



UNITED STATES PATENT AND TRADEMARK OFFICE

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NOTICE OF ALLOWANCE AND FEE(S) DUE

23552 7590 07/05/2019
 MERCHANT & GOULD P.C.
 P.O. BOX 2903
 MINNEAPOLIS, MN 55402-0903

EXAMINER

CAREY, MICHAEL JAMES

ART UNIT

PAPER NUMBER

3792

DATE MAILED: 07/05/2019

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/596,455	05/16/2017	Scott J. WOLF	17713.0001US10	1879

TITLE OF INVENTION: METHODS OF TREATING NASAL AIRWAYS

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$500	\$0.00	\$0.00	\$500	10/07/2019

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

23552 7590 07/05/2019
MERCHANT & GOULD P.C.
P.O. BOX 2903
MINNEAPOLIS, MN 55402-0903

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
(Date)

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15/596,455	05/16/2017	Scott J. WOLF	17713.0001US10	1879

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nonprovisional	SMALL	\$500	\$0.00	\$0.00	\$500	10/07/2019

EXAMINER	ART UNIT	CLASS-SUBCLASS
CAREY, MICHAEL JAMES	3792	606-041000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) The names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
- (2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
- 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. Fees submitted: ☐ Issue Fee ☐ Publication Fee (if required) ☐ Advance Order - # of Copies _____

4b. Method of Payment: (Please first reapply any previously paid fee shown above)

☐ Electronic Payment via EFS-Web ☐ Enclosed check ☐ Non-electronic payment by credit card (Attach form PTO-2038)

☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

5. **Change in Entity Status** (from status indicated above)

- ☐ Applicant certifying micro entity status. See 37 CFR 1.29
- ☐ Applicant asserting small entity status. See 37 CFR 1.27
- ☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____



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23552	7590	07/05/2019	EXAMINER	
MERCHANT & GOULD P.C.			CAREY, MICHAEL JAMES	
P.O. BOX 2903			ART UNIT	
MINNEAPOLIS, MN 55402-0903			PAPER NUMBER	
			3792	
DATE MAILED: 07/05/2019				

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
 (Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. 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 30 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, Virginia 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.** 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.

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.

Notice of Allowability	Application No. 15/596,455	Applicant(s) WOLF et al.	
	Examiner MICHAEL J CAREY	Art Unit 3792	AIA (FITF) Status Yes

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

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 6/6/2019.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on ____.

2. ☐ 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.

3. ☒ The allowed claim(s) is/are 1-15. As a result of the allowed claim(s), 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.

4. ☐ 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)).

* Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892) 2. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date <u>6/13/2019</u> . 3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____. 4. ☐ Interview Summary (PTO-413), Paper No./Mail Date. _____.	5. ☒ Examiner's Amendment/Comment 6. ☒ Examiner's Statement of Reasons for Allowance 7. ☐ Other _____.
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/MICHAEL J CAREY/
Primary Examiner, Art Unit 3792

DETAILED ACTION***Acknowledgements***

1. The objection to the specification from the office action dated 4/16/2019 has been removed in light of an amendment to the specification dated 6/6/2019.

Terminal Disclaimer

2. The terminal disclaimer filed on 6/6/2019 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patents 8,986,301 and 8,936,594 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Allowable Subject Matter

3. Claims 1-15 are allowed.

4. The following is an examiner's statement of reasons for allowance: The applicant has, in addition to the terminal disclaimers, filed significant reasons for allowance over the prior art on pages 8-10 of the response dated 6/6/2019.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL JAMES CAREY whose telephone number is (571)270-7235. The examiner can normally be reached on Monday-Friday (9am-5pm).

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

Application/Control Number: 15/596,455
Art Unit: 3792

Page 3

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Koharski can be reached on 571-272-7230. 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.

/MICHAEL J CAREY/
Primary Examiner, Art Unit 3792

Issue Classification 	Application/Control No. 15/596,455	Applicant(s)/Patent Under Reexamination WOLF et al.
	Examiner MICHAEL J CAREY	Art Unit 3792

CPC						
Symbol					Type	Version
A61B	/	18	/	02	F	2013-01-01
A61B	/	18	/	1485	I	2013-01-01
A61B	/	18	/	16	I	2013-01-01
A61B	/	18	/	1442	I	2013-01-01
A61B	/	18	/	1815	I	2013-01-01
A61B	/	18	/	20	I	2013-01-01
A61F	/	5	/	08	I	2013-01-01
A61B	/	5	/	01	I	2013-01-01
A61B	/	18	/	06	I	2013-01-01
A61B	/	18	/	1445	I	2013-01-01
A61B	/	18	/	085	I	2013-01-01
A61B	/	18	/	1206	I	2013-01-01
A61B	/	18	/	14	I	2013-01-01
A61B	/	18	/	1477	I	2013-01-01
A61F	/	5	/	56	I	2013-01-01
A61N	/	5	/	025	I	2013-01-01
A61N	/	5	/	0603	I	2013-01-01
A61N	/	5	/	0625	I	2013-01-01
A61B	/	2017	/	320069	A	2017-08-01
A61B	/	2017	/	32007	A	2017-08-01
A61B	/	2018	/	00327	A	2013-01-01
A61B	/	2018	/	00702	A	2013-01-01
A61B	/	2018	/	00821	A	2013-01-01
A61B	/	2018	/	00922	A	2013-01-01
A61B	/	2018	/	00005	A	2013-01-01
A61B	/	2018	/	00023	A	2013-01-01
A61B	/	2018	/	143	A	2013-01-01
A61B	/	2018	/	00577	A	2013-01-01
A61B	/	2018	/	1807	A	2013-01-01
A61B	/	2018	/	1861	A	2013-01-01
F04C	/	2270	/	041	A	2013-01-01

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	1-15	
/MICHAEL J CAREY/ Primary Examiner, Art Unit 3792	26 June 2019	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	8F

Issue Classification 	Application/Control No. 15/596,455	Applicant(s)/Patent Under Reexamination WOLF et al.	
	Examiner MICHAEL J CAREY	Art Unit 3792	

CPC						
Symbol					Type	Version
A61B	/	2018	/	0022	A	2013-01-01
A61B	/	2018	/	00595	A	2013-01-01
A61B	/	2018	/	00642	A	2013-01-01
A61B	/	2018	/	00875	A	2013-01-01
A61B	/	2018	/	00982	A	2013-01-01
A61B	/	2018	/	0212	A	2013-01-01
A61B	/	2018	/	0225	A	2013-01-01
A61B	/	2018	/	0262	A	2013-01-01
A61B	/	2018	/	1253	A	2013-01-01
A61B	/	2018	/	126	A	2013-01-01
A61B	/	2018	/	0016	A	2013-01-01
A61B	/	2018	/	00178	A	2013-01-01
A61B	/	2018	/	00791	A	2013-01-01
A61B	/	2018	/	00886	A	2013-01-01
A61B	/	2018	/	1425	A	2013-01-01
A61B	/	2017	/	248	A	2013-01-01
A61B	/	2018	/	00708	A	2013-01-01
A61B	/	17	/	320068	A	2013-01-01

CPC Combination Sets				
Symbol	Type	Set	Ranking	Version
/				

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	1-15	
/MICHAEL J CAREY/	26 June 2019	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	8F

<i>Issue Classification</i> 	Application/Control No. 15/596,455	Applicant(s)/Patent Under Reexamination WOLF et al.
	Examiner MICHAEL J CAREY	Art Unit 3792

INTERNATIONAL CLASSIFICATION			
CLAIMED			
A61B	/	18	/ 02
NON-CLAIMED			
	/		/

US ORIGINAL CLASSIFICATION	
CLASS	SUBCLASS
606	41

CROSS REFERENCES(S)						
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)					

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	1-15	
/MICHAEL J CAREY/ Primary Examiner, Art Unit 3792	26 June 2019	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	8F

<i>Issue Classification</i> 	Application/Control No. 15/596,455	Applicant(s)/Patent Under Reexamination WOLF et al.
	Examiner MICHAEL J CAREY	Art Unit 3792

☒ Claims renumbered in the same order as presented by applicant ☐ CPA ☒ T.D. ☐ R.1.47															
CLAIMS															
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	1-15	
/MICHAEL J CAREY/ Primary Examiner, Art Unit 3792	26 June 2019	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	8F

<i>Search Notes</i> 	Application/Control No. 15/596,455	Applicant(s)/Patent Under Reexamination WOLF et al.
	Examiner MICHAEL J CAREY	Art Unit 3792

CPC - Searched*		
Symbol	Date	Examiner
a61b5/01	04/12/2019	MC
a61b17/2816	04/12/2019	MC
a61b18/02, 06, 085, 1206, 14, 1442, 1445, 1477, 1815, 20	04/12/2019	MC
a61f5/08, 56	04/12/2019	MC
a61f7/10	04/12/2019	MC
a61n1/403	04/12/2019	MC
a61n5/025, 0603, 0625	04/12/2019	MC
a61n7/022	04/12/2019	MC
a61b5/01	06/26/2019	MC
a61b17/2816	06/26/2019	MC
a61b18/02, 06, 085, 1206, 14, 1442, 1445, 1477, 1815, 20	06/26/2019	MC
a61f5/08, 56	06/26/2019	MC
a61f7/10	06/26/2019	MC
a61n1/403	06/26/2019	MC
a61n5/025, 0603, 0625	06/26/2019	MC
a61n7/022	06/26/2019	MC

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner
606	41	04/12/2019	MC
606	41	06/26/2019	MC

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

/MICHAEL J CAREY/ Primary Examiner, Art Unit 3792	
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<i>Search Notes</i> 	Application/Control No. 15/596,455	Applicant(s)/Patent Under Reexamination WOLF et al.
	Examiner MICHAEL J CAREY	Art Unit 3792

Search Notes		
Search Notes	Date	Examiner
Google Patent Search	04/12/2019	MC
Inventor and Assignee Search	04/12/2019	MC
IDS References Considered	04/12/2019	MC
Text Limited Search	04/12/2019	MC
Inventor and Assignee Search	06/26/2019	MC
IDS References Considered	06/26/2019	MC
Text Limited Search	06/26/2019	MC

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
a61b5	01	06/26/2019	MC
a61b17	2816	06/26/2019	MC
a61b18	02, 06, 085, 1206, 14, 1442, 1445, 1477, 1815, 20	06/26/2019	MC
a61f5	08, 56	06/26/2019	MC
a61f7	10	06/26/2019	MC
a61n1	403	06/26/2019	MC
a61n5	025, 0603, 0625	06/26/2019	MC
a61n7	022	06/26/2019	MC
606	41	06/26/2019	MC

/MICHAEL J CAREY/ Primary Examiner, Art Unit 3792	
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<i>Index of Claims</i> 	Application/Control No. 15/596,455	Applicant(s)/Patent Under Reexamination WOLF et al.
	Examiner MICHAEL J CAREY	Art Unit 3792

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

[illegible]

Doc code: IDS

PTO/SB/08a (01-10)

Doc description: Information Disclosure Statement (IDS) Filed

Approved for use through 07/31/2012. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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

Application Number	15596455
Filing Date	2017-05-16
First Named Inventor	WOLF
Art Unit	3792
Examiner Name	CAREY
Attorney Docket Number	17713.0001US10

U.S.PATENTS

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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	10265115		2019-04-23	Wolf et al.	

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	1	20090192505		2009-07-30	Askew	
	2	20190076185		2019-03-14	Dinger et al.	
	3	20070093710		2007-04-26	Maschke	
	4	20190151005		2019-05-23	Wolf et al.	
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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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EXAMINER SIGNATURE

Examiner Signature	/MICHAEL J CAREY/	Date Considered	06/26/2019
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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**
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Application Number	15596455
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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	/Christopher P. Ziolkowski/	Date (YYYY-MM-DD)	2019-06-13
Name/Print	Christopher P. Ziolkowski	Registration Number	73729

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.J.C/

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
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			USPAT; USOCR			
S6	160	("10028781" "20180263678" "20180344378" "7655243" "9763743" "10028780" "20080125626" "20180177542" "20180177546" "20180185085" "20180228533" "20180317997" "20050288665" "20090124958" "9943361" "20020087155" "20050240147" "20080027423" "20080312644" "20100241112" "20170360495" "20180000535" "5733280" "7097641" "8128617" "9888957" "9913682" "20050234439" "20100174283" "20120298105" "9763723" "9788886" "9801752" "20020049464" "20050020901" "20120316473" "20170209199" "20170231651" "20170245924" "20170252089" "5542916" "5938659" "6502574" "7678069" "9125677" "9687288" "9687296" "20020016588" "20020128641" "20030144659" "20030208194" "20030225403" "20040220644" "20050119643" "20050222565" "20060235377" "20060253117" "20060276817" "20070066944" "20070073282" "20070219600" "20080027480" "20080082090" "20090018485" "20090143821" "20090292358" "20100144996" "20100152730" "20110009737" "20110282268" "20120039954" "20120078377" "20120316557" "20120323227" "20120323232" "20130218158" "20140088463" "20140114233" "20150202003" "20160287315" "20160361112" "20170007316" "20170014258" "20170095288" "4887605" "5348008" "5533499" "5624439" "5674191" "5707349" "5718702" "5728094" "5730719" "5738114" "5743870" "5743904" "5746224" "5800429" "5807306" "5816095" "5817049" "5820580" "5823197" "5827277" "5843021" "5843077" "5846235" "5879349" "6045549" "6096033" "6102907" "6109268" "6126657" "6131579" "6139546" "6152143" "6165173" "6179803" "6210355" "6228079" "6231569" "6293941" "6309386" "6371926" "6383181" "6391028" "6416491" "6425151" "6431174" "6451013" "6551310" "6562036" "6575969" "6589235" "6659106" "6911027" "6978781" "7055523" "7114495" "7322993" "7416550" "7442191" "7780730" "7824394" "7850683" "8137345" "8317781" "8317782" "8936594" "8986301" "9072597" "9179964" "9179967"	US- PGPUB; USPAT	OR	OFF	2019/04/12 08:52

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S8	38	S6 and ((rf or radiofrequency) same seconds)	US- PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	OFF	2019/04/12 08:58
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S10	114380	(A61B18/02 or A61B18/14 or A61N7/022 or A61F7/10 or A61B17/2816 or A61N1/403 or A61N5/025 or A61B18/1206 or A61N5/0625 or A61B18/1477 or A61F5/56 or A61N5/0603 or A61B18/06 or A61B18/1445 or A61B18/085 or A61B5/01 or A61F5/08 or A61B18/20 or A61B18/1815 or A61B18/1442).cpc.	US- PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	OFF	2019/04/12 09:04
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S12	346	S11 and ((nose or nasal) same (radiofrequency or rf))	US- PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	OFF	2019/04/12 09:13
S13	191	S12 and bipolar	US- PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	OFF	2019/04/12 09:13
S14	106	S13 and cartilage	US- PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	OFF	2019/04/12 09:13

EAST Search History (Interference)

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Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L17	1	(two and row and bipolar and electrode and mucosa).clm.	USPAT	OR	ON	2019/06/26 12:33
L18	0	(two and row and bipolar and electrode and mucosa and pressure).clm.	USPAT	OR	ON	2019/06/26 12:33

6/ 26/ 2019 12:33:39 PM
C:\ Users\ mcarey\ Documents\ EAST\ Workspaces\ 15596455.wsp

<i>Application Number</i> * 15/596,455 *	Application/Control No. 15/596,455	Applicant(s)/Patent under Reexamination WOLF et al.	
	Examiner CAREY, MICHAEL JAMES	Art Unit 3792	
Document Code - DISQ		Internal Document - DO NOT MAIL	

TERMINAL DISCLAIMER	☒ APPROVED	☐ DISAPPROVED
Date Filed: <u>06 June 2019</u>	This patent is subject to a Terminal Disclaimer	

Approved/Disapproved by:
/JEAN PROCTOR/ Technology Center: OPLC Telephone: (571)272-1040 2 td's

Doc code: IDS

PTO/SB/08a (01-10)

Doc description: Information Disclosure Statement (IDS) Filed

Approved for use through 07/31/2012. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		15596455
	Filing Date		2017-05-16
	First Named Inventor	WOLF	
	Art Unit	3792	
	Examiner Name	CAREY	
	Attorney Docket Number	17713.0001US10	

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	10265115		2019-04-23	Wolf et al.	
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	20090192505		2009-07-30	Askew	
	2	20190076185		2019-03-14	Dinger et al.	
	3	20070093710		2007-04-26	Maschke	
	4	20190151005		2019-05-23	Wolf et al.	
	5	20190175242		2019-06-13	Wolf et al.	
If you wish to add additional U.S. Published Application citation information please click the Add button.						Add

FOREIGN PATENT DOCUMENTS						Remove
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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number		15596455
Filing Date		2017-05-16
First Named Inventor	WOLF	
Art Unit	3792	
Examiner Name	CAREY	
Attorney Docket Number	17713.0001US10	

Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ² i	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							

If you wish to add additional Foreign Patent Document citation information please click the Add button

NON-PATENT LITERATURE DOCUMENTS

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		

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

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	15596455		
Filing Date	2017-05-16		
First Named Inventor	WOLF		
Art Unit	3792		
Examiner Name	CAREY		
Attorney Docket Number	17713.0001US10		

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	/Christopher P. Ziolkowski/	Date (YYYY-MM-DD)	2019-06-13
Name/Print	Christopher P. Ziolkowski	Registration Number	73729

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.

Electronic Patent Application Fee Transmittal				
Application Number:		15596455		
Filing Date:		16-May-2017		
Title of Invention:		METHODS OF TREATING NASAL AIRWAYS		
First Named Inventor/Applicant Name:		Scott J. WOLF		
Filer:		Christopher P. Ziolkowski/Juliana Hoffman		
Attorney Docket Number:		17713.0001US10		
Filed as Small 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:				
SUBMISSION- INFORMATION DISCLOSURE STMT	2806	1	120	120
Total in USD (\$)				120

Electronic Acknowledgement Receipt

EFS ID:	36289002
Application Number:	15596455
International Application Number:	
Confirmation Number:	1879
Title of Invention:	METHODS OF TREATING NASAL AIRWAYS
First Named Inventor/Applicant Name:	Scott J. WOLF
Customer Number:	23552
Filer:	Christopher P. Ziolkowski/Juliana Hoffman
Filer Authorized By:	Christopher P. Ziolkowski
Attorney Docket Number:	17713.0001US10
Receipt Date:	13-JUN-2019
Filing Date:	16-MAY-2017
Time Stamp:	12:39:46
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$ 120
RAM confirmation Number	061319INTEFSW12403000
Deposit Account	132725
Authorized User	Juliana Hoffman

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37 CFR 1.16 (National application filing, search, and examination fees)

37 CFR 1.17 (Patent application and reexamination processing fees)

37 CFR 1.19 (Document supply fees)

37 CFR 1.20 (Post Issuance fees)

37 CFR 1.21 (Miscellaneous fees and charges)

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)	2019-06-13_IDS_17713-0001US10.PDF	630966	no	4
			9ee6f41da8d511281a55e49afbae8301cdcbdda6		

Warnings:**Information:**

2	Fee Worksheet (SB06)	fee-info.pdf	30865	no	2
			3739bd9457ec4aae130635f84b5065b867f667a8		

Warnings:**Information:**

Total Files Size (in bytes):	661831
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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.

**TERMINAL DISCLAIMER TO OBVIATE A DOUBLE PATENTING
REJECTION OVER A "PRIOR" PATENT**

Docket Number (Optional)

17713.0001US10

In re Application of: Scott J. WOLF

Application No.: 15/596,455

Filed: May 16, 2017

For: METHODS OF TREATING NASAL AIRWAYS

The applicant, Aerin Medical Inc., owner of 100 percent interest in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of **prior patent** No. 8,986,301 as the term of said **prior patent** is presently shortened by any terminal disclaimer. The applicant hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the **prior patent** are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the applicant does not disclaim the terminal part of the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term of the **prior patent**, "as the term of said **prior patent** is presently shortened by any terminal disclaimer," in the event that said **prior patent** later:

- expires for failure to pay a maintenance fee;
- is held unenforceable;
- is found invalid by a court of competent jurisdiction;
- is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321;
- has all claims canceled by a reexamination certificate;
- is reissued; or
- is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

Check either box 1 or 2 below, if appropriate.

1. ☐ The undersigned is the applicant. If the applicant is an assignee, the undersigned is authorized to act on behalf of the assignee.

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

2. ☒ The undersigned is an attorney or agent of record. Reg. No. 73729

/Christopher P. Ziolkowski/ 2019-06-06
Signature Date

Christopher P. Ziolkowski
Typed or printed name

Attorney (612) 766-6025
Title Telephone Number

- ☒ Terminal disclaimer fee under 37 CFR 1.20(d) included.

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

This collection of information is required by 37 CFR 1.321. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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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.
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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 Patent Application Fee Transmittal				
Application Number:		15596455		
Filing Date:		16-May-2017		
Title of Invention:		METHODS OF TREATING NASAL AIRWAYS		
First Named Inventor/Applicant Name:		Scott J. WOLF		
Filer:		Christopher P. Ziolkowski/Juliana Hoffman		
Attorney Docket Number:		17713.0001US10		
Filed as Small 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:				
STATUTORY OR TERMINAL DISCLAIMER	2814	2	160	320

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				320

Electronic Acknowledgement Receipt

EFS ID:	36220799
Application Number:	15596455
International Application Number:	
Confirmation Number:	1879
Title of Invention:	METHODS OF TREATING NASAL AIRWAYS
First Named Inventor/Applicant Name:	Scott J. WOLF
Customer Number:	23552
Filer:	Christopher P. Ziolkowski/Juliana Hoffman
Filer Authorized By:	Christopher P. Ziolkowski
Attorney Docket Number:	17713.0001US10
Receipt Date:	06-JUN-2019
Filing Date:	16-MAY-2017
Time Stamp:	12:01:41
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$ 320
RAM confirmation Number	060619INTEFSW12021500
Deposit Account	132725
Authorized User	Juliana Hoffman

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37 CFR 1.16 (National application filing, search, and examination fees)

37 CFR 1.17 (Patent application and reexamination processing fees)

37 CFR 1.19 (Document supply fees)
 37 CFR 1.20 (Post Issuance fees)
 37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		2019-06-06_Amendment_17713-0001US10.pdf	106054	yes	11
			50be5dd0c03474c9f345e7274980fee944cf4d52		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Applicant Arguments/Remarks Made in an Amendment		8	11	
	Claims		4	7	
	Specification		2	3	
	Amendment/Req. Reconsideration-After Non-Final Reject		1	1	
Warnings:					
Information:					
2	Terminal Disclaimer Filed	2019-06-06_TerminalDisclaimer_8936594.PDF	170816	no	2
			621837772698e3fd4c2c7ce8a5820aad308f9d9c		
Warnings:					
Information:					
3	Terminal Disclaimer Filed	2019-06-06_TerminalDisclaimer_8986301.PDF	170816	no	2
			2f9a76d077e00342f741e36dacea21996faf9469		
Warnings:					
Information:					
4	Fee Worksheet (SB06)	fee-info.pdf	30750	no	2
			1dd63905690d89a20e8df0e5d550d222344b05dc		
Warnings:					
Information:					
Total Files Size (in bytes):			478436		

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.

REMARKS

Claims 1-15 are pending and stand rejected by the Office Action of April 16, 2019. This Amendment amends claims 1, 2, 4-13, and 15. No new matter is added. For example, support for the amendments to claims 1 and 11 may be found in paragraph [0135], Figs. 18, 23A, and 23D, and throughout the application. Applicant respectfully requests reconsideration of pending claims 1-15.

This response also amends the title to add more description, paragraph [0001] to reflect that a related application issued as a patent, and paragraph [0135] to correct a minor typographical error. These amendments add no new matter.

Specification

The Office Action requested that paragraph [0001] be updated to reflect the current status of related applications. Appropriate correction is made herein.

The Office Action contended that the title of the application is not descriptive. Without acquiescing to this contention, this response amends the title to “METHODS OF TREATING NASAL AIRWAYS WITH RADIOFREQUENCY ENERGY”.

Claim Rejections – 35 U.S.C. § 112

Claims 14 and 15 were rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite. Specifically, the Office Action objects to the use of the word “about.” Applicant respectfully submits that claims 14 and 15 did not contain the word “about” and that perhaps claims 8-10 were meant to be listed, rather than claims 14 and 15. Applicant amended claims 8-10 to remove the word “about.” Applicant thus requests withdrawal of this rejection.

Claim Rejections – 35 U.S.C. § 102

Claims 1-9 and 10-15 were rejected under 35 U.S.C. § 102, as allegedly being anticipated by U.S. Patent No. 6,109,268, to Thapliyal et al. (hereinafter “Thapliyal”). Applicant respectfully traverses this rejection.

Thapliyal is generally directed to a device for applying radiofrequency energy to an electrically conductive fluid, injected through the device, in order to heat the fluid, which subsequently ablates bodily tissues. (See, for example: Thapliyal Abstract; column 3, line 65 to

column 4, line 8; column 4, lines 38-48; and Fig. 7C.) The Thapliyal device preferably includes a fluid delivery element or fluid is injected into the treatment site by some other fluid injection device. (See, for example, Thapliyal column 6, lines 32-36.) A primary objective of the Thapliyal device and method is to apply energy to fluid and not directly to tissue, in an attempt to reduce unwanted damage of the tissue. (See Thapliyal column 3, lines 31-52.) Thapliyal describes an alternative embodiment where “electric current passes directly into the tissue to a selected depth” and “the return electrode draws the electric current away from the tissue site to limit its depth of penetration into the tissue”. (Thapliyal column 26, lines 41-63.) But it appears that fluid would still be needed in that embodiment to create a current flow path to the return electrode. (See, for example, Thapliyal column 12, line 55-65; and column 14, line 10-20).

The method of independent claims 1 and 11, by contrast, involves directly contacting nasal mucosa and applying radiofrequency energy through the mucosa to heat submucosal tissue, without injecting fluid into the nasal cavity. Thapliyal never teaches or suggests such a method, and in fact it teaches away from direct application of RF to tissue absent fluid to create a current flow path (Thapliyal, column 3, lines 32-52). Instead, Thapliyal teaches the use of fluid to form a current flow path.

Pending dependent claims of the present application add further detail that is not described or suggested in Thapliyal. For example, claims 2 and 13 specify treatment of cartilage in the nasal valve area of the nasal airway. Thapliyal never teaches or suggests treating the nasal valve, and in fact Applicant believes treating this particular part of the nasal airway has unique and lasting positive effects on patients’ ability to breathe through their noses.

For at least these reasons, Applicants respectfully submit that independent claims 1 and 11, as well as all dependent claims, are allowable over Thapliyal. Applicant thus requests withdrawal of the rejection of claims 1-15 under 35 U.S.C. § 102.

Claim Rejections – 35 U.S.C. § 103

Claim 10 was rejected under 35 U.S.C. § 103, as allegedly being unpatentable over U.S. Patent Application Pub. No. 2002/0016588, filed by Wong et al. (hereinafter “Wong”). Applicant respectfully traverses this rejection.

Applicant respectfully submits that claim 1 is allowable at least for the reasons set forth above. Additionally, amended claim 10 is now directed to a method involving treating one area

of the nasal cavity for 15 seconds, repositioning the treatment device, and treating a second area for 15 seconds. Neither Thapliyal nor Wong describes the method as claimed. Thus, Applicant respectfully requests withdrawal of the rejection of claim 10 under 35 U.S.C. § 103.

Non-Statutory Double Patenting Rejection

Claims 1-15 were rejected on the ground of non-statutory double patenting, as allegedly being unpatentable over claims 1-2, 6, 11-12, 16, and 18 of U.S. Patent No. 8,986,301 in view of Thapliyal and Wong. Claims 1-15 were rejected on the ground of non-statutory double patenting, as allegedly being unpatentable over claims 1, 3, 6, 9, 12, 14-15 of U.S. Patent No. 8,936,594 in view of Thapliyal. Applicant does not acquiesce to these contentions but nonetheless files herewith terminal disclaimers for U.S. Patent Nos. 8,986,301 and 8,936,594 with this response. Applicant thus requests withdrawal of the double patenting rejections.

No Disclaimers or Disavowals

Although the present communication may include alterations to the application or claims, or characterizations of claim scope or referenced art, Applicant is not conceding, in this application, that previously pending claims are not patentable over the cited references. Rather any alterations or characterizations are being made to facilitate expeditious prosecution of this application. Applicant reserves the right to pursue, at a later date, any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviews of this or any parent, child or related prosecution history shall not reasonably infer that Applicant has made any disclaimers or disavowals of any subject matter supported by the present application.

Conclusion

In view of the foregoing, Applicant respectfully submits that this application now stands in condition for allowance. Should the Examiner believe that a telephone interview would further the prosecution of this case, the Examiner is requested to contact the undersigned attorney at the phone number below.

U.S. Patent Application S/N 15/596,455

Attorney Docket No. 17713.0001US10

The Commissioner is hereby authorized to charge any additional fees which may be required for entry of these papers or to credit any overpayment to Deposit Account No. 13-2725.

Respectfully submitted,
MERCHANT & GOULD P.C.
P.O. Box 2903
Minneapolis, Minnesota 55402-0903

Date: 2019-06-06

/ Christopher P. Ziolkowski /
Christopher P. Ziolkowski
Reg. No.: 73,729
Direct: (612) 766-6025

AMENDMENTS TO THE CLAIMS

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

Listing of Claims:

1. (Currently Amended) A method for treating nasal obstruction by ~~modifying~~ reshaping or remodeling submucosal tissue of a nasal airway, the method comprising:

~~positioning~~ contacting a treatment element of a nasal airway treatment device ~~against target tissue~~ directly with nasal mucosa of the nasal airway, wherein the treatment element comprises ~~one or more~~ two rows of bipolar electrode pairs;

applying pressure with the treatment element against the nasal mucosa to deform submucosal tissue underlying the nasal mucosa ~~target tissue~~;

applying radiofrequency energy with the ~~one or more~~ bipolar electrode pairs through the nasal mucosa and to the submucosal tissue, while continuing to apply pressure with the treatment element and without injecting fluid into the nasal airway, to heat the submucosal tissue cartilage of the nasal airway; and

~~reshaping a region of~~ removing the treatment element from the nasal airway and thereby treating the nasal obstruction,

wherein applying the pressure and the radiofrequency energy reshapes or remodels the submucosal tissue, and wherein the region submucosal tissue remains at least partially reshaped or remodeled after the treatment element is removed.

2. (Currently Amended) The method of claim 1, wherein the submucosal tissue comprises cartilage ~~[[is]]~~ located in an internal nasal valve area of the ~~patient's~~ nasal airway.

3. (Original) The method of claim 1, further comprising controlling at least one characteristic of the applied radiofrequency energy with a control system coupled with the nasal airway treatment device.

4. (Currently Amended) The method of claim 1, wherein the radiofrequency energy is applied in the form of a 460 kHz sinusoid wave ~~further comprising applying a conductivity enhancing substance to the nasal airway.~~

5. (Currently Amended) The method of claim 1, further comprising:
sensing a temperature of the nasal mucosa using a thermocouple positioned between the two rows of bipolar electrode pairs on the treatment element; and
modifying an amount of the radiofrequency energy applied to the submucosal tissue based on the sensed temperature ~~wherein applying radiofrequency energy comprises activating the one or more bipolar electrode pairs using an input control.~~

6. (Currently Amended) The method of claim 1, further comprising displaying one or more parameters of treatment while the radiofrequency energy is applied, the one or more parameters selected from the group consisting of treatment time, power level, temperature sensed by the treatment element, electric impedance, electric current, and depth of treatment.

7. (Currently Amended) The method of claim 1, further comprising applying local anesthesia to the nasal mucosa before applying the radiofrequency energy ~~an area near or surrounding the target tissue.~~

8. (Currently Amended) The method of claim 1, wherein the radiofrequency energy is produced by a radiofrequency energy source configured to run between ~~about~~ 1 Watt and ~~about~~ 100 Watts.

9. (Currently Amended) The method of claim 1, wherein applying the radiofrequency energy comprises heating the ~~cartilage~~ submucosal tissue to a temperature of ~~about~~ 50 degrees Celsius to ~~about~~ 70 degrees Celsius.

10. (Currently Amended) The method of claim 1, wherein the radiofrequency energy is applied to the ~~target tissue~~ submucosal tissue for ~~about~~ at least 15 seconds, and wherein the method further comprises, before removing the treatment element from the nasal airway:
repositioning the treatment element to contact a different portion of nasal mucosa;

applying pressure with the treatment element against the different portion of nasal mucosa to deform submucosal tissue underlying the different portion of nasal mucosa; and

applying radiofrequency energy with the bipolar electrode pairs through the different portion of nasal mucosa and to the submucosal tissue, while continuing to apply pressure with the treatment element, for an additional at least 15 seconds.

11. (Currently Amended) A method of decreasing nasal airflow resistance or perceived airflow resistance, the method comprising:

contacting a treatment element of a nasal airway treatment device directly with nasal mucosa of a nasal airway, wherein the treatment element comprises two rows of bipolar radiofrequency electrode pairs; and

directly applying radiofrequency energy through the nasal mucosa to heat heating submucosal tissue underlying the nasal mucosa, without injecting fluid into the nasal airway, of a nasal airway using [[a]] the two rows of bipolar radiofrequency electrode pairs of a treatment element of a nasal airway treatment device, such that the submucosal tissue shrinks, tightens, or stiffens while the submucosal tissue heals, thereby decreasing nasal airflow resistance or perceived airflow resistance within the nasal airway.

12. (Currently Amended) The method of claim 11, further comprising repositioning, remodeling, or reshaping the submucosal tissue with the treatment element, wherein the submucosal tissue remains at least partially repositioned, remodeled or reshaped after the submucosal tissue heals.

13. (Currently Amended) The method of claim 11, wherein the submucosal tissue comprises cartilage located in an internal nasal valve area of the nasal airway.

14. (Original) The method of claim 11, wherein the submucosal tissue is heated to a sub-ablative temperature.

15. (Currently Amended) The method of claim 11, further comprising:

sensing a temperature of the nasal mucosa, using a thermocouple positioned between the two rows of bipolar radiofrequency electrode pairs on the treatment element ~~on the nasal airway treatment device~~; and

modifying an amount of the radiofrequency energy applied to the heating of the ~~the heating of the~~ submucosal tissue based on the sensed temperature.

AMENDMENTS TO THE SPECIFICATION

Please replace the title with the following replacement title as amended:

METHODS OF TREATING NASAL AIRWAYS WITH RADIOFREQUENCY ENERGY

Please replace paragraph [0001] with the following replacement paragraph:

[0001] This application is a continuation of U.S. patent application Ser. No. 15/248,935, entitled "DEVICES TO TREAT NASAL AIRWAYS," filed Aug. 26, 2016, now U.S. Patent No. 9,687,296, which is a continuation of U.S. patent application Ser. No. 14/864,428, now U.S. Pat. No. 9,433,463, entitled "DEVICES TO TREAT NASAL AIRWAYS," filed Sep. 24, 2015, which is a continuation of U.S. patent application Ser. No. 14/737,196, now U.S. Pat. No. 9,179,967, entitled "DEVICES TO TREAT NASAL AIRWAYS," filed Jun. 11, 2015, which is a continuation of U.S. patent application Ser. No. 14/607,639, now U.S. Pat. No. 9,179,964, entitled METHODS AND DEVICES TO TREAT NASAL AIRWAYS, filed Jan. 28, 2015, which is a continuation of U.S. patent application Ser. No. 14/026,922, now U.S. Pat. No. 8,986,301, entitled METHODS AND DEVICES TO TREAT NASAL AIRWAYS, filed Sep. 13, 2013, which is a continuation-in-part of U.S. patent application Ser. No. 13/495,844, now U.S. Pat. No. 8,936,594, entitled METHODS AND DEVICES TO TREAT NASAL AIRWAYS, filed Jun. 13, 2012, which claims priority to U.S. Provisional Patent Application Nos. 61/603,864, filed on Feb. 27, 2012 and 61/496,930, filed Jun. 14, 2011. The disclosures of all the above-referenced patent applications are hereby incorporated by reference in their entireties herein.

Please replace paragraph [0135] with the following replacement paragraph:

[0135] In some embodiments, the treatment element 32 may be configured to deliver heat energy to the nasal valve. In such embodiments, the treatment element may comprise any suitable heating element available to the skilled artisan. For example, the treatment element 32 may comprise electrical resistance heating elements. In alternative embodiments, the heating element may comprise conduits for delivering high-temperature fluids (e.g. hot water or steam) onto the nasal tissue. In some embodiments, a high-temperature fluid heating element may comprise flow

channels which place high-temperature fluids into conductive contact with nasal tissues (e.g. through a membrane wall) without injecting such fluids into the ~~patients~~patient's nose. In further embodiments, any other suitable heating element may be provided. In further embodiments, the treatment element 32 may comprise elements for delivering energy in other forms, such as light, laser, RF, microwave, cryogenic cooling, DC current and/or ultrasound in addition to or in place of heating elements.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor:	WOLF	Examiner:	CAREY
Serial No.:	15/596,455	Group Art Unit:	3792
Filed:	May 16, 2017	Docket No.:	17713.0001US10
Customer No.:	23552	Confirmation No.:	1879
Title:	METHODS OF TREATING NASAL AIRWAYS WITH RADIOFREQUENCY ENERGY		

AMENDMENT

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

Dear Examiner Carey,

In response to the Non-Final Office Action of April 16, 2019, please consider and enter the following amendments and remarks.

Amendments to the Specification begin on page 2.

Amendments to the Claims begin on page 4.

Remarks begin on page 8.

**TERMINAL DISCLAIMER TO OBVIATE A DOUBLE PATENTING
REJECTION OVER A "PRIOR" PATENT**

Docket Number (Optional)

17713.0001US10

In re Application of: Scott J. WOLF

Application No.: 15/596,455

Filed: May 16, 2017

For: METHODS OF TREATING NASAL AIRWAYS

The applicant, Aerin Medical Inc., owner of 100 percent interest in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of **prior patent** No. 8,936,594 as the term of said **prior patent** is presently shortened by any terminal disclaimer. The applicant hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the **prior patent** are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the applicant does not disclaim the terminal part of the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term of the **prior patent**, "as the term of said **prior patent** is presently shortened by any terminal disclaimer," in the event that said **prior patent** later:

- expires for failure to pay a maintenance fee;
- is held unenforceable;
- is found invalid by a court of competent jurisdiction;
- is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321;
- has all claims canceled by a reexamination certificate;
- is reissued; or
- is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

Check either box 1 or 2 below, if appropriate.

1. ☐ The undersigned is the applicant. If the applicant is an assignee, the undersigned is authorized to act on behalf of the assignee.

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

2. ☒ The undersigned is an attorney or agent of record. Reg. No. 73729

/Christopher P. Ziolkowski/
Signature

2019-06-06
Date

Christopher P. Ziolkowski
Typed or printed name

Attorney
Title

(612) 766-6025
Telephone Number

- ☒ Terminal disclaimer fee under 37 CFR 1.20(d) included.

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

This collection of information is required by 37 CFR 1.321. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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.



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/596,455	05/16/2017	Scott J. WOLF	17713.0001US10	1879
23552	7590	04/16/2019	EXAMINER	
MERCHANT & GOULD P.C.			CAREY, MICHAEL JAMES	
P.O. BOX 2903				
MINNEAPOLIS, MN 55402-0903				
			ART UNIT	PAPER NUMBER
			3792	
			NOTIFICATION DATE	DELIVERY MODE
			04/16/2019	ELECTRONIC

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

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

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

USPTO23552@merchantgould.com

<i>Office Action Summary</i>	Application No. 15/596,455	Applicant(s) WOLF et al.	
	Examiner MICHAEL J CAREY	Art Unit 3792	AIA (FITF) Status Yes

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

Period for Reply

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

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

Status

- 1) ☒ Responsive to communication(s) filed on 5/16/2017.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

- 5) ☒ Claim(s) 1-15 is/are pending in the application.
5a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 6) ☐ Claim(s) _____ is/are allowed.
- 7) ☒ Claim(s) 1-15 is/are rejected.
- 8) ☐ Claim(s) _____ is/are objected to.
- 9) ☐ Claim(s) _____ are subject to restriction and/or election requirements.

* 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 5/16/2017 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

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

Certified copies:

- a) ☐ All b) ☐ Some** c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

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

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)
Paper No(s)/Mail Date See Continuation Sheet
- 3) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 4) ☐ Other: _____

Continuation of Attachment(s) 2) Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)
Paper No(s)/Mail Date: 2/28/2019, 11/26/2018, 6/11/2018, 3/12/2018, 12/18/2017, 9/12/2017, 5/16/2017

DETAILED ACTION***Notice of Pre-AIA or AIA Status***

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

Specification

2. Any application numbers listed in the disclosure should be updated to reflect their patent status (e.g. pending, patented, abandoned) and publication numbers should be provided for any applications that have been published. Specifically, paragraph [0001] needs to be corrected. Furthermore, any reference to attorney docket numbers appearing therein should be removed.

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 112

4. 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.

5. Claims 14-15 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. The term "about" in claims 14-15 is a relative term which renders the claim indefinite. The term "about" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Further, as the term "about" is used with several different units of measure, the Examiner cannot determine the degree of leniency on these parameters.

Claim Rejections - 35 USC § 102

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

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

A person shall be entitled to a patent unless –

(a)(1) the claimed invention was patented, described in a printed publication, or in public use, on sale or otherwise available to the public before the effective filing date of the claimed invention.

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

8. Claim(s) 1-9 is/are rejected under 35 U.S.C. 102(a)(1) and (a)(2) as being anticipated by U.S. Patent 6,109,268 to Thapliyal (hereinafter “Thapliyal”). In regards to claims 1-9, Thapliyal discloses a method comprising:

a. positioning a treatment element of a nasal airway treatment device against target tissue of the nasal airway, wherein the treatment element comprises one or more bipolar electrode pairs (Col 24 Ln 46-65, Col 26 Ln 64 – Col 27 Ln 17); applying pressure with the treatment element against the target tissue (Col 10 Ln 21-42); applying radiofrequency energy with the one or more bipolar electrode pairs to heat cartilage of the nasal airway (Col 8 Ln 16-38, Col 26 Ln 64 – Col 27 Ln 17); and reshaping a region of the nasal airway and thereby treating the nasal obstruction, wherein the region remains at least partially reshaped after the treatment element is removed (Col 14 Ln 21-62)

- b. wherein the cartilage is located in an internal nasal valve area of the patient's nasal airway (Claim 4)
 - c. controlling at least one characteristic of the applied radiofrequency energy with a control system coupled with the nasal airway treatment device (Col 17 Ln 15-39)
 - d. applying a conductivity enhancing substance to the nasal airway (Col 13 Ln 16-32)
 - e. wherein applying radiofrequency energy comprises activating the one or more bipolar electrode pairs using an input control (Col 17 Ln 15-44, Col 26 Ln 64 – Col 27 Ln 17)
 - f. displaying one or more parameters of treatment while the radiofrequency energy is applied, the one or more parameters selected from the group consisting of time, power level, temperature, electric impedance, electric current, and depth of treatment (Col 17 Ln 15-44)
 - g. applying local anesthesia to an area near or surrounding the target tissue (Col 27 Ln 18-38)
 - h. wherein the radiofrequency energy is produced by a radiofrequency energy source configured to run between about 1 Watt and about 100 Watts (Col 15 Ln 60 – Col 16 Ln 8)
 - i. wherein applying the radiofrequency energy comprises heating the cartilage to a temperature of about 50 degrees Celsius to about 70 degrees Celsius (Col 5 Ln 36-65)
9. Claim(s) 11-15 is/are rejected under 35 U.S.C. 102(a)(1) and (a)(2) as being anticipated by Thapliyal. In regards to claims 11-15, Thapliyal discloses a method comprising:
- a. heating submucosal tissue of a nasal airway using a bipolar radiofrequency electrode pair of a treatment element of a nasal airway treatment device, such that the submucosal tissue shrinks, tightens, or stiffens while the submucosal tissue heals,

thereby decreasing nasal airflow resistance or perceived airflow resistance within the nasal airway (Col 7 Ln 56 – Col 8 Ln 15, Col 26 Ln 64 – Col 27 Ln 17)

- b. repositioning the submucosal tissue with the treatment element, wherein the submucosal tissue remains at least partially repositioned after the tissue heals (Col 14 Ln 21-62)
- c. wherein the submucosal tissue comprises cartilage (Claim 4)
- d. wherein the submucosal tissue is heated to a sub-ablative temperature (Col 5 Ln 36-65)
- e. sensing a temperature using a thermocouple on the nasal airway treatment device; and modifying the heating of the submucosal tissue based on the sensed temperature (Col 6 Ln 66 – Col 7 Ln 11)

Claim Rejections - 35 USC § 103

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

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

11. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103 are summarized as follows:

- 1. Determining the scope and contents of the prior art.
- 2. Ascertaining the differences between the prior art and the claims at issue.
- 3. Resolving the level of ordinary skill in the pertinent art.
- 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Application/Control Number: 15/596,455
Art Unit: 3792

Page 6

12. This application currently names joint inventors. In considering patentability of the claims the examiner presumes that the subject matter of the various claims was commonly owned as of the effective filing date of the claimed invention(s) absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and effective filing dates of each claim that was not commonly owned as of the effective filing date of the later invention in order for the examiner to consider the applicability of 35 U.S.C. 102(b)(2)(C) for any potential 35 U.S.C. 102(a)(2) prior art against the later invention.

13. Claim 10 is/are rejected under 35 U.S.C. 103 as being unpatentable over Thapliyal in view of U.S. Patent Application Publication 2002/0016588 to Wong (hereinafter "Wong").

Thapliyal does not disclose that the radiofrequency energy is applied to the target tissue for about 15 seconds. However, Wong discloses a method of using radiofrequency energy to reshape cartilage wherein the radiofrequency energy is applied to the target tissue for about 15 seconds ([0053]). It would have been obvious before the effective filing date of the claimed invention to modify Thapliyal to include a 15 second therapy time such as that disclosed by Wong in order to prevent applying an overdose of energy which may harm the patient.

Double Patenting

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

Application/Control Number: 15/596,455
Art Unit: 3792

Page 7

438, 164 USPQ 619 (CCPA 1970); *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on nonstatutory double patenting provided the reference application or patent either is shown to be commonly owned with the examined application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement. See MPEP § 717.02 for applications subject to examination under the first inventor to file provisions of the AIA as explained in MPEP § 2159. See MPEP §§ 706.02(l)(1) - 706.02(l)(3) for applications not subject to examination under the first inventor to file provisions of the AIA. A terminal disclaimer must be signed in compliance with 37 CFR 1.321(b).

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

15. Claims 1-15 rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1-2, 6, 11-12, 16, and 18 of U.S. Patent No. 8,986,301 in view of Thapliyal and Wong. The claims of the '301 patent disclose all of the limitations of the current claims except in the cases of claims 5-9, 10, and 14. However, Thapliyal and Wong have been relied upon to show these limitations would have been obvious to persons having ordinary skill in the art.

In regards to claims 5-6, 8-9, and 14, Thapliyal discloses a method of reshaping cartilage using radiofrequency energy comprising:

- a. wherein applying radiofrequency energy comprises activating the one or more bipolar electrode pairs using an input control (Col 17 Ln 15-44, Col 26 Ln 64 – Col 27 Ln 17)
- b. displaying one or more parameters of treatment while the radiofrequency energy is applied, the one or more parameters selected from the group consisting of time, power level, temperature, electric impedance, electric current, and depth of treatment (Col 17 Ln 15-44)
- c. wherein the radiofrequency energy is produced by a radiofrequency energy source configured to run between about 1 Watt and about 100 Watts (Col 15 Ln 60 – Col 16 Ln 8)
- d. wherein applying the radiofrequency energy comprises heating the cartilage to a temperature of about 50 degrees Celsius to about 70 degrees Celsius (Col 5 Ln 36-65)
- e. wherein the submucosal tissue is heated to a sub-ablative temperature (Col 5 Ln 36-65)

It would have been obvious before the effective filing date of the claimed invention to modify the '301 patent to include activating and modifying the parameters of the radiofrequency energy such as that taught by Thapliyal in order to deliver the proper amount of energy to the patient that will reshape the cartilage without damaging the tissue in the immediate vicinity.

In regards to claim 7, Thapliyal discloses a method of reshaping cartilage using radiofrequency energy comprising applying local anesthesia to an area near or surrounding the target tissue (Col 27 Ln 18-38). It would have been obvious before the effective filing date of the claimed invention to modify the '301 patent to include the application of anesthesia such as that taught by Thapliyal in order for the patient to be comfortable during the procedure.

In regards to claim 10, Wong discloses a method of using radiofrequency energy to reshape cartilage wherein the radiofrequency energy is applied to the target tissue for about 15 seconds ([0053]). It would have been obvious before the effective filing date of the claimed invention to

modify the '301 patent to include a 15 second therapy time such as that disclosed by Wong in order to prevent applying an overdose of energy which may harm the patient.

16. Claims 1-15 are rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1, 3, 6, 9, 12, 14-15 of U.S. Patent No. 8,936,594 in view of Thapliyal.

The claims of the '594 patent disclose all of the limitations of the current claims except in the cases of claims 1, 4-8, and 15. However, Thapliyal has been relied upon to show these limitations would have been obvious to persons having ordinary skill in the art.

In regards to claims 1, 5-6, and 8, Thapliyal discloses a method of reshaping cartilage using radiofrequency energy comprising:

- a. positioning a treatment element of a nasal airway treatment device against target tissue of the nasal airway, wherein the treatment element comprises one or more bipolar electrode pairs (Col 24 Ln 46-65, Col 26 Ln 64 – Col 27 Ln 17); applying pressure with the treatment element against the target tissue (Col 10 Ln 21 -42); applying radiofrequency energy with the one or more bipolar electrode pairs to heat cartilage of the nasal airway (Col 8 Ln 16-38, Col 26 Ln 64 – Col 27 Ln 17); and reshaping a region of the nasal airway and thereby treating the nasal obstruction, wherein the region remains at least partially reshaped after the treatment element is removed (Col 14 Ln 21-62)
- b. wherein applying radiofrequency energy comprises activating the one or more bipolar electrode pairs using an input control (Col 17 Ln 15-44, Col 26 Ln 64 – Col 27 Ln 17)
- c. displaying one or more parameters of treatment while the radiofrequency energy is applied, the one or more parameters selected from the group consisting of time, power level, temperature, electric impedance, electric current, and depth of treatment (Col 17 Ln 15-44)

- d. wherein the radiofrequency energy is produced by a radiofrequency energy source configured to run between about 1 Watt and about 100 Watts (Col 15 Ln 60 – Col 16 Ln 8)

It would have been obvious before the effective filing date of the claimed invention to modify the '594 patent to include activating and modifying the parameters of the bipolar radiofrequency energy such as that taught by Thapliyal in order to deliver the proper amount of energy to the patient that will reshape the cartilage without damaging the tissue in the immediate vicinity. In regards to claim 4, Thapliyal discloses a method of reshaping cartilage with radiofrequency energy comprising applying a conductivity enhancing substance to the nasal airway (Col 13 Ln 16-32). It would have been obvious before the effective filing date of the claimed invention to modify the '594 patent to include applying a conductivity enhancing substance in order to increase the effectiveness of the energy therapy.

In regards to claim 7, Thapliyal discloses a method of reshaping cartilage using radiofrequency energy comprising applying local anesthesia to an area near or surrounding the target tissue (Col 27 Ln 18-38). It would have been obvious before the effective filing date of the claimed invention to modify the '594 patent to include the application of anesthesia such as that taught by Thapliyal in order for the patient to be comfortable during the procedure.

In regards to claim 15, Thapliyal discloses a method of reshaping cartilage using radiofrequency energy comprising sensing a temperature using a thermocouple on the nasal airway treatment device; and modifying the heating of the submucosal tissue based on the sensed temperature (Col 6 Ln 66 – Col 7 Ln 11). It would have been obvious before the effective filing date of the claimed invention to modify the '594 patent to include sensing temperature and modifying the therapy based on the sensing such as that taught by Thapliyal to deliver the proper amount of energy to the patient that will reshape the cartilage without damaging the tissue in the immediate vicinity.

Conclusion

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL JAMES CAREY whose telephone number is (571)270-7235.

The examiner can normally be reached on Monday-Friday (9am-5pm).

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

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Koharski can be reached on 571-272-7230. 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.

/MICHAEL J CAREY/
Primary Examiner, Art Unit 3792

<i>Notice of References Cited</i>	Application/Control No. 15/596,455	Applicant(s)/Patent Under Reexamination WOLF et al.	
	Examiner MICHAEL J CAREY	Art Unit 3792	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-6109268-A	08-2000	Thapliyal; Hira V.	A61B18/1485	128/898
*	B	US-8986301-B2	03-2015	Wolf; Scott J.	A61F5/08	606/41
*	C	US-8936594-B2	01-2015	Wolf; Scott J.	A61B18/1485	606/41
*	D	US-20020016588-A1	02-2002	Wong, Brian J.F.	A61B18/14	606/32
	E					
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	J					
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FOREIGN PATENT DOCUMENTS

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*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>Search Notes</i> 	Application/Control No. 15/596,455	Applicant(s)/Patent Under Reexamination WOLF et al.
	Examiner MICHAEL J CAREY	Art Unit 3792

CPC - Searched*		
Symbol	Date	Examiner
a61b5/01	04/12/2019	MC
a61b17/2816	04/12/2019	MC
a61b18/02, 06, 085, 1206, 14, 1442, 1445, 1477, 1815, 20	04/12/2019	MC
a61f5/08, 56	04/12/2019	MC
a61f7/10	04/12/2019	MC
a61n1/403	04/12/2019	MC
a61n5/025, 0603, 0625	04/12/2019	MC
a61n7/022	04/12/2019	MC

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner
606	41	04/12/2019	MC

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

Search Notes		
Search Notes	Date	Examiner
Google Patent Search	04/12/2019	MC
Inventor and Assignee Search	04/12/2019	MC
IDS References Considered	04/12/2019	MC
Text Limited Search	04/12/2019	MC

/MICHAEL J CAREY/ Primary Examiner, Art Unit 3792	
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<i>Search Notes</i> 	Application/Control No. 15/596,455	Applicant(s)/Patent Under Reexamination WOLF et al.
	Examiner MICHAEL J CAREY	Art Unit 3792

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

/MICHAEL J CAREY/ Primary Examiner, Art Unit 3792	
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<i>Index of Claims</i> 	Application/Control No. 15/596,455	Applicant(s)/Patent Under Reexamination WOLF et al.
	Examiner MICHAEL J CAREY	Art Unit 3792

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

[illegible]

Doc code: IDS

PTO/SB/08a (01-10)

Doc description: Information Disclosure Statement (IDS) Filed

Approved for use through 07/31/2012. OMB 0651-0031

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

Application Number	15596455
Filing Date	2017-05-16
First Named Inventor	Scott J. WOLF
Art Unit	3766
Examiner Name	Michael James CAREY
Attorney Docket Number	17713.0001US10

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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	5542916		1996-08-06	Hirsch et al.	
	2	5938659		1999-08-17	Tu	
	3	6502574		2003-01-07	Stevens	
	4	7678069		2010-03-16	Baker et al.	
	5	9125677		2015-09-08	Sobol	
	6	9687288		2017-06-27	Saadat	
	7	9687296		2017-06-27	Wolf et al.	
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	1	20170209199		2017-07-27	Wolf et al.	
	2	20170231651		2017-08-17	Dinger et al.	
	3	20020049464		2002-04-25	Donofrio et al.	
	4	20050020901		2005-01-27	Belson	
	5	20120316473		2012-12-13	Bonutti et al.	
	6	20170252089		2017-09-07	Hester	
	7	20170245924		2017-08-31	Wolf et al.	

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	1	2001043653	WO		2001-06-21			

**INFORMATION DISCLOSURE
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Art Unit	3766
Examiner Name	Michael James CAREY
Attorney Docket Number	17713.0001US10

	2	2015153696	WO	2015-10-08			
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NON-PATENT LITERATURE DOCUMENTS

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
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Examiner Signature	/MICHAEL J CAREY/	Date Considered	04/12/2019
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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.

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

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Filing Date	2017-05-16
First Named Inventor	Scott J. WOLF
Art Unit	3766
Examiner Name	Michael James CAREY
Attorney Docket Number	17713.0001US10

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	/Christopher P. Ziolkowski/	Date (YYYY-MM-DD)	2017-09-12
Name/Print	Christopher P. Ziolkowski	Registration Number	73729

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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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)).
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Doc code: IDS

PTO/SB/08a (01-10)

Doc description: Information Disclosure Statement (IDS) Filed

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

Application Number	15596455
Filing Date	2017-05-16
First Named Inventor	Scott J. WOLF
Art Unit	3766
Examiner Name	CAREY, MICHAEL JAMES
Attorney Docket Number	17713.0001US10

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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	9788886		2017-10-17	Wolf et al.	
	2	9801752		2017-10-31	Wolf et al.	
	3	9763723		2017-09-19	Saadat	

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	1	20050234439		2005-10-20	Underwood	
	2	20100174283		2010-07-08	McNall	
	3	20120298105		2012-11-29	Osorio	

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	1	199907299	WO		1999-02-18			
	2	2010077980	WO		2010-07-08			
	3	2012174161	WO		2012-12-20			

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	1	Supplementary European Search Report for Application No. 15772528, mailed September 26, 2017, 7 pages.	

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Examiner Signature	/MICHAEL J CAREY/	Date Considered	04/12/2019
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Signature	/Scott M. Smith/	Date (YYYY-MM-DD)	2017-12-18
Name/Print	Scott M. Smith	Registration Number	48268

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Attorney Docket Number	17713.0001US10

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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	9888957		2018-02-13	Wolf et al.	
	2	9913682		2018-03-13	Wolf et al.	
	3	5733280		1998-03-31	Avitall	
	4	7097641		2006-08-29	Arless et al.	
	5	8128617		2012-03-06	Bencini et al.	

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	1	20020087155		2002-07-04	Underwood et al.	

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Examiner Name	CAREY, MICHAEL JAMES
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2	20170360495	2017-12-21	Wolf et al.
3	20180000535	2018-01-04	Wolf et al.
4	20050240147	2005-10-27	Makower et al.
5	20080027423	2008-01-31	CHOI et al.
6	20080312644	2008-12-18	Fourkas et al.
7	20100241112	2010-09-23	Watson

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	1	WO 2003024349	WO		2003-03-27			

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Attorney Docket Number	17713.0001US10	

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Signature	/Scott M. Smith/	Date (YYYY-MM-DD)	2018-03-12
Name/Print	Scott M. Smith	Registration Number	48268

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PTO/SB/08a (02-18)

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Art Unit	3762
Examiner Name	CAREY, MICHAEL JAMES
Attorney Docket Number	17713.0001US10

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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	9943361		2018-04-17	Wolf et al.	

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	1	20050288665		2005-12-29	Woloszko et al.	
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Signature	/Scott M. Smith/	Date (YYYY-MM-DD)	2018-06-11
Name/Print	Scott M. Smith	Registration Number	48,268

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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.

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Bibliographic Data

Application No: 15/596,455

Foreign Priority claimed: ☐ Yes ☒ No35 USC 119 (a-d) conditions met: ☐ Yes ☒ No ☐ Met After Allowance

Verified and Acknowledged: /MICHAEL J CAREY/

Examiner's Signature

Initials

Title:

METHODS OF TREATING NASAL AIRWAYS

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
05/16/2017	606	3792	17713.0001US10
RULE			

APPLICANTS

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Andrew FRAZIER Sunnyvale, CA, UNITED STATES

CONTINUING DATA

This application is a CON of 15248935 08/26/2016 PAT 9687296

15248935 is a CON of 14864428 09/24/2015 PAT 9433463

14864428 is a CON of 14737196 06/11/2015 PAT 9179967

14737196 is a CON of 14607639 01/28/2015 PAT 9179964

14607639 is a CON of 14026922 09/13/2013 PAT 8986301

14026922 is a CIP of 13495844 06/13/2012 PAT 8936594

13495844 has PRO of 61603864 02/27/2012

13495844 has PRO of 61496930 06/14/2011

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Application Number	15596455
Filing Date	2017-05-16
First Named Inventor	WOLF
Art Unit	3792
Examiner Name	CAREY
Attorney Docket Number	17713.0001US10

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	1	10028780		2018-07-24	Wolf et al.	

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Application Number	15596455
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Examiner Name	CAREY
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Art Unit	3792
Examiner Name	CAREY
Attorney Docket Number	17713.0001US10

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	/Scott M. Smith/	Date (YYYY-MM-DD)	2018-11-26
Name/Print	Scott M. Smith	Registration Number	48268

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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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).
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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.J.C/

Doc code: IDS

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Doc description: Information Disclosure Statement (IDS) Filed

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Application Number

Filing Date

First Named Inventor

WOLF

Art Unit

Examiner Name

Attorney Docket Number

17713.0001US10

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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	4887605		1989-12-19	Angelsen et al.	
	2	5348008		1994-09-20	Bornn et al.	
	3	5533499		1996-07-09	Johnson	
	4	5624439		1997-04-29	Edwards et al.	
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Examiner Name		
Attorney Docket Number	17713.0001US10	

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10	5738114		1998-04-14	Edwards	
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20	5827277		1998-10-27	Edwards	
21	5843021		1998-12-01	Edwards et al.	
22	5843077		1998-12-01	Edwards	
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Examiner Name		
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32	6152143		2000-11-28	Edwards	
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54	7055523		2006-06-06	Brown	
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	1	20020016588		2002-02-07	Wong et al.	
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	1	101325919	CN		2008-12-17		corresponding English US2007073282	×

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2	2007037895	WO		2007-04-05			☐
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	1	Buckley et al., "High-resolution spatial mapping of shear properties in cartilage," J Biomech., 2010 Mar 3;43(4):796-800, Epub Nov. 5, 2009.	
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11	Singapore Search Report for Application Serial No. 201309238-2, Jun. 9, 2014 for pp. 1-27.
12	Stewart et al., "Development and validation of the Nasal Obstruction Symptom Evaluation (NOSE) scale," Otolaryngol Head Neck Surg., 130(2):157-163, Feb. 2004.
13	Stupak, "Endonasal repositioning of the upper lateral cartilage and the internal nasal valve," Ann Otol Rhinol Laryngol., 120(2):88-94, Feb. 2011.
14	Stupak, MD, H.D., A Perspective on the Nasal Valve, Dept. of Otorhinolaryngology, Albert Einstein College of Medicine, Nov. 6, 2009.

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

EXAMINER SIGNATURE

Examiner Signature	/MICHAEL J CAREY/	Date Considered	04/12/2019
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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.

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

Application Number		
Filing Date		
First Named Inventor	WOLF	
Art Unit		
Examiner Name		
Attorney Docket Number	17713.0001US10	

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.

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

Application Number		
Filing Date		
First Named Inventor	WOLF	
Art Unit		
Examiner Name		
Attorney Docket Number	17713.0001US10	

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	/Christopher P. Ziolkowski/	Date (YYYY-MM-DD)	2017-05-16
Name/Print	Christopher P. Ziolkowski	Registration Number	73,729

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:

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. /M.J.C/

Doc code: IDS

PTO/SB/08a (01-10)

Doc description: Information Disclosure Statement (IDS) Filed

Approved for use through 07/31/2012. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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

Application Number	15596455
Filing Date	2017-05-16
First Named Inventor	WOLF
Art Unit	3792
Examiner Name	CAREY
Attorney Docket Number	17713.0001US10

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	7655243		2010-02-02	Deem et al.	
	2	9763743		2017-09-19	Lin	
	3	10028781		2018-07-24	Saadat	

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	1	20180344378		2018-12-06	Wolf et al.	
	2	20180263678		2018-09-20	Saadat	

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Filing Date	2017-05-16
First Named Inventor	WOLF
Art Unit	3792
Examiner Name	CAREY
Attorney Docket Number	17713.0001US10

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NON-PATENT LITERATURE DOCUMENTS

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	Chen et al., China Journal of Endoscopy, Vol. 11, No. 3. pp. 239-243, March 2005, [English Translation of Title] "Radiofrequency treatment of nasal posterior-under nerve ethmoidal nerve and infratubinal for perennial allergic rhinitis under nasal endoscope," [also translated as] "Preliminary exploration of radiofrequency thermocoagulation of the posterior inferior nasal nerve, anterior ethmoidal nerve, and inferior nasal concha under nasal endoscopy in the treatment of perennial allergic rhinitis." 9 pages.	
	2	Fang et al., J First Mil Med Univ, Vol. 25 No. 7, pp. 876-877, 2005, [English translation of title] "Nasal endoscopy combined with multiple radiofrequency for perennial allergic rhinitis" [also translated as] "Nasal Endoscopic Surgery Combined with Multisite Radiofrequency Technology for Treating Perennial Allergic Rhinitis," 4 pages.	
	3	Kong et al., Journal of Clinical Otorhinolaryngology, 2005. "Clinical observation on radiofrequency ablation treatment in perennial allergic rhinitis," Retrieved from the Internet: <URL:http://en.cnki.com.cn/Article_en/CJFDTOTAL-LCEH200505015.htm>, 1 page.	
	4	Liu et al., China Journal of Endoscopy, Vol. 14, No. 11, pp. 1127-1130, November 2008, [English Translation of Title] "Impact of treatment of perennial rhinitis by radiofrequency thermo-coagulations to vidian and anterior ethmoidal nerves on mucociliary clearance," [also translated as] "Impact of radiofrequency thermocoagulation of bilateral vidian and anterior ethmoidal nerve cluster regions on nasal mucociliary transport function in perennial allergic rhinitis and vasomotor rhinitis." 12 pages.	
	5	Search Report in European Application No. 18204723.3 dated February 18, 2019, 8 pages.	

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

EXAMINER SIGNATURE

Examiner Signature	/MICHAEL J CAREY/	Date Considered	04/12/2019
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Signature	/Christopher P. Ziolkowski/	Date (YYYY-MM-DD)	2019-02-28
Name/Print	Christopher P. Ziolkowski	Registration Number	73,729

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.J.C/

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	2	((("8986301") or ("8936594")).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/04/12 08:45
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EAST Search History (Prior Art)

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L6	114380	(A61B18/02 or A61B18/14 or A61N7/022 or A61F7/10 or A61B17/2816 or A61N1/403 or A61N5/025 or A61B18/1206 or A61N5/0625 or A61B18/1477 or A61F5/56 or A61N5/0603 or A61B18/06 or A61B18/1445 or A61B18/085 or A61B5/01 or A61F5/08 or A61B18/20 or A61B18/1815 or A61B18/1442).cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	OFF	2019/04/12 09:04
L8	117586	I5 or I6	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	OFF	2019/04/12 09:09
L9	346	I8 and ((nose or nasal) same (radiofrequency or rf))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	OFF	2019/04/12 09:13
L10	191	I9 and bipolar	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	OFF	2019/04/12 09:13
L11	106	I10 and cartilage	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	OFF	2019/04/12 09:13
S1	18	((("AERIN") near3 ("MEDICAL") near3 ("INC"))).AS,AANM.	USPAT	OR	OFF	2019/04/12 07:32

EAST Search History (Prior Art)

S2	305	((("WOLF") near3 ("Scott")) OR (("FRAZIER") near3 ("Andrew"))).INV.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2019/04/12 07:32
S3	160	("10028781" "20180263678" "20180344378 "7655243" "9763743" "10028780" "20080 125626" "20180177542" "20180177546" "2 0180185085" "20180228533" "2018031799 7" "20050288665" "20090124958" "994336 1" "20020087155" "20050240147" "200800 27423" "20080312644" "20100241112" "20 170360495" "20180000535" "5733280" "70 97641" "8128617" "9888957" "9913682" "2 0050234439" "20100174283" "2012029810 5" "9763723" "9788886" "9801752" "20020 049464" "20050020901" "20120316473" "2 0170209199" "20170231651" "2017024592 4" "20170252089" "5542916" "5938659" "6 502574" "7678069" "9125677" "9687288" " 9687296" "20020016588" "20020128641" " 20030144659" "20030208194" "200302254 03" "20040220644" "20050119643" "20050 222565" "20060235377" "20060253117" "2 0060276817" "20070066944" "2007007328 2" "20070219600" "20080027480" "200800 82090" "20090018485" "20090143821" "20 090292358" "20100144996" "20100152730" "20110009737" "20110282268" "20120039 954" "20120078377" "20120316557" "2012 0323227" "20120323232" "20130218158" " 20140088463" "20140114233" "201502020 03" "20160287315" "20160361112" "20170 007316" "20170014258" "20170095288" "4 887605" "5348008" "5533499" "5624439" " 5674191" "5707349" "5718702" "5728094" " 5730719" "5738114" "5743870" "5743904" "5746224" "5800429" "5807306" "5816095 "5817049" "5820580" "5823197" "582727 7" "5843021" "5843077" "5846235" "58793 49" "6045549" "6096033" "6102907" "6109 268" "6126657" "6131579" "6139546" "615 2143" "6165173" "6179803" "6210355" "62 28079" "6231569" "6293941" "6309386" "6 371926" "6383181" "6391028" "6416491" " 6425151" "6431174" "6451013" "6551310" " 6562036" "6575969" "6589235" "6659106" "6911027" "6978781" "7055523" "7114495 "7322993" "7416550" "7442191" "778073 0" "7824394" "7850683" "8137345" "83177 81" "8317782" "8936594" "8986301" "9072 597" "9179964" "9179967" "9237924" "941 5194" "9433463" "9452010" "9452087" "94 86278" "9526571").PN.	US-PGPUB; USPAT	OR	OFF	2019/04/12 07:35

EAST Search History (Prior Art)

S4	1	("6109268").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/04/12 07:37
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EAST Search History (Interference)

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