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NOTICE OF ALLOWANCE AND FEE(S) DUE

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MCKEE, VOORHEES & SEASE, P.L.C.
801 GRAND AVENUE
SUITE 3200
DES MOINES, IA 50309-2721

EXAMINER

LANGEL, WAYNE A

ART UNIT

PAPER NUMBER

1736

DATE MAILED: 09/23/2016

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/643,738	03/10/2015	Michael McIlrath	P11395US00	1000

TITLE OF INVENTION: ELECTROSTATIC ADHESION OF DRY POWDERS TO MACRO FERTILIZERS

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$960	\$0	\$0	\$960	12/23/2016

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: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

Notice of Allowability	Application No. 14/643,738	Applicant(s) MCILRATH, MICHAEL	
	Examiner WAYNE LANGEL	Art Unit 1736	AIA (First Inventor to File) 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 the amendment 8-31-16.
☐ 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 1-8,10-17 and 21. 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) | 5. ☒ Examiner's Amendment/Comment |
| 2. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date ____ | 6. ☐ Examiner's Statement of Reasons for Allowance |
| 3. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 7. ☐ Other ____. |
| 4. ☒ Interview Summary (PTO-413),
Paper No./Mail Date <u>9-15-16</u> . | |

/WAYNE LANGEL/
Primary Examiner, Art Unit 1736

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

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in an interview with Mr. Sease on September 15, 2016.

In claim 1, line 16, "; and" has been deleted.

In claim 2, line 2, a period (.) has been inserted after "100 kV".

IN claim 5, line 3, "micronutrients" has been changed to - - micronutrient - -.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WAYNE LANGELE whose telephone number is (571)272-1353. The examiner can normally be reached on Monday through Friday, 8:30 am - 4:45 pm Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1736

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.

/WAYNE LANGE/
Primary Examiner, Art Unit 1736

Amendments to the Claims

1. (Currently amended) A method for adhering an agricultural input powder to an agronomic carrier comprising:
providing an agricultural input powder wherein at least half of the particles of the powder are of an average diameter between about 10 and about 90 microns in size;
providing an electrostatic charging chamber comprising electrodes for charging particles of powder;
providing a grounded metal component and agronomic carriers to be coated;
applying air pressure to the powder such that the powder flows as a directable jet through the charging chamber where the particles of the powder are electrostatically charged by the electrodes, said electrostatically charged powder being driven towards the grounded metal component; and
electrostatically charging a quantity of dry agricultural input powder in a charging chamber comprising a grounded metal component and bringing the agronomic carriers in contact with the grounded metal component such that the carrier becomes grounded such that the electrostatically charged powder moves onto and towards the grounded agronomic carrier metal component; and
passing the agronomic carriers by the charged powder such that the charged powder adheres to the carrier.
2. (Original) The method according to claim 1 wherein the electrostatic charge is applied to the agronomic input powder at from 15 to 100 kV
3. (Original) The method according to claim 1 wherein the charging chamber is at an air pressure between 0-4 BAR.
4. (Original) The method according to claim 1 wherein the agronomic carrier is selected from the group consisting of: seeds; nitrogen fertilizer products; phosphate fertilizer products; potassium fertilizer products; sulfur fertilizer products; calcium fertilizer products; magnesium

fertilizer products; urea prills; dry fertilizer products; granular fertilizer products; inert pellets; and biodegradable pellets.

5. (Original) The method according to claim 1 wherein the agricultural input powder is selected from the group consisting of: a fungicide; an insecticide; a nutrient; a fertilizer powder or component thereof; an inoculant; a soil amendment; a micronutrients; and combinations thereof.

6. (Original) The method according to claim 1 wherein at least 50% of the powder passes through a 100 MESH screen.

7. (Original) The method according to claim 1 wherein the powder is between 100 MESH to 450 MESH.

8. (Original) The method according to claim 1 wherein the powder is between 100 MESH to 325 MESH.

9. (Cancelled)

10. (Original) The method according to claim 5 wherein the agricultural input is a nutrient and the nutrient is selected from the group consisting of: nitrogen, phosphorus, potassium, calcium and magnesium.

11. (Currently amended) The method according to claim 5 wherein the agricultural input is a ~~micronutrient and the micronutrient~~ is selected from the group consisting of zinc, copper, manganese, boron, iron, calcium, magnesium, molybdenum, chloride-based compounds, selenium, phosphorus, phosphate, nitrogen, potassium, and sulfur.

12. (Original) The method according to claim 1 where the electrostatic charge is applied at a rate between 25 kV to 100 kV.

13. (Original) The method according to claim 1 where the electrostatic charge is applied at a rate between from 15 kV to 25 kV.
14. (Original) The method according to claim 1 where the electrostatic charge is applied at a rate between from 15 kV to 50 kV.
15. (Original) The method according to claim 1 where the electrostatic charge is applied at a rate between from 15 kV to 75 kV.
16. (Original) The method according to claim 1 where the electrostatic charge is applied at a rate between from 25 kV to 75 kV.
17. (Original) The method according to claim 1 where the electrostatic charge is applied at a rate between from 25 to 50 kV.
18. (Cancelled)
19. (Cancelled)
20. (Cancelled)
21. (New) The method according to claim 1 wherein the air pressure disperses the powder into individual particles, thereby improving adhesion of the charged powder to the agronomic carrier.