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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------------------|-----------------------------|
| 11/801,647 | 05/09/2007 | Gregory W. Haggquist | 6000.108.01US (TT-8) | 4523 |
| 61529 | 7590 | 02/01/2013 | | |
| Neugeboren O'Dowd PC 1227 Spruce Street SUITE 200 BOULDER, CO 80302 | | | EXAMINER GREENE, JASON M | |
| | | | ART UNIT 1772 | PAPER NUMBER |
| | | | NOTIFICATION DATE 02/01/2013 | DELIVERY MODE 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):

craig@neugeborenlaw.com
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| | | | |
|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 11/801,647 | Applicant(s) HAGGQUIST, GREGORY W. | |
| | Examiner Jason M. Greene | Art Unit 1772 | |

-- 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 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, 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 17 December 2012.
- 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) 1,3-33 and 35-73 is/are pending in the application.
- 5a) Of the above claim(s) 42-62 is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 1,3-33,35-41 and 63-73 is/are rejected.
- 8) ☐ Claim(s) ____ is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

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

Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☒ The drawing(s) filed on 9 May 2007 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).
- a) ☐ All b) ☐ Some * c) ☐ None of:
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) <input type="checkbox"/> Notice of References Cited (PTO-892) | 3) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>1/2/13</u> . | 4) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 17 December 2012 has been entered.

Response to Amendment

Response to Arguments

2. Applicant's arguments, see page 15, lines 5-19, filed 17 December 2012, with respect to the rejection(s) of claim(s) 28-31, 33, 35-39, 63, 64, 66-69, 71 and 72 under 35 USC 102 and 103 have been fully considered and are persuasive. Therefore, the rejections have been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of the Haggquist reference under 35 USC 103.

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3. Applicant's arguments filed 17 December 2012 have been fully considered but they are not persuasive. Applicants argue that the small (i.e. 5-40 nm) particle size of Spijkers would fail to impart the recited moisture vapor transmission rate to the disclosed membrane. However, the examiner does not agree. It is initially noted that Applicants' disclosure is silent as to the specific sizes of the active particles used to manufacture the membrane. Furthermore, there is nothing on the record to show that the particle size disclosed by the Spijkers reference would fail to impart the recited moisture vapor transmission rate on the disclosed membrane, especially since the particle loading rate overlaps to instantly claimed loading rate. While some of the carbon will be "buried" in the membrane, other particles will be located at or near the outer edge. Additionally, Applicants' comment regarding larger active particles being incompatible with the "small membrane size" of Spijkers is not understood in view of the fact that both the instant membrane and the Spijkers membrane have approximately the same thickness. As was noted in the prior Office action, the instant membrane has a thickness of 1 mil (25.4 μm) (see instant Example 1) while the Spijkers membrane has a thickness of 5-50 μm or 20-50 μm (see col. 5, lines 36-49 of Spijkers et al.). While the reference membrane can have a thickness as small as 5 μm in a non-preferred embodiment, it can likewise have a thickness almost twice the thickness of the instant membrane. Thus using a larger particle size would not render the Spijkers membrane inoperable.

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4. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the size of the active particles) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 1, 3-33, 35-41 and 63-73 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spijkers et al. (US 6,028,019) in view of Haggquist (US 2004/0018359 A1).

Spijkers et al. discloses a water-proof composition comprising a liquid-impermeable breathable (water vapor permeable) cured base material, and a plurality of particles (carbon soot) in contact with the liquid impermeable breathable cured base material, wherein the particles inherently improve the moisture vapor transport capacity of the composition (including within the instantly recited range), along with imparting anti-static (see col. 5, lines 29-30) and stealth properties, and wherein the particles

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comprise 1-10% of the total weight of the composition (see col. 4, lines 40-47) at col. 1, line 55 to col. 5, line 49.

Spijkers et al. teaches the claimed water-proof breathable membrane except for the carbon particles being activated carbon and the active particles having a removable encapsulate. However, Haggquist teaches a similar membrane wherein activated carbon particles (for odor adsorbance) are encapsulated (including using the claimed materials) to prevent premature deactivation (see paragraphs [0028]-[0033]), and one of ordinary skill in the art would have recognized that the removable encapsulate could be used for such a purpose in the Spijkers et al. membrane. It is noted that Haggquist also teaches using zeolites as an alternate to activated carbon as well using active particles providing anti-microbial activity (see paragraph [0030]). Haggquist also teaches using multiple encapsulants at paragraph [0040].

While Spijkers et al. does not explicitly recite the particles imparting stealth or quick drying properties, the Examiner contends that the particles will inherently impart such properties since the membrane of Spijkers et al. is substantially identical to the instantly claimed membrane. Specifically both teach a polymeric membrane impregnated with carbon particles. Since the membranes are substantially identical, the claimed properties are assumed to be inherent and the burden of proof shifts to Applicants to demonstrate otherwise. See MPEP 2112.01.

Spijkers et al. also teaches the membrane being incorporated into various articles including fabrics, clothing and laminates at col. 4, line 60 to col. 5, line 35.

With particular regard to claim 7, Spijkers et al. does not teach the recited polymers, but Haggquist teaches such polymers being suitable in water-resistant, vapor permeable applications (see paragraphs [0030] and [0035) and substitution of one polymeric material for another would have been within the scope of one having ordinary skill. Additionally, the polymers recited in claim 7 are well known hydrophobic materials and their use in place of the polyether ester of Spijkers et al. would have been within the scope of one having ordinary skill.

With regard to claims 30, 32, 66 and 71, while Spijkers et al. does not teach an active particle loading of 25-75wt% or 30-50wt% one of ordinary skill in the art would have recognized that the loading could have been increased to provide an enhanced effect.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M. Greene whose telephone number is (571)272-1157. The examiner can normally be reached on Monday - Friday (9:00 AM to 5:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Insuk Bullock can be reached on (571) 272-5954. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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

/Jason M. Greene/
Primary Examiner, Art Unit 1772

jmg
January 28, 2013