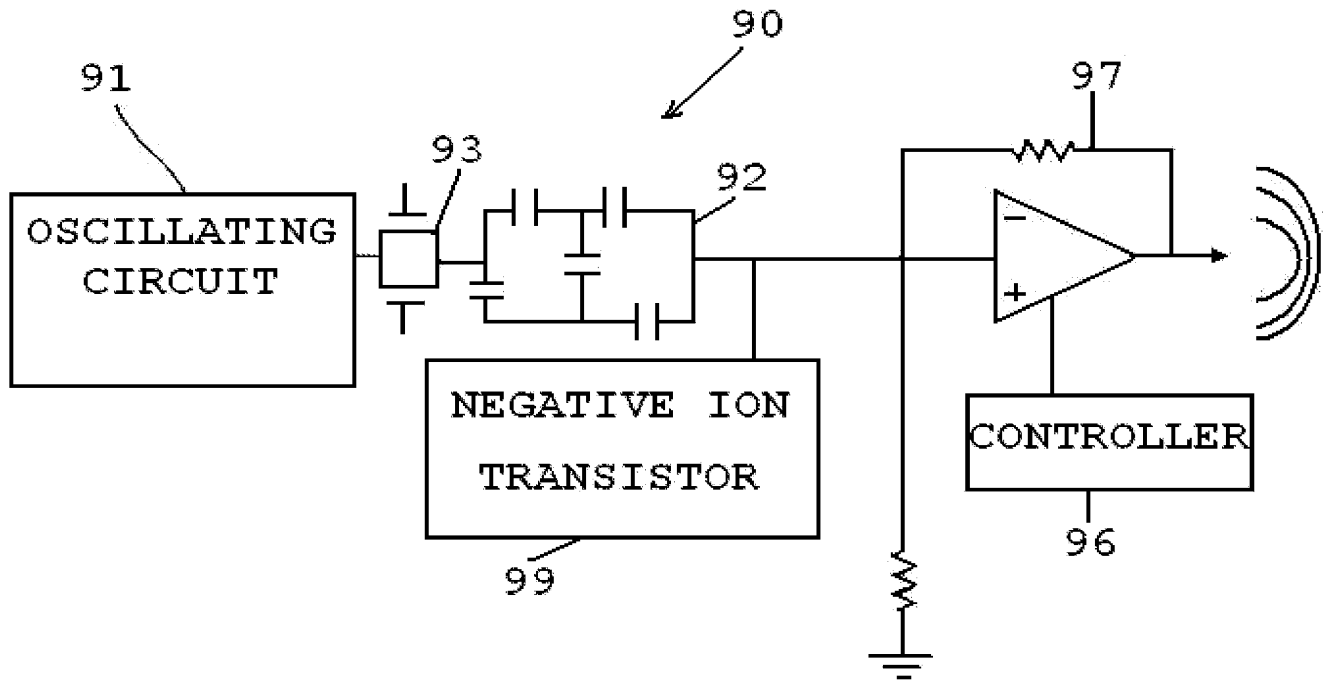


FIG. 21

Electronic Patent Application Fee Transmittal

Application Number:	13724287
Filing Date:	21-Dec-2012
Title of Invention:	INTRINSIC TRANSDUCTION SYSTEM
First Named Inventor/Applicant Name:	JAMES EDWARD JENNINGS
Filer:	James Edward Jennings
Attorney Docket Number:	

Filed as Small Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Utility Search Fee	2111	1	310	310
Utility Examination Fee	2311	1	125	125

Pages:

Claims:

Miscellaneous-Filing:

Late filing fee for oath or declaration	2051	1	65	65
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Petition:

Patent-Appeals-and-Interference:

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				500

Electronic Acknowledgement Receipt

EFS ID:	14966703
Application Number:	13724287
International Application Number:	
Confirmation Number:	8891
Title of Invention:	INTRINSIC TRANSDUCTION SYSTEM
First Named Inventor/Applicant Name:	JAMES EDWARD JENNINGS
Customer Number:	82669
Filer:	James Edward Jennings
Filer Authorized By:	
Attorney Docket Number:	
Receipt Date:	14-FEB-2013
Filing Date:	21-DEC-2012
Time Stamp:	22:28:39
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$500
RAM confirmation Number	7784
Deposit Account	
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
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1	Oath or Declaration filed	SB1_ITS.pdf	1368850	no	3
			241c88e5199b58db6698b7093b764e97d6e458a9		
Warnings:					
Information:					
2	Drawings-only black and white line drawings	ITS_DRAWINGS_NEW.pdf	365459	no	8
			41d6cf64c7ed5c470ba90a47fbfe240fdb94a400		
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	32967	no	2
			a4be2c7b30bf212ae282e51ef0f01abe8e5bf5e7		
Warnings:					
Information:					
Total Files Size (in bytes):			1767276		

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 a 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.

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number
13/724,287

APPLICATION AS FILED - PART I

(Column 1) (Column 2)

FOR	NUMBER FILED	NUMBER EXTRA
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A
TOTAL CLAIMS (37 CFR 1.16(j))	3 minus 20 = *	*
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3 minus 3 = *	*
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))		

SMALL ENTITY

RATE(\$)	FEE(\$)
N/A	98
N/A	310
N/A	125
x 31 =	0.00
x 125 =	0.00
	0.00
	0.00
TOTAL	533

OR OTHER THAN SMALL ENTITY

RATE(\$)	FEE(\$)
N/A	
N/A	
N/A	
TOTAL	

* If the difference in column 1 is less than zero, enter "0" in column 2.

APPLICATION AS AMENDED - PART II

(Column 1) (Column 2) (Column 3)

AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total (37 CFR 1.16(j))	*	Minus	**	=
	Independent (37 CFR 1.16(h))	*	Minus	***	=
	Application Size Fee (37 CFR 1.16(s))				
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))				

SMALL ENTITY

RATE(\$)	ADDITIONAL FEE(\$)
x =	
x =	
TOTAL ADD'L FEE	

OR OTHER THAN SMALL ENTITY

RATE(\$)	ADDITIONAL FEE(\$)
x =	
x =	
TOTAL ADD'L FEE	

(Column 1) (Column 2) (Column 3)

AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total (37 CFR 1.16(j))	*	Minus	**	=
	Independent (37 CFR 1.16(h))	*	Minus	***	=
	Application Size Fee (37 CFR 1.16(s))				
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))				

RATE(\$)	ADDITIONAL FEE(\$)
x =	
x =	
TOTAL ADD'L FEE	

OR OTHER THAN SMALL ENTITY

RATE(\$)	ADDITIONAL FEE(\$)
x =	
x =	
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".

The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.



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Table with 6 columns: APPLICATION NUMBER, FILING or 371(c) DATE, GRP ART UNIT, FIL FEE REC'D, ATTY.DOCKET.NO, TOT CLAIMS, IND CLAIMS. Values: 13/724,287, 12/21/2012, 1629, 98, (blank), 3, 3

CONFIRMATION NO. 8891

FILING RECEIPT



82669
James Edward Jennings
P.O. Box 270081
Louisville, CO 80027

Date Mailed: 01/29/2013

Receipt is acknowledged of this non-provisional 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 APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections

Inventor(s) JAMES EDWARD JENNINGS, Superior, CO;

Applicant(s) JAMES EDWARD JENNINGS, Superior, CO;

Power of Attorney: None

Domestic Applications for which benefit is claimed - None.

A proper domestic benefit claim must be provided in an Application Data Sheet in order to constitute a claim for domestic benefit. See 37 CFR 1.76 and 1.78.

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.

Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

If Required, Foreign Filing License Granted: 01/24/2013

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is US 13/724,287

Projected Publication Date: To Be Determined - pending completion of Corrected Papers

Non-Publication Request: No

Early Publication Request: No

** SMALL ENTITY **

Title

INTRINSIC TRANSDUCTION SYSTEM

Preliminary Class

514

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

LICENSE FOR FOREIGN FILING UNDER**Title 35, United States Code, Section 184****Title 37, Code of Federal Regulations, 5.11 & 5.15****GRANTED**

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as

set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

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UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
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Table with 4 columns: APPLICATION NUMBER, FILING OR 371(C) DATE, FIRST NAMED APPLICANT, ATTY. DOCKET NO./TITLE. Row 1: 13/724,287, 12/21/2012, JAMES EDWARD JENNINGS, CONFIRMATION NO. 8891

82669
James Edward Jennings
P.O. Box 270081
Louisville, CO 80027

FORMALITIES LETTER



Date Mailed: 01/29/2013

NOTICE TO FILE CORRECTED APPLICATION PAPERS

Filing Date Granted

An application number and filing date have been accorded to this application. The application is informal since it does not comply with the regulations for the reason(s) indicated below. Applicant is given TWO MONTHS from the date of this Notice within which to correct the informalities indicated below. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

The required item(s) identified below must be timely submitted to avoid abandonment:

- Replacement drawings in compliance with 37 CFR 1.84 and 37 CFR 1.121(d) are required. The drawings submitted are not acceptable because:
The drawings must be reasonably free from erasures and must be free from alterations, overwriting, interlineations, folds, and copy marks. See Figure(s) 1,3,7,8,9,11 - 15 .

Applicant is cautioned that correction of the above items may cause the specification and drawings page count to exceed 100 pages. If the specification and drawings exceed 100 pages, applicant will need to submit the required application size fee.

The applicant needs to satisfy supplemental fees problems indicated below.

The required item(s) identified below must be timely submitted to avoid abandonment:

- A surcharge (for late submission of the basic filing fee, search fee, examination fee or inventor's oath or declaration) as set forth in 37 CFR 1.16(f) of \$ 65 for a small entity in compliance with 37 CFR 1.27, must be submitted.

SUMMARY OF FEES DUE:

Total fee(s) required within TWO MONTHS from the date of this Notice is \$ 500 for a small entity

- \$ 65 Surcharge.
The application search fee has not been paid. Applicant must submit \$ 310 to complete the search fee.
The application examination fee has not been paid. Applicant must submit \$ 125 to complete the examination fee for a small entity in compliance with 37 CFR 1.27.

Items Required To Avoid Processing Delays:

Applicant is notified that the above-identified application contains the deficiencies noted below. No period for reply is set forth in this notice for correction of these deficiencies. However, if a deficiency relates to the inventor's oath or declaration, the applicant must file an oath or declaration in compliance with 37 CFR 1.63, or a substitute

statement in compliance with 37 CFR 1.64, executed by or with respect to each actual inventor no later than the expiration of the time period set in the "Notice of Allowability" to avoid abandonment. See 37 CFR 1.53(f).

A new inventor's oath or declaration that identifies this application (e.g., by Application Number and filing date) is required. The inventor's oath or declaration does not comply with 37 CFR 1.63 in that it:

- does not state that the above-identified application was made or authorized to be made by the person executing the oath or declaration.

Replies must be received in the USPTO within the set time period or must include a proper Certificate of Mailing or Transmission under 37 CFR 1.8 with a mailing or transmission date within the set time period. For more information and a suggested format, see Form PTO/SB/92 and MPEP 512.

Replies should be mailed to:

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web.
<https://portal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html>

For more information about EFS-Web please call the USPTO Electronic Business Center at **1-866-217-9197** or visit our website at <http://www.uspto.gov/ebc>.

If you are not using EFS-Web to submit your reply, you must include a copy of this notice.

/mkoroma/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

UTILITY PATENT APPLICATION TRANSMITTAL

Attorney Docket No.	
First Inventor	JAMES EDWARD JENNINGS
Title	INTRINSIC TRANSDUCTION SYSTEM
Express Mail Label No.	

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

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

- Fee Transmittal Form (e.g., PTO/SB/17)
- Applicant claims small entity status. See 37 CFR 1.27.
- Specification [Total Pages 21]
Both the claims and abstract must start on a new page.
(For information on the preferred arrangement, see MPEP 608.01(a))
- Drawing(s) (35 U.S.C. 113) [Total Sheets 8]
- Gath or Declaration [Total Sheets 3]
 - Newly executed (original or copy)
 - A copy from a prior application (37 CFR 1.63(d))
(for continuation/divisional with Box 18 completed)
- DELETION OF INVENTOR(S)
Signed statement attached deleting inventor(s) name in the prior application, see 37 CFR 1.53(b)(2) and 1.33(b).
- Application Data Sheet. See 37 CFR 1.78
- CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix)
 Landscape Table on CD
- Nucleotide and/or Amino Acid Sequence Submission
(if applicable, items a - c. are required)
 - Computer Readable Form (CRF)
 - Specification Sequence Listing on:
 - CD-ROM or CD-R (2 copies), or
 - Paper
 - Statements verifying identity of above copies

ADDRESS TO: Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

ACCOMPANYING APPLICATION PARTS

- Assignment Papers (cover sheet & document(s))
Name of Assignee _____
- 37 CFR 3.73(b) Statement Power of Attorney
(when there is an assignor)
- English Translation Document *(if applicable)*
- Information Disclosure Statement (PTO/SB/08 or PTO-1449)
 Copies of citations attached
- Preliminary Amendment
- Return Receipt Postcard (MPEP 503)
(Should be specifically formatted)
- Certified Copy of Priority Document(s)
(if foreign priority is claimed)
- Nonpublication Request under 35 U.S.C. 133(b)(2)(B)(i).
Applicant must attach form PTO/SB/35 or equivalent.
- Other _____

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in the first sentence of the specification following the title, or in an Application Data Sheet under 37 CFR 1.78.

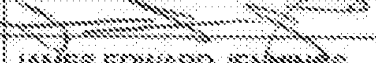
Continuation Divisional Continuation-in-part (CIP) of prior application No.: _____

Prior application information: Examiner: _____ Art Unit: _____

19. CORRESPONDENCE ADDRESS

The address associated with Customer Number: 82009 OR Correspondence address below

Name			
Address			
City	State	Zip Code	
Country	Telephone	Email	

Signature		Date	12-21-2012
Name (Print/Type)	JAMES EDWARD JENNINGS	Registration No. (Attorney/Agent)	

**DECLARATION FOR UTILITY OR
DESIGN
PATENT APPLICATION
(37 CFR 1.63)**



Declaration
Submitted
With Initial
Filing

OR



Declaration
Submitted After Initial
Filing (surcharge
(37 CFR 1.16(f))
required)

Attorney Docket
Number

First Named Inventor

JAMES E. JENNINGS

COMPLETE IF KNOWN

Application Number

Filing Date

Art Unit

Examiner Name

I hereby declare that: (1) Each inventor's residence, mailing address, and citizenship are as stated below next to their name; and (2) I believe the inventor(s) named below to be the original and first inventor(s) of the subject matter which is claimed and for which a patent is sought on the invention titled:

INTRINSIC TRANSDUCTION SYSTEM

(Title of the invention)

the application of which



is attached hereto

OR



was filed on (MM/DD/YYYY) _____ as United States Application Number or PCT International

Application Number _____ and was amended on (MM/DD/YYYY) _____ (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified application, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

Authorization To Permit Access To Application by Participating Offices



If 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 World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the above-identified patent application is filed access to the above-identified patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, WIPO, or other intellectual property office in which a foreign application claiming priority to the above-identified patent application is filed to have access to the above-identified patent application.

In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the above-identified patent application with respect to: 1) the above-identified patent application-as-filed; 2) any foreign application to which the above-identified patent application claims priority under 35 U.S.C. 115(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.56 has been filed in the above-identified patent application; and 3) any U.S. application-as-filed from which benefit is sought in the above-identified patent application.

In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing the Authorization to Permit Access to Application by Participating Offices.

[Page 1 of 3]

This collection of information is required by 35 U.S.C. 113 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 21 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 1480, Alexandria, VA 22313-1480. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1480, Alexandria, VA 22313-1480.

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DECLARATION — Utility or Design Patent Application

Claim of Foreign Priority Benefits

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b) of any foreign application(s) for patent, inventor's or plant breeder's rights certificate(s), or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent, inventor's or plant breeder's rights certificate(s), or any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached?	
				YES	NO
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Additional foreign application number(s) are listed on a supplemental priority data sheet PTO/5802B attached hereto.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

DECLARATION — Utility or Design Patent ApplicationDirect all
correspondence to:The address
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Customer Number:

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address below

Name

Address

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Country

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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. Petitioner/applicant is advised that documents which form the record of a patent application (such as the PTO/SB/01) are placed into the Privacy Act system of records DEPARTMENT OF COMMERCE, COMMERCE-PAT-7, System name: Patent Application Files. Documents not retained in an application file (such as the PTO-2038) are placed into the Privacy Act system of COMMERCE/PAT-TM-10, System name: Deposit Accounts and Electronic Funds Transfer Profiles.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

NAME OF SOLE OR FIRST INVENTOR:

A petition has been filed for this unsigned inventor

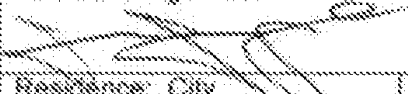
Given Name (first and middle [if any])

Family Name or Surname

JAMES EDWARD**JENNINGS**

Inventor's Signature

Date

**12-21-2012**

Residence: City

State

Country

Citizenship

SUPERIOR**CO****US****US**

Mailing Address

PO BOX 270081

City

State

Zip

Country

LOUISVILLE**CO****80027****US**

Additional inventors or a legal representative are being named on the

supplemental sheet(s) PTO/SB/02A or OELR attached hereto

Electronic Patent Application Fee Transmittal

Application Number:	
Filing Date:	
Title of Invention:	INTRINSIC TRANSDUCTION SYSTEM
First Named Inventor/Applicant Name:	JAMES EDWARD JENNINGS
Filer:	James Edward Jennings
Attorney Docket Number:	

Filed as Small Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Utility filing Fee (Electronic filing)	4011	1	98	98

Pages:

Claims:

Miscellaneous-Filing:

Petition:

Patent-Appeals-and-Interference:

Post-Allowance-and-Post-Issuance:

Extension-of-Time:

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Total in USD (\$)				98

Electronic Acknowledgement Receipt

EFS ID:	14544936
Application Number:	13724287
International Application Number:	
Confirmation Number:	8891
Title of Invention:	INTRINSIC TRANSDUCTION SYSTEM
First Named Inventor/Applicant Name:	JAMES EDWARD JENNINGS
Customer Number:	82669
Filer:	James Edward Jennings
Filer Authorized By:	
Attorney Docket Number:	
Receipt Date:	21-DEC-2012
Filing Date:	
Time Stamp:	15:13:31
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$98
RAM confirmation Number	2670
Deposit Account	
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
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1	Specification	ITS_SPEC.pdf	97017	no	21
			7f73a546b903262d86f0969562ddd552b409bb40		
Warnings:					
Information:					
2	Drawings-only black and white line drawings	ITS_DRAWINGS.pdf	671446	no	8
			60317afb988660eea9fa71ead076cebf20588e64		
Warnings:					
Information:					
3	Transmittal of New Application	SB5_ITS.pdf	589391	no	1
			e1a205e706f5fabb00fd1ecc6e67d952f1e851a0		
Warnings:					
Information:					
4	Oath or Declaration filed	SB1_ITS.pdf	1368850	no	3
			241c88e5199b58db6698b7093b764e97d6e458a9		
Warnings:					
Information:					
5	Fee Worksheet (SB06)	fee-info.pdf	29537	no	2
			052fd980095fbc89a042786817d3ba008c61dda		
Warnings:					
Information:					
Total Files Size (in bytes):			2756241		

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 a 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 & TRADEMARK OFFICE

APPLICATION FOR U.S. LETTERS PATENT

TITLE: INTRINSIC TRANSDUCTION SYSTEM

INVENTOR: JENNINGS, James Edward

CROSS REFERENCE TO RELATED APPLICATIONS

[001] NONE

BACKGROUND OF THE INVENTION

Field of the Invention

[002] This invention relates to transduction piezoelectric nerve stimulation and more specifically relates to devices for applying transcutaneous nerve stimulation for physiotherapeutic purposes.

The present disclosure relates generally to systems and methods for causing nerve cells to regenerate and, more particularly, to systems and methods for promoting nerve regeneration in the central and peripheral nervous stimuli systems of humans.

[003] Transcutaneous nerve stimulation, commonly referred to as TENS is the application of a controlled amount of low electrical currents to stimulate nerves and/or muscle tissues in a patient for treating numerous physiological problems such as muscle and joint pain and inflammation. The currents may be provided in a steady flow or in electrical impulses of various wavelength frequencies. The electrical currents primarily stimulate the nerve for the body to produce natural endorphins to block the perception of pain and also physically cause the muscle tissues at the area of application to tighten and relax repeatedly, and thus increasing the blood circulation to enhance the natural curing process. The TENS currents are provided by a generator and the currents are delivered with application probes to the inflicted locations of a patient's body. The free end of the currents application probes is commonly in the form of a flexible inductive composite pad which must be attached to the patient's body with conductive adhesive gel and/or adhesive tapes in order to deliver the current to the patient's body. However, the curing process is not efficient if it is relying solely on the TENS stimulation.

[004] Peripheral nerve fibers have been classified in order of decreasing size and conduction velocity in a manner which is now standardized. Generally, as the fibre size decreases, the amplitude of electrical stimulation required to elicit an action potential increases. Also, the smaller fibre will require longer pulse durations than large fibre stimuli. These differences in nerve response have been used to selectively stimulate different types of nerve fibers by varying the amplitude, pulse duration, or pulse repetition rate of an electrical stimulating pulse. The desired degree of nerve fibre selectivity, however, has not been achieved in the prior art, with the result that, for example, an elicited touch response resulting from the stimulating pulse is often accompanied by a prickly, stinging, burning, sharp or other unpleasant noxious response.

[005] Therefore, various exemplary embodiments of the invention may provide a nerve regeneration system that may include an interactive diagnostic device configured to measure nerve growth, re-growth, and/or connections between severed or otherwise damaged nerve segments.

[006] To attain the advantages and in accordance with the purpose of the invention, as embodied and broadly described herein, one exemplary aspect of the invention may provide a nerve regeneration system comprising a lead configured to be placed in a body proximate a damaged nerve, a portion of the lead being configured to stimulate the damaged nerve.

[007] According to one exemplary aspect, the stimulation comprises a therapeutic electric signal, and the parameter of the stimulation may comprise a parameter associated with the electric signal. For example, the parameter may comprise one or more of strength, direction, current, or voltage of the electric signal. According to another exemplary aspect, the nerve regeneration

system may comprise an electrode coupled to the lead and configured to deliver electric stimulation to the damaged nerve. The electrode may include a plurality of electrodes and the parameter may comprise one or more of a number, a sequence, or a combination of electrodes to be energized to deliver electric stimulation. The system may also comprise a conductor for connecting the electrode to the control module. According to still another aspect, the control module may be enclosed in a substantially sealed housing with one or more leads extending from the housing. The control module may be configured to communicate with an external device. According to another aspect, the present disclosure is directed toward a nerve regeneration system that comprises a nerve regeneration module comprising at least one lead implanted in a body proximate a damaged nerve. The nerve regeneration module may be configured to administer a nerve regeneration treatment to the damaged nerve and detect a patient response to the nerve regeneration treatment. According to still another aspect, the nerve regeneration system comprises a power supply configured to generate an electromagnetic signal for stimulating the damaged nerve. Accordingly, the at least one lead may comprise one or more electrodes electrically coupled to the power supply, the one or more electrodes being configured to deliver the electromagnetic signal to the damaged nerve. According to one embodiment, the one or more of the electrodes are disposed along a length of the at least one lead.

[008] Additional objects and advantages of the invention will be set forth in part in the description which follows, and in part will be obvious from the description, or may be learned by practice of the invention. The objects and advantages of the invention will be realized and attained by means of the elements and combinations particularly pointed out in the appended claims.

[009] It is to be understood that both the foregoing general description and the following detailed description are exemplary and explanatory only and are not restrictive of the invention, as claimed.

DESCRIPTION OF RELATED ART

[0010] The central nervous system, including the brain, is the primary control system of a body, communicating with one or more parts of the body via a complicated system of interconnected nerves. Nerves are cable-like bundles of axons that carry electrical signals and impulses between one or more neurons and the central nervous system. Thus, nerves play a critical role in communicating sensory and stimulatory signals between various parts of the body (e.g., muscles, organs, glands, etc.) and the central nervous system.

[0011] Nerves may be damaged or severed either through trauma or disease. Damaged or severed nerves may inhibit the central nervous system's ability to receive sensory and stimulatory data from individual neurons, potentially limiting the nervous system's control over the body. For example, severe nerve damage may lead to paralysis, such as paraplegia or quadriplegia.

[0012] In the peripheral nervous system, a common treatment to repair damaged nerves involves a surgical procedure to harvest a healthy nerve from another part of the patient's body and graft the harvested nerve to bridge the damaged section. Although surgery can successfully repair damaged nerve cells in many cases, these procedures may have several disadvantages. For instance, in most cases, several invasive surgical procedures are required to find suitable donor

nerves. Further, damage to nerves at the donor site is quite common, potentially leading to weakening of donor nerves at the expense of the recipient nerves.

[0013] Some alternatives to surgical repair of damaged nerves have been developed. These systems typically involve surrounding damaged nerves in a sheath and administering therapeutic drugs or electromagnetic energy to the damaged nerve site. The administration of the therapeutic drugs and/or electromagnetic energy may facilitate nerve regeneration, while the sheath guides the nerve to grow in a desired direction.

[0014] Engineer Georges Lakhovsky, believed that people could achieve good health by adjusting the oscillation of their cells. He tapped Tesla to assist him in building the Multiple Wave Oscillator. Lakhovsky claimed the machine would improve health, remove pathogens, and even cure cancer. "The action of the pounding surf creates negative air ions and we also see it immediately after spring thunderstorms when people report lightened moods," says ion researcher Michael Terman, PhD, of Columbia University in New York. The Organic Electronics research group at Linköping University previously developed ion transistors for transport of both positive and negative ions, as well as biomolecules. An advantage of chemical circuits is that the charge carrier consists of chemical substances with various functions. This means that we now have new opportunities to control and regulate the signal paths of cells in the human body.

[0015] Energy in electronic elements: Electric potential energy, or electrostatic potential energy, is a potential energy (measured in joules) that results from conservative Coulomb forces and is associated with the configuration of a particular set of point charges within a defined system. The

term "electric potential energy" is used to describe the potential energy in systems with time-variant electric fields, while the term "electrostatic potential energy" is used to describe the potential energy in systems with time-invariant electric fields.

[0016] Capacitance is the ability of a body to store an electrical charge. Any body or structure that is capable of being charged, either with static electricity or by an electric current, exhibits capacitance. A common form of energy storage device is a parallel-plate capacitor. In a parallel plate capacitor, capacitance is directly proportional to the surface area of the conductor plates and inversely proportional to the separation distance between the plates. If the charges on the plates are +q and -q, and V gives the voltage between the plates, then the capacitance C is given by

$$C = q/V.$$

[0017] The capacitance is a function only of the physical dimensions (geometry) of the conductors and the permittivity of the dielectric. It is independent of the potential difference between the conductors and the total charge on them.

Piezoelectricity is the combined effect of the electrical behavior of the material:

$$D = \epsilon E$$

where D is the electric charge density displacement (electric displacement), ϵ is permittivity and E is electric field strength, and

$$\text{Hooke's Law: } S = s T$$

where S is strain, s is compliance and T is stress.

Physical Properties of TPU

[0018] TPU possesses a combination of physical properties not available in other thermoplastic materials or synthetic rubbers, including: Superior Abrasion resistance for physically punishing,

high-wear applications. Formulated UV resistance prevents yellowing or embrittlement. Elevated tensile strength provides reliability and durability over the life of the product in which the film is used. Good memory retention, Durometers (hardness) from very soft to very hard. High resistance to hydrocarbons, chemicals, ozone, bacteria, and fungus make it ideal for tough industrial environments. Inherently waterproof, for use in performance apparel, bedding, transdermal and wound care applications. Superior resistance to skin oils, yet has good "hand" or "feel" when in contact with the skin. Easily fabricated using thermal bonding, laminating, die cutting, radio frequency (RF) sealing or vacuum forming and Flame-retardant. Typically, when two or more of these properties are required for an application, TPU is the material of choice.

Other TPU Medical Applications

[0019] TPU is typically used for parts requiring a high level of performance. Applications typically require a flexible material with a high degree of flex resistance, wearability and durability. Many of the characteristics of TPU make it ideal for medical use. Medical applications include: IV site dressings, Transdermal patches, Thin film wound dressings, Cast and dressing covers, Surgical gowns & drapes, Puncture-resistant gloves, Incontinence pads, Compression dressings, Orthopedic gel insoles, Medical anti-shock trousers, Gel-filled positioning pads, Inflatable support bladders, Pressure infuser cuffs, Extraction bags, Hospital mattresses, covers, Orthodontic brace aligners.

[0020] Copolymers: Copolymers of PVDF are also used in piezoelectric and electrostrictive applications. One of the most commonly-used copolymers is P(VDF-trifluoroethylene), usually available in ratios of about 50:50 wt% and 65:35 wt% (equivalent to about 56:44 mol% and

70:30 mol%). Another one is P(VDF-tetrafluoroethylene). They improve the piezoelectric response by improving the crystallinity of the material.

[0021] A novel electrospun TPU/PVdF porous fibrous polymer electrolyte for lithium ion batteries. Novel blend-based gel polymer electrolyte (GPE) films of thermoplastic polyurethane (TPU) and poly(vinylidene fluoride) (PVdF) (denoted as TPU/PVdF) have been prepared by electrospinning. The electrospun thermoplastic polyurethane-co-poly (vinylidene fluoride) membranes were activated with a 1M solution of LiClO₄ in EC/PC and showed a high ionic conductivity about 1.6 mS cm⁻¹ at room temperature. The electrochemical stability is at 5.0 V versus Li⁺/Li, making them suitable for practical applications in lithium cells. Cycling tests of Li/GPE/LiFePO₄ cells showed the suitability of the electrospun membranes made of TPU/PVdF (80/20, w/w) for applications in lithium rechargeable batteries.

[0022] A novel high-performance gel polymer electrolyte membrane basing on electrospinning technique for lithium rechargeable batteries. Nonwoven films of composites of thermoplastic polyurethane (TPU) with different proportion of poly(vinylidene fluoride) (PVdF) (80, 50 and 20%, w/w) are prepared by electrospinning 9 wt% polymer solution at room temperature. Then the gel polymer electrolytes (GPEs) are prepared by soaking the electrospun TPU–PVdF blending membranes in 1 M LiClO₄/ethylene carbonate (EC)/propylene carbonate (PC) for 1 h. The gel polymer electrolyte (GPE) shows a maximum ionic conductivity of 3.2×10^{-3} S cm⁻¹ at room temperature and electrochemical stability up to 5.0 V versus Li⁺/Li for the 50:50 blend ratio of TPU:PVdF system. At the first cycle, it shows a first charge–discharge capacity of 168.9 mAh g⁻¹ when the gel polymer electrolyte (GPE) is evaluated in a Li/PE/lithium iron phosphate

(LiFePO₄) cell at 0.1 C-rate at 25 °C. TPU–PVdF (50:50, w/w) based gel polymer electrolyte is observed much more suitable than the composite films with other ratios for high-performance lithium rechargeable batteries.

[0023] TPU combines the best properties of rubber and plastic, but has no plasticizers to leach out and cause allergic reactions or embrittlement over time. Thus, products made from polyurethane film & sheet, retain long-term flexibility and outstanding shelf life.

[0024] Thus, there is a need for an improved nerve stimuli regeneration system that may overcome one or more of the problems discussed above. In particular, there is a need for an improved nerve regeneration system that can efficiently optimize the treatment parameters, without requiring invasive exploratory techniques.

OBJECTS AND SUMMARY OF THE INVENTION

[0025] The intrinsic transduction system of the present invention provides products, preferably an athletic shoe or athletic apparel, adapted to emit Piezoelectricity energy or information in response to impact. The product comprises a molded part having a Nerve stimulating unit or a midsole device at least partially molded therein. The unit comprises an impact-sensing element made from a polymeric piezoelectric material, a battery means, a stimulus device or an information display device and a circuit connected to said piezoelectric material. The stimulus unit is responsive to electrical energy produced upon impact which permits the nerve stimulus device to be energized from the battery or any information displaying device to be activated. In one embodiment, the electrical energy resulting from each impact is used as a trigger to operate nerve stimulating unit via the circuit incorporated therein, and the amount and/or duration of the

stimulus emission can be independently determined/controlled by appropriate design of the circuit.

[0026] The product is preferably a spin disk, garment or shoe, particularly a prosthetic spinal disc, athletic garment or a sports shoe. The molded outsole part is preferably a thermoplastic unit structure, with at least a midsole, the circuit and the transducer stimulus device disposed in or molded into the midsole part of the structure, and with the piezoelectric stimulus-emitting device being arranged to emit energy outwardly from said mid part and/or by leads. The polymeric piezoelectric material may be molded into the midsole part of the structure, preferably in the region of maximum stress.

[0027] In still another embodiment, the circuit responds to the magnitude of the electrical energy produced by the piezoelectric material and thereby selectively energizes one or more of the nerve stimulating devices depending on the amount of electrical energy produced. In this manner, a visual indication of the magnitude of the pressure exerted upon the sole can be displayed.

[0028] The present invention provides a stimulating pulse having frequency components falling within predetermined frequency band limits. This pulse reliably elicits a touch response without the heretofore attendant noxious sensation mentioned above. It has been demonstrated that the differential excitation of the touch fibers relative to pain specific fibers inhibits the transmission of pain to the conscious centers. The type of stimulation specified herein, optimizes the differential excitation between touch and pain specific fibers, thus optimizing the inhibition of pain transmission.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a top view of the piezoelectric disk orb control of the present invention;

FIG. 2 is a side view of the piezoelectric disk orb control of the present invention;

FIG. 3 is a top view of the piezoelectric disk orb of the present invention;

FIG. 4 is a side view of the piezoelectric embed disk orb of the present invention with a base;

FIG. 5 is an elevation view of the piezoelectric disk battery capacitor of the present invention;

FIG. 6 is a top view of the piezoelectric disk control of the present invention;

FIG. 7 is a side view of the piezoelectric vertebral disc of the present invention;

FIG. 8 is a perspective view of the piezoelectric vertebral disc of another embodiment;

FIG. 9 is a side view of the mid-out sole vertebral disc of the present invention;

FIG. 10 is a side view of the battery capacitor vertebral disc of the present invention;

FIG. 11 is a perspective front view of therapeutic garments embodiment of the present invention.

FIG. 12 is a perspective rear view of therapeutic garments embodiment of the present invention.

FIGS. 13 illustrate views of footwear product including features of the present invention;

FIGS. 14 illustrate views of footwear product including features of the present invention;

FIG. 15 is an elevational perspective view of a cleat of the present invention;

FIG. 16 is a perspective top elevation view of shoe insole according to the present invention;

FIG. 17 -19 are side elevations view of shoe sole according to the present invention;

FIG. 20 is a block schematic circuitry diagram of the transducer according to the invention;

FIG. 21 is a schematic circuitry diagram of a negative ion transducer according to the invention.

DETAILED DESCRIPTION OF A PREFERRED EMBODIMENT

[0029] Negative ions are odorless, tasteless, and invisible molecules that we inhale in abundance in certain environments. Think mountains, waterfalls, and beaches. Once they reach our bloodstream, negative ions are believed to produce biochemical reactions that increase levels of the mood chemical serotonin, helping to alleviate depression, relieve stress, and boost our daytime energy.

[0030] Ions are molecules that have gained or lost an electrical charge. . They are created in nature as air molecules break apart due to sunlight, radiation, and moving air and water. You may have experienced the power of negative ions when you last set foot on the beach or walked beneath a waterfall. While part of the euphoria is simply being around these wondrous settings and away from the normal pressures of home and work, the air circulating in the mountains and the beach is said to contain tens of thousands of negative ions -- Much more than the average home or office building, which contain dozens or hundreds, and many register a flat zero.

[0031] Thus, there is an increasing interest in external electrical skin stimulation for such purposes as pain suppression, neuro-muscular stimulation, communication systems, etcetera. Obviously, many modifications and variations of the present invention are possible in light of the teaching of devices shown in U.S. Patent Nos. 1,059,090, No. 1,305,725 and No.6,703,785 . Specifically, there are many alternative ways of transducing the optimized waveforms disclosed herein which do not depart from the intended scope of the application. Accordingly, within the scope of the appended claims, the invention may be practiced otherwise than as specifically described.

DETAILED DESCRIPTION OF THE INVENTION

[0032] FIGS. 1, FIG. 2 and FIG.3 show the construction of a spin Piezoelectric transducer 33, 35, 37, 39 according to the invention. The illustrated piezoelectric transducer FIG.1 thru 3 is a module comprising a thin and small case disk housing outsole 42. FIG.4 transducer has a piezoelectric insole 26 embed coupler outsole 42 base member accommodated about the midsole 30 casing. FIG.5 battery transducer 41, starting from a regular lithium-ion coin battery, replaced the usual divider between electrodes with a polyvinylidene difluoride film whose piezoelectric nature produces a charging action inside that gap through just a little pressure. Further, modified(AL foil 32, LiCoO₂ 34, PVDF 36, TiO₂ NT 38, Ti foil 40) with the attachment of a mid-out housing case. Fig.1 & Fig.6 an oscillating transducer 33,44 incorporates a controller 31 and designs 29 may form an abstract or geometrical pattern, emblem, or a logo or one or more alphanumeric characters constituting, for example, a trademark of the manufacturer. The ends of the fibers at these various points may be colored, e.g. with different colored translucent inks or dyes. Fig.7 and Fig.9 shows two adjacent vertebrae 27 and 28 with mid 30-out 42 molded transducer disc prosthesis 46,48 replacing the natural disc. Disc prosthesis 46 is a representation of the Charité prosthesis modified by the inclusion of out 42 plate transducers 35 and or mid fluid reserve 25, battery capacitor 41, transistors, antenna. FIG. 8 shows a Bryan similar cervical disc 45. Note that it is only recommended as a prosthesis for the cervical vertebrae. It has a mid 30 (not visible) between two molded out plates transducers 33 (only one shown). A flexible middisk 30 membrane between the molded outdisk 42 case housing surrounds the transducers 35 and or mid fluid reserve 25, battery capacitor 41, transistors nucleus. Applicant understands that current models of the cervical disc do not have the small tabs 47. Fig.9 illustrates vertebral bodies 27 and 28 are separated by molded intervertebral mid 30-out 42 discs. Each disc has a

nucleus midsole **30** surrounded by an annulus outsole **42**. **Fig.10** represents a intervertebral prosthetic housing a battery capacitor **41** and end transducers **35**. This embodiment may also house mid fluid **25** reserve accessible by a catheter aperture **23**, battery capacitor **41**, transistors and leads **50** to damaged nerve endings. **Fig.11** and **Fig.12** depict athletic apparel transducers head to toe garments according to embodiments of the present invention. Transducer **35** garment **51,55** may be adapted to be worn by a wearer therapeutically. The shoes **60,70** shown in **FIG. 13** and **FIG. 14** comprises a battery transducer **41**, unitary sole-and-heel structure attached by molding or other means to a midsole **30**. The transducers **35,44**, forefoot sole and heel battery transducer **41** structure may be molded to the **Fig.16** insole **88** midsole **30** using methods well known in the art. Located or molded within the **Fig.17, Fig.18, Fig.19** sole **81,83** of the forefoot sole **81,82,83** and heel battery transducer **41** structure, preferably adjacent to a point of maximum stress (i.e. near the part corresponding to the ball or heel of the wearer's foot) is a piezoelectric **93** impact battery capacitor **41** comprised of a sheet or layer of polymeric piezoelectric material. This piezoelectric impact battery capacitor **41** preferably comprises polyvinylidene fluoride (PVDF) which has been stretch oriented and electrically polarized to enhance its piezoelectric properties. Such materials are known in the art. Referring to **FIGS. 1** thru **19**, the piezoelectric transducers **33, 35, 37, 39, 44** is electrically conductive to a **Fig.20 & Fig.21** circuits **90,100** which contains a battery capacitor **41,92**. Additional embodiments include but not limited to fluid **25** reserve, controllers **31,96**, touchscreen **57**, CPU **96**, transistor **99** chips, antenna **94**, resistor **97**, oscillator **91** and leads **50**. Said transducer parts communicate with design **29** emboss numerals, letters and emblems including logos, trademarks and fonts. **Fig.15** provides spark transducer mid **30** out **42** cleats **72** for athletic shoes, spark cleats **72** have a piezoelectric sole attachment member transducer disk **35** having a longitudinal axis for fitting into sole attachment

means in the soles of the shoes and coupled traction edge 73. Fig.13-14 and Fig.16-19 detail various embodiments of the transducer 35 shoe mid 30-out 42 sole and or insole 88 including CPU 96, resistor 97 transistor 99 chips, controllers 31 and battery capacitors 41,92. FIG. 20 is a block circuit diagram showing the transducer, antenna 94, touchscreen 57, resistor 97,controller 96, transistor 99 and battery 98 capacitor 92. The transistor 99 has an oscillation 91 using a piezoelectric 93 transducer as oscillating means charges the battery 98 capacitor 92, transistor 99 boosts, controlled 96 and dispersed. FIG. 21 is a circuit diagram showing the negative ion transistor 99. The negative ion transistor 99 has an oscillating circuit 91 using a piezoelectric transducer as oscillating means. The oscillating circuit 91 generates a signal 26 at a frequency 101 of, for instance, 75 kHz as resonant frequency 101 of the piezoelectric 93 transducer 33, 35, 37, 39, 44 (which is determined by the length direction dimension) or the neighborhood (± 5 kHz) of the resonant frequency 101.

ALTERNATIVE EMBODIMENTS

Alternatively, send out signals to muscle synapses where chips work with common signaling substances, for example acetylcholine. According to yet another aspect, the FIG. 21 system may comprise a first lead 50 may configured to deliver an electrical signal, and a second lead 50 configured to deliver the therapeutic fluid 25 to the damaged nerve. The lead may comprise a catheter tube lead 50 in fluid communication with the fluid delivery device and configured to deliver the therapeutic fluid to the damaged nerve. According to still another aspect, the control module may comprise a fluid delivery device configured to provide a therapeutic fluid to the damaged nerve. For example, the control module comprises a fluid port for supplying fluid to the fluid delivery device. All embodiments may be produced with alternative materials, in the art.

Claims:

I claim

1. An intrinsic transducer system method, comprising: athletic apparel, shoes, prosthetic disc and spark cleats wherein the piezoelectric stimulation comprises a therapeutic electric signal:

a. method for constructing a an athletic shoe comprising sole, midsole, outsole, and bladders, having the appearance of a novel athletic shoe; and wherein said transducer assembly of parts, said parts communicate design with emboss numerals, letters and emblems including team logos, trademarks and fonts communicate with emboss wherein oscillating transducer means incorporated within the sole comprising piezoelectric material for generating impact signals upon application of pressure to the material, the sole imparting pressure to the material when impressed against a surface; monstable multivibrator circuit means interconnecting the pressure to battery capacitor transducer means, the ion and the power means, wherein the circuit means responds to the impact to control the power means to power the ion in response to the pressure imparted by the sole on the material; wherein the circuit means comprises; input transistor means for enhancing the frequency from the pressure transducer means and emitting the piezoelectricity to the circuit means, the input means including sensitivity resistor control means across which the ions are applied to stimulate nerves and tissue; and

b. a transducer spark cleat for an athletic shoe, which cleat comprises a sole attachment member having a longitudinal axis for mounting the cleat to the shoe; wherein a hub having a planar upper portion perpendicular to the attachment member having a first periphery and a rounded lower portion having a second periphery; and

c. an athletic apparel negative ion transducer garment, comprising: a textile portion; a transducer device retention element coupled by bonding to the textile portion; and wherein said oscillating

transducer assembly of parts, said parts communicate with emboss numerals, letters and emblems including team logos, trademarks and fonts; and

d. a negative ion transduce athletic apparel garment, piezoelectric support structures for foot-receiving devices as midsole and/or outsole structures for articles of footwear including an impact-attenuating material, cleat for athletic shoes which provides a sole attachment member; a hub having a planar upper portion for contacting the shoe sole, a rounded lower portion for bearing weight of the user, and an edge; and resilient traction elements, wherein prosthetic systems and methods for promoting nerve regeneration are disclosed in exemplary embodiments, a nerve regeneration system may include a lead configured to be placed in a body proximate a damaged nerve, a portion of the lead being configured to stimulate the damaged nerve.

2. A method for constructing a transducer prosthetic vertebrae disc sole comprising construction of an athletic shoe midsole, outsole, and bladders, having the appearance of a novel vertebrae disc:

a. prosthetic transducer implant configured for placement between opposing bones that apply pressure to the implant during articulation, the implant comprising: a battery capacitor, transistor, resistor, antenna, CPU, a fluid-filled reservoir; and a molded body coupled to at least one of the bones and the reservoir to provide cushioning during articulation; and

b. negative ion transducer adapted for use as a stimulation for the purpose of organic pain suppression which comprises: wherein the parameter of the stimulation comprises a parameter associated with the electric signal; wherein the parameter comprises one or more of strength, direction, current, or voltage of the electric signal; further comprising a lead coupled and

configured to deliver electric stimulation to the damaged nerve; wherein the control module is enclosed in a substantially sealed housing and the lead extends from the housing; wherein multiple leads extend from the housing. output leads for transmitting a signal generated by the circuit means to the tissue and nerves, including a first resistive means for limiting the current through the leads; and

c. transducer nerve regeneration system comprising: a lead configured to be placed in a body proximate a damaged nerve, a portion of the lead being configured to stimulate the damaged nerve; and a control module configured to a signal indicative of the nerve's response to the stimulation and adjust a parameter of the stimulation in response to the monitored signal; and

d. the system of claim 2, wherein the stimulation comprises a therapeutic electric signal.

e. The system of claim 2, wherein the fluid delivery system comprises a reservoir for storing fluid associated with the fluid delivery lead.

3. A battery transduction oscillation system method of charging or enhancement where piezoelectric transducer and/or battery disks form a modified version of capacitor, wherein said capacitor(s) having an outside housing and wherein the improvement comprising an outside diameter or linear distance constitute and wherein said battery capacitor is a sub-system of an nerve regenerator, sub-system of an athletic apparel, sub-system of a vertebrae disc prosthetic, sub-system of a shoe, sub-system of a cleat, sub-system of a negative ion system, and:

a. negative ion transducer system method, comprising: A lithium battery, A negative ion transducer for generating negative ions by piezoelectric oscillation, said negative ion transducer circuit comprising: a negative ion transistor operable to output a DC high voltage; a resistor

circuit operable to generate a negative high voltage from the DC high voltage from said negative transistor; a discharge adapted to emit electrons; an oscillating circuit operable to generate a signal having a frequency in a neighborhood of a resonant frequency of said negative transistor for controlling a frequency of an DC voltage.

Abstract:

An intrinsic transduction system for stimulating portions of the body. The output of the transducer is a stimulating and/or nerve regenerating frequency having components falling within predetermined frequency band limits so as to optimally excite touch nerve fibers relative to nociceptor or pain receptor nerve fibers. Products, in particular a prosthetic disc, shoe, apparel, a spark cleat, incorporating an impact sensing element made from polymeric piezoelectric material. In response to impact, the piezoelectric material generates an electrical signal to a battery powered negative ion emitting unit or to an information display device which is at least partially molded into or contained in the product, or relayed by antenna. In addition, a CPU can be included in the circuitry to provide preprogrammed control of the emitting devices or to evaluate the input from the impact sensing element and a negative ion transducer, permits ready control of a quantity of generated negative ions and resists a size and thickness reduction. The negative ion transducer is of an electron emission type in which electrons are emitted by spin oscillation and/or impressing a negative ion voltage electric discharge . A negative ion transistor chip is used for amplifying a voltage from a capacitor and circuit.

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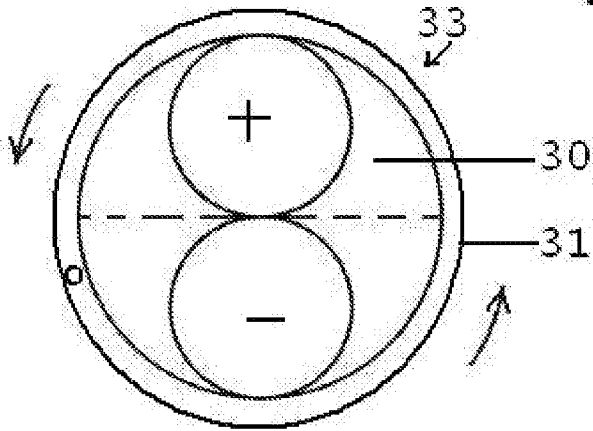


FIG. 1

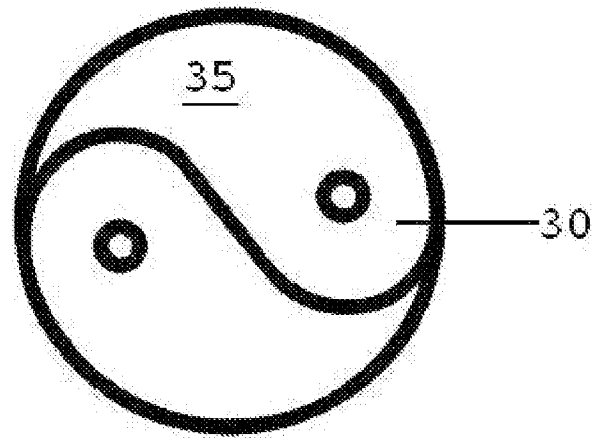


FIG. 3

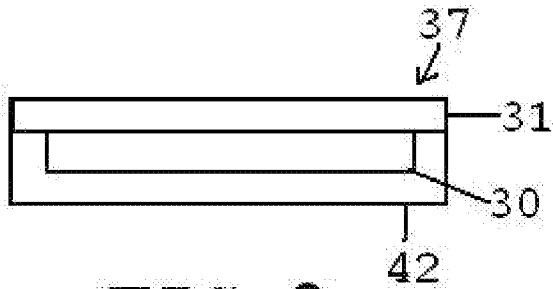


FIG. 2

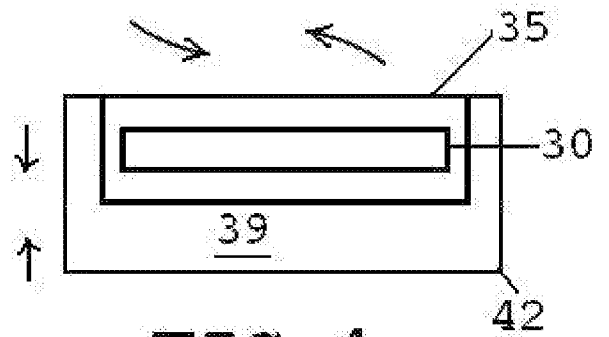


FIG. 4

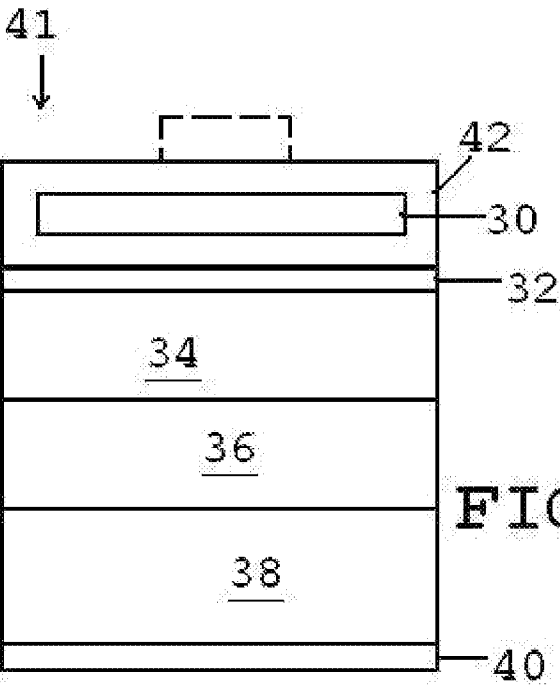


FIG. 5

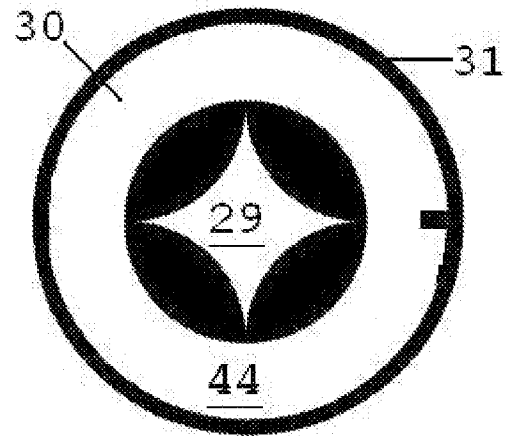


FIG. 6

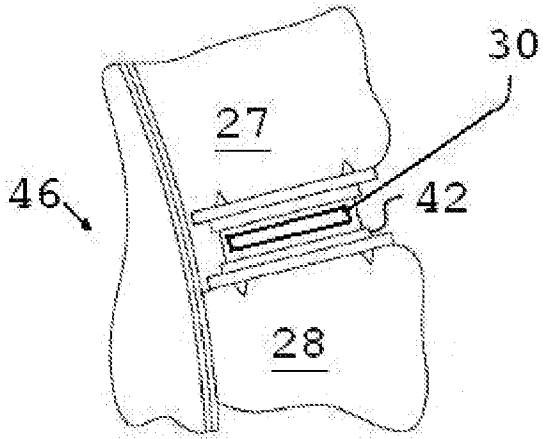


FIG. 7

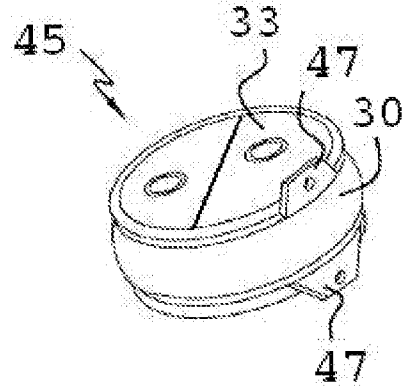


FIG. 8

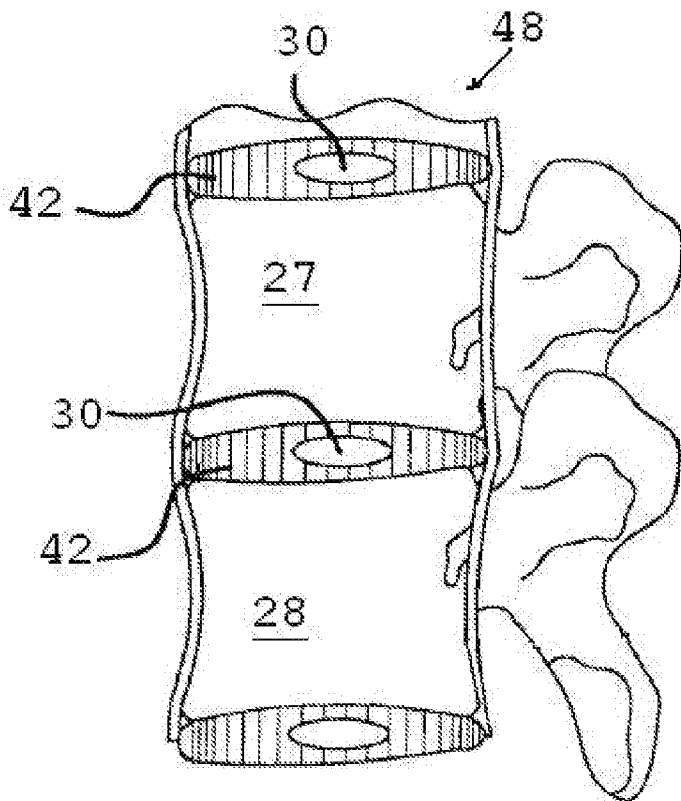


FIG. 9

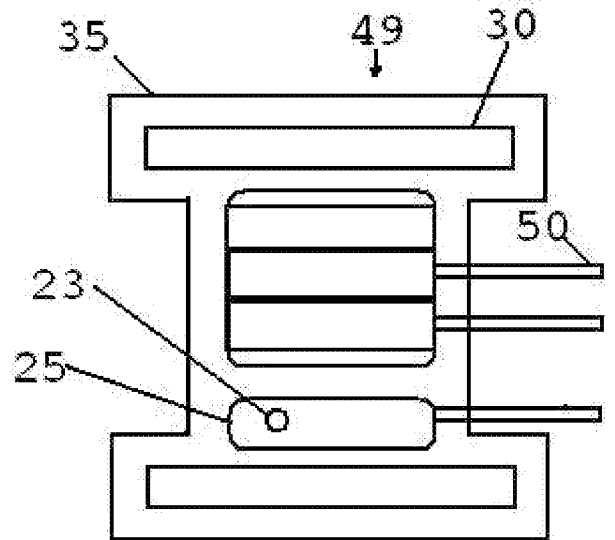


FIG. 10

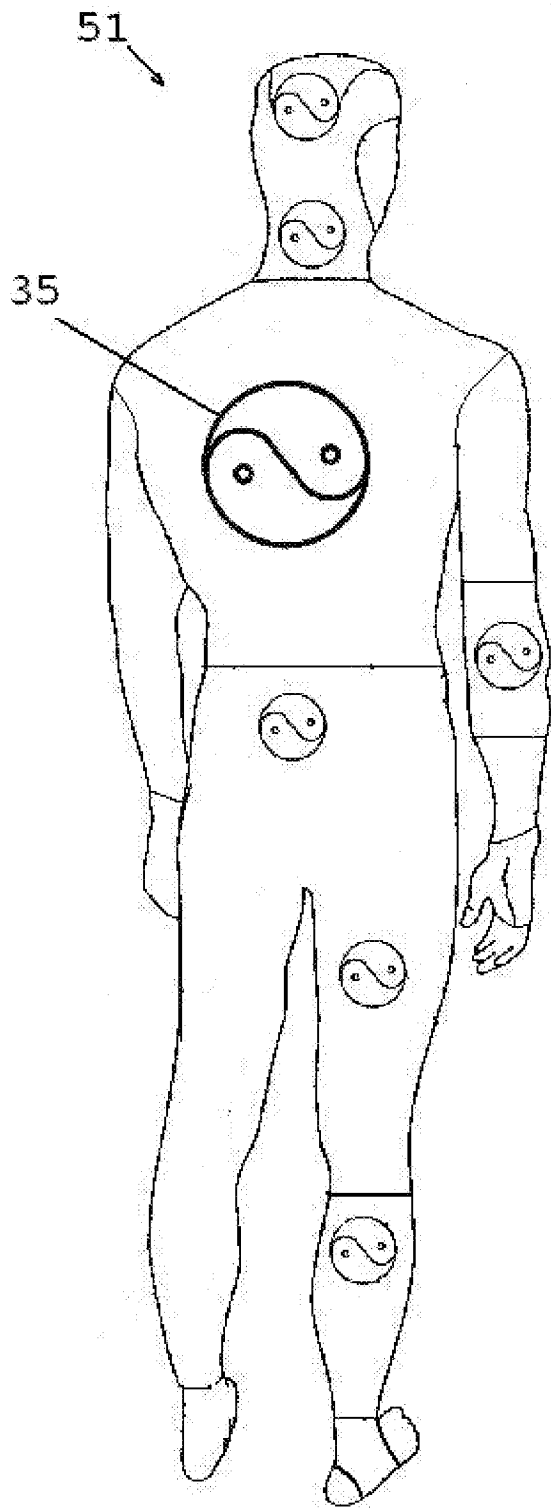


FIG. 11

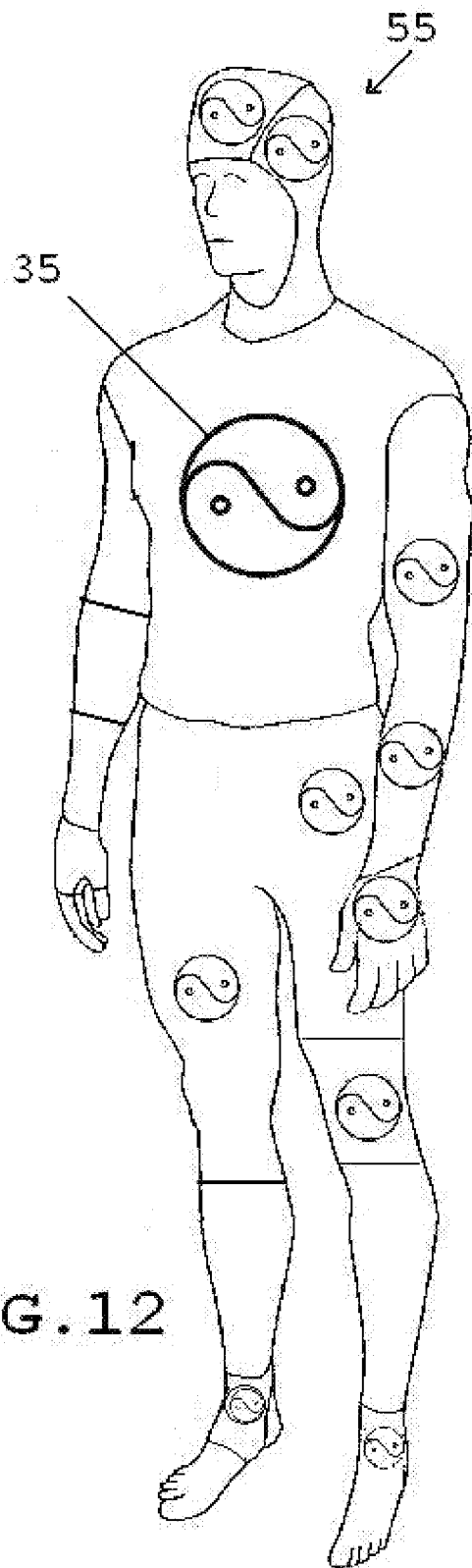


FIG. 12

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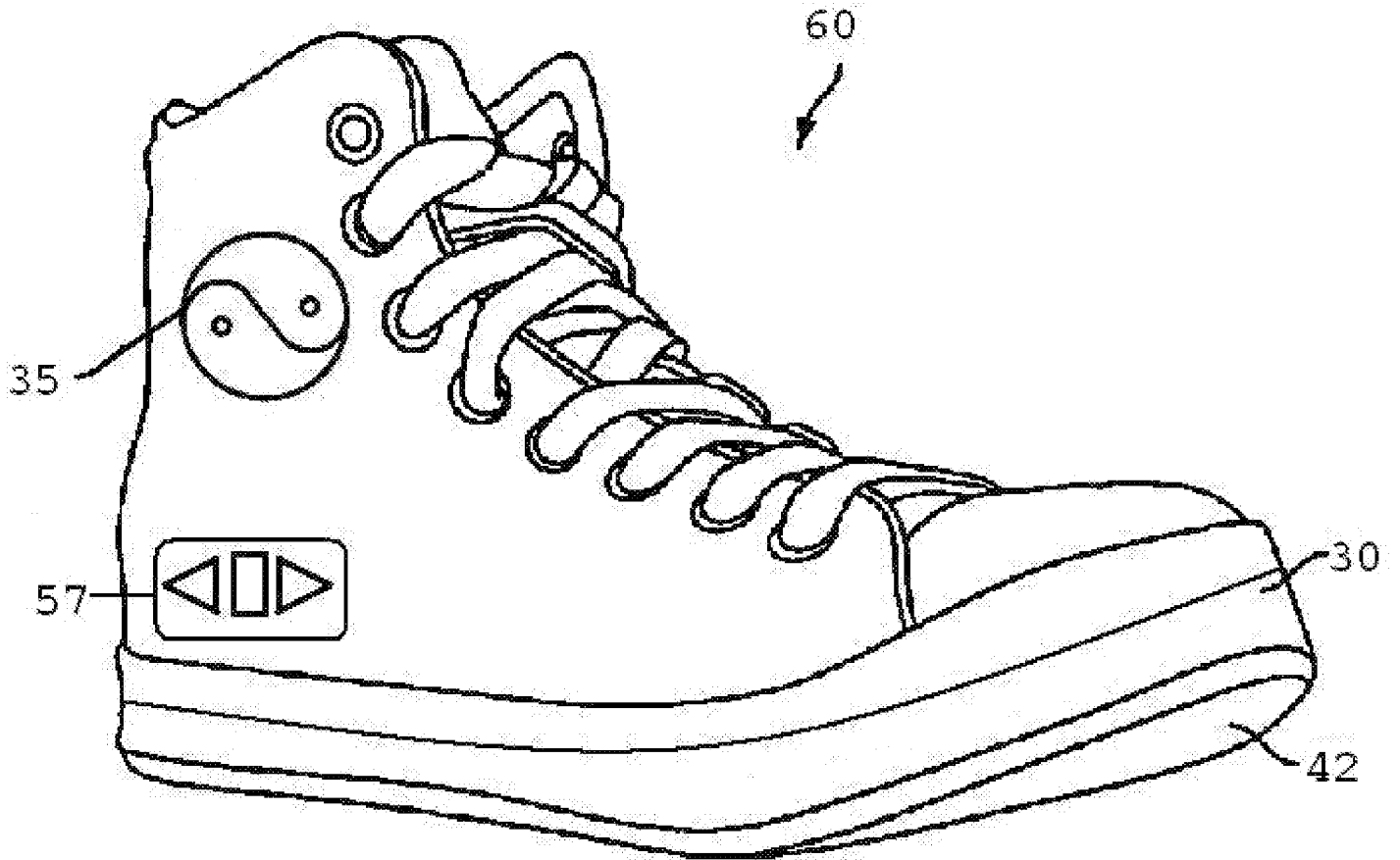


FIG. 13

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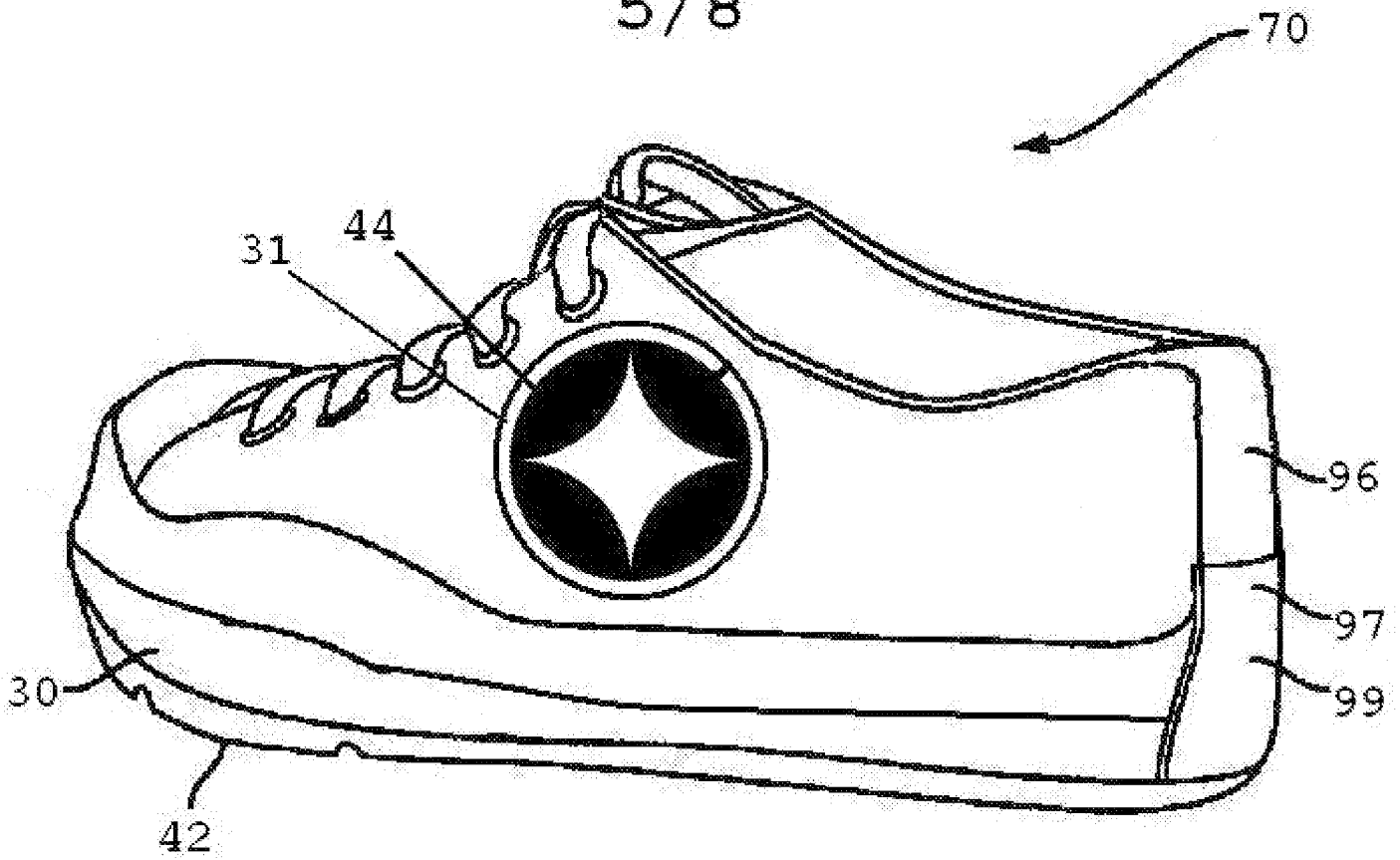


FIG. 14

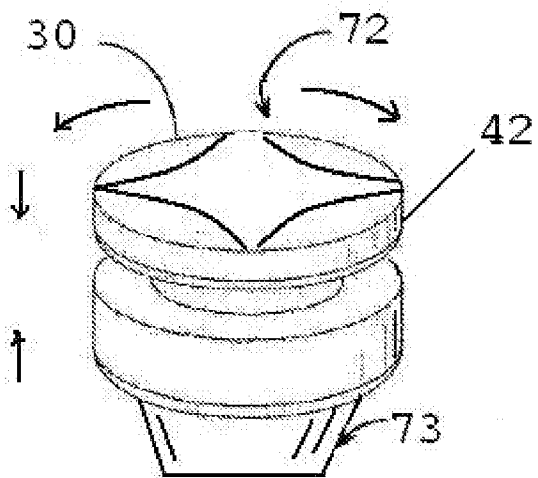


FIG. 15

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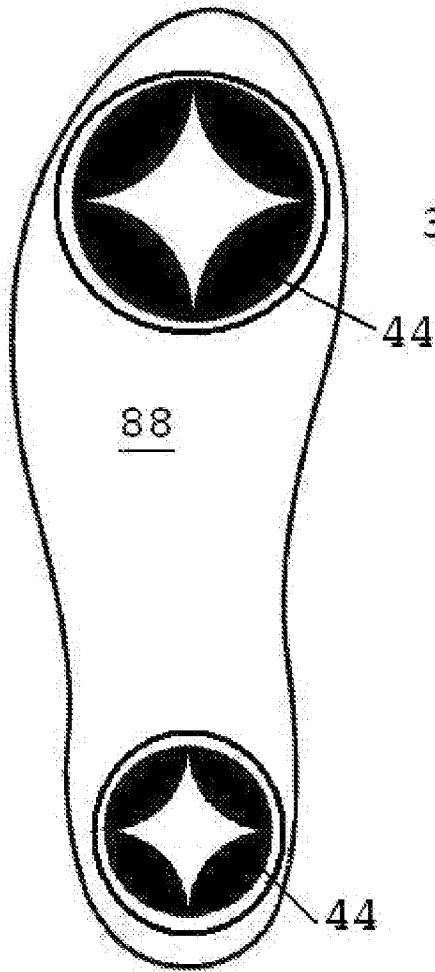


FIG. 16

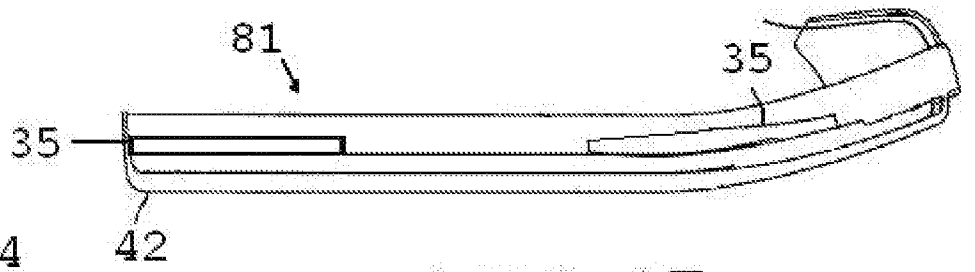


FIG. 17

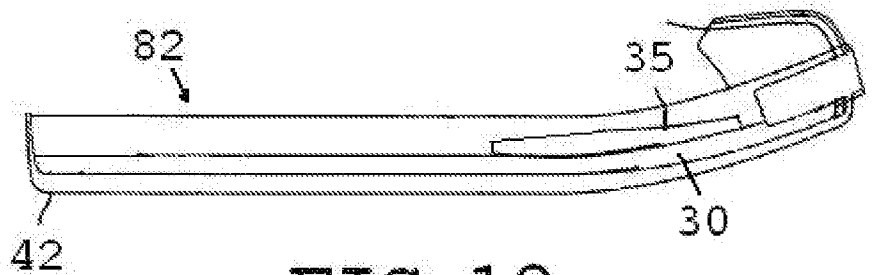


FIG. 18

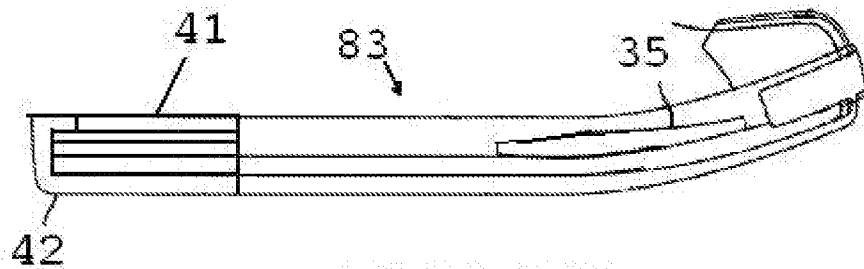
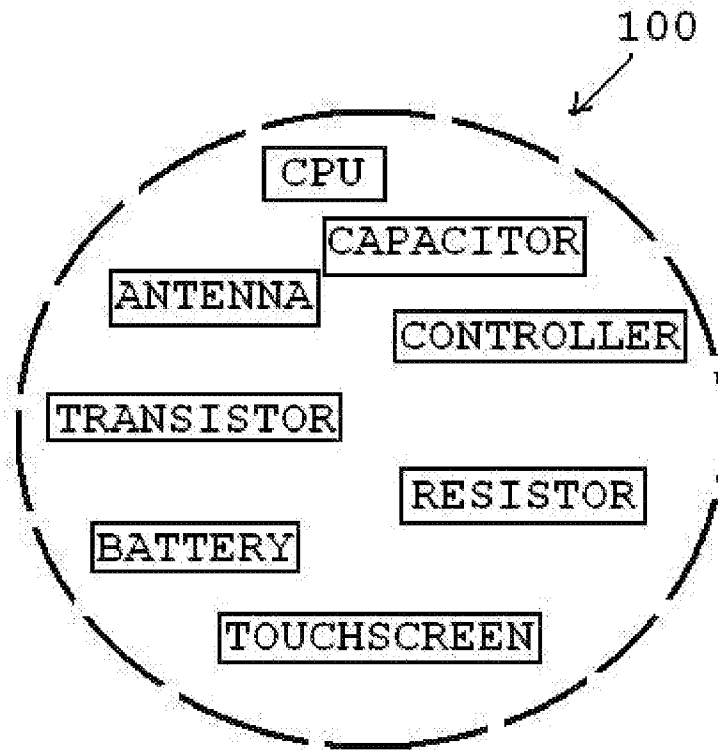


FIG. 19

FIG. 20



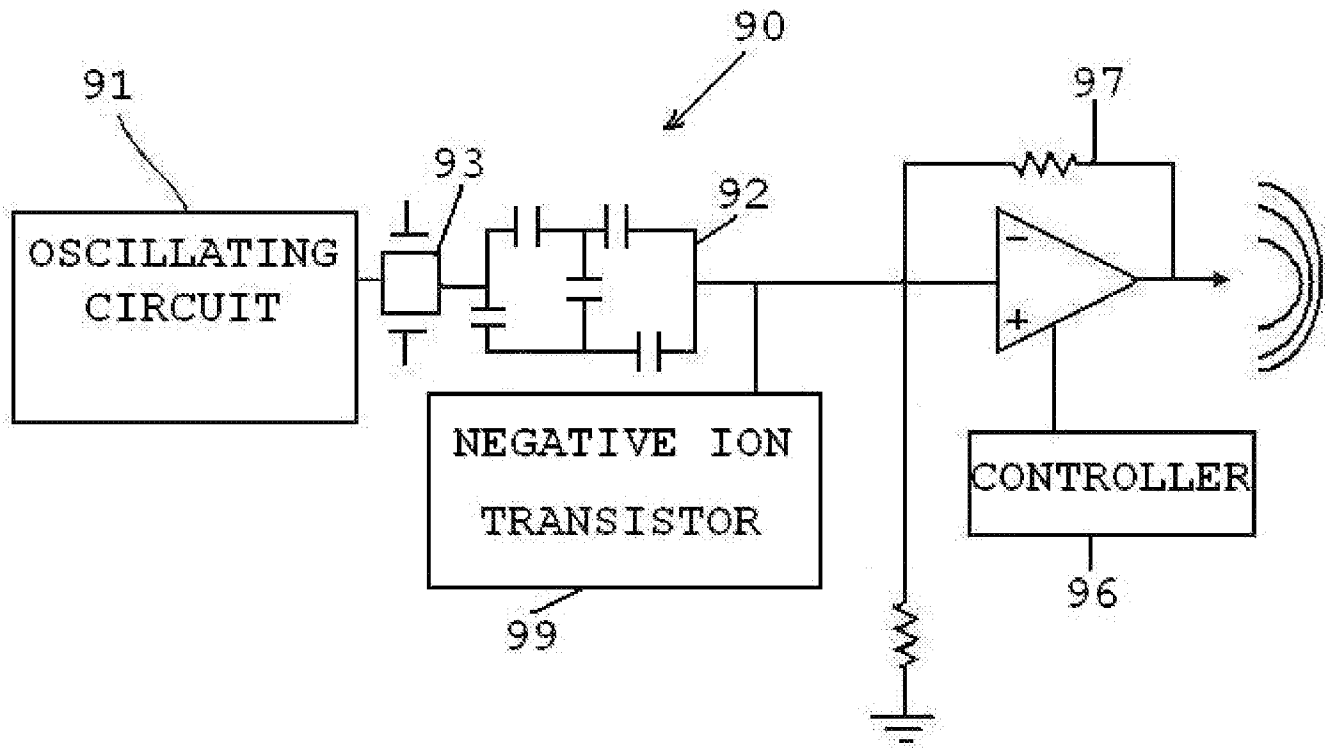


FIG. 21

SCORE Placeholder Sheet for IFW Content

Application Number: 13724287

Document Date: 12/21/2012

The presence of this form in the IFW record indicates that the following document type was received in electronic format on the date identified above. This content is stored in the SCORE database.

- Drawings – Other than Black and White Line Drawings

Since this was an electronic submission, there is no physical artifact folder, no artifact folder is recorded in PALM, and no paper documents or physical media exist. The TIFF images in the IFW record were created from the original documents that are stored in SCORE.

To access the documents in the SCORE database, refer to instructions developed by SIRA.

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