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NOTICE OF ALLOWANCE AND FEE(S) DUE

76360 7590 03/12/2018
MAGINOT, MOORE & BECK LLP
One Indiana Square, Suite 2200
INDIANAPOLIS, INDIANA 46204

Table with 2 columns: EXAMINER (HOHENBRINK JR, LAWRENCE D), ART UNIT (1743), PAPER NUMBER

DATE MAILED: 03/12/2018

Table with 5 columns: APPLICATION NO. (15/659,771), FILING DATE (07/26/2017), FIRST NAMED INVENTOR (Paul M. Fromm), ATTORNEY DOCKET NO. (1776-0693CON), CONFIRMATION NO. (5379)

TITLE OF INVENTION: SYSTEM AND METHOD FOR REMOVING THREE-DIMENSIONAL PRINTED PARTS FROM A PLATEN USING INDUCTIVE HEATING AND GRAVITY

Table with 7 columns: APPLN. TYPE (REGULAR), ENTITY STATUS (UNDISCOUNTED), ISSUE FEE DUE (\$1000), PUBLICATION FEE DUE (\$0.00), PREV. PAID ISSUE FEE (\$0.00), TOTAL FEE(S) DUE (\$1000), DATE DUE (06/12/2018)

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.

PART B - FEE(S) TRANSMITTAL

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
 Commissioner for Patents
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 or Fax (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)

76360 7590 03/12/2018
MAGINOT, MOORE & BECK LLP
 One Indiana Square, Suite 2200
 INDIANAPOLIS, INDIANA 46204

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.

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 facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/659,771	07/26/2017	Paul M. Fromm	1776-0693CON	5379

TITLE OF INVENTION: SYSTEM AND METHOD FOR REMOVING THREE-DIMENSIONAL PRINTED PARTS FROM A PLATEN USING INDUCTIVE HEATING AND GRAVITY

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
REGULAR	UNDISCOUNTED	\$1000	\$0.00	\$0.00	\$1000	06/12/2018

EXAMINER	ART UNIT	CLASS-SUBCLASS
HOHENBRINK JR, LAWRENCE D	1743	425-375000

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 03-02 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,
 (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.

1 _____
 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 has been filed for recordation as set forth in 37 CFR 3.11. 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. The following fee(s) are submitted:

4b. Payment of Fee(s): (**Please first reapply any previously paid issue fee shown above**)

- Issue Fee
- Publication Fee (No small entity discount permitted)
- Advance Order - # of Copies _____

- A check is enclosed.
- Payment by credit card. Form PTO-2038 is attached.
- The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

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 undiscouted 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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EXAMINER

HOHENBRINK JR, LAWRENCE D

ART UNIT PAPER NUMBER

1743

DATE MAILED: 03/12/2018

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 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, 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. 15/659,771	Applicant(s) Fromm et al.	
Examiner Lawrence D Hohenbrink Jr.	Art Unit 1743	AIA 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 Applicant's filing of 2/6/2018.
 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 1-20. 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 _____.
- 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 _____.

/LAWRENCE D. HOHENBRINK, JR./
Examiner, Art Unit 1743

/SEYED MASOUD MALEKZADEH/
Primary Examiner, Art Unit 1743

DETAILED ACTION

Status of the Application

- 1) This Office Action is the second action on the merits and is a Notice of Allowability. The Examiner acknowledges receipt of Applicant's Amendment, including amended Claims, amended Specification, and Arguments/Remarks, filed 2/6/2018 in response to office action (non-final rejection) mailed 1/23/2018.
- 2) Claims 1-20 were previously pending. Claims 1, 8, 11, 15, and 19 are amended, Claims 2-7, 9-10, 12-14, 16-18, and 20 are as previously presented. Currently Claims 1-20 are pending and are examined herein.

Notice of Pre-AIA or AIA Status

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

Double Patenting

- 4) Claims 11-20 were previously rejected on the ground of nonstatutory double patenting as being unpatentable over claims 2-9 of U.S. Patent No. 9,782,964 B2 (issued patent of ascendant application 14/677,161). In light of Applicant's amendment, these rejections are **withdrawn**.

Response to Amendment

- 5) Claims 8 and 19 were previously objected to for minor informalities. In light of Applicant's amendments, these objections are **withdrawn**.
- 6) Claim 15 were previously rejected under 35 USC 112(b) as indefinite. In light of Applicant's amendment, this rejection is **withdrawn**.

Response to Arguments

- 7) Applicant's arguments, see pages 11-15, filed 2/6/2018, with respect to claims 1-20 have been fully considered and are persuasive. The rejections of claims 1-20 have been withdrawn.

Allowable Subject Matter

8) Claims 1-20 are allowed.

9) The following is an examiner's statement of reasons for allowance:

10) Independent Claim 1 is allowable because the recited limitations for operating an actuator with the controller to rotate the platen to a non-horizontal second position after the 3D object is formed on the platen, and operating an inductive heater with the controller to heat the platen as the platen is rotated the second position to release the 3D object from the platen and enable gravity to remove the 3D object from the non-horizontal platen, when taken with the claim as a whole, is novel and nonobvious over the prior art of record. Dependent Claims 2-10 are allowable as depending from an allowable base claim.

11) Independent Claim 11 is allowable because the recited limitations for a controller configured for operating an actuator with the controller to rotate the platen to a non-horizontal second position after the 3D object is formed on the platen, and operating an inductive heater with the controller to heat the platen as the platen is rotated the second position to release the 3D object from the platen and enable gravity to remove the 3D object from the non-horizontal platen, when taken with the claim as a whole, is novel and nonobvious over the prior art of record. Dependent Claims 12-20 are allowable as depending from an allowable base claim.

12) A close prior art reference of record *Neilsen* discloses a solid freeform fabrication additive manufacturing system that involves a liquid-ejecting process, the system comprising bulk-jetting apparatus that generate three-dimensional objects by ejecting a solidifiable build material and a solidifiable support material onto a platform in a layer-by-layer process, where the object is described by electronic data and is automatically built by the system. One or more printheads using inkjet drop-on-demand technology, each printhead having a plurality of nozzles to eject drops of material, eject build material and/or support material to form a cross-section of the desired object, the cross-sections successively formed to make the desired object. The plurality of ejectors eject drops of material towards the platform opposite the ejectors and horizontally level. Furthermore, *Neilsen* discloses the

process may be controlled via a control panel and is an automatic process. *Neilson* does not disclose the claim limitations recited above.

- 13) A close prior art reference of record *Naware* discloses apparatus for printing 3D objects from 3D data, where a platform holds the object being deposited from a print head onto the platform and the material being used may comprise a flowable, thermally solidifiable material such as wax. The platform comprises heating zones that may comprise electromagnetic induction heating. Each zone comprises a temperature control module comprising a temperature sensor, and the modules may be controlled by a controller. Selective control of the temperature zones may facilitate part removal from the build plate. *Naware* does not disclose the claim limitations recited above.
- 14) A close prior art reference of record *Spence* discloses apparatus and methods for servicing a substrate media printing system, particularly for cleaning elements of a printing station and rail track comprising parallel rails used to convey the substrate media. A cart frame is moveable along a rail track for passing through a printing station and other stations, the cart frame may comprise a platen, and the rail track path may be linear, arched, or curved. *Spence* further discloses a non-contact motor drive such as a magnetic propulsion drive, thus a motive force, with a central rail provided to house elements of the drive. *Spence* does not disclose the claim limitations recited above.
- 15) A close prior art reference of record *Voris* discloses apparatus comprising a 3D printer with a print controller that has a print control program to control a tilt adjustment mechanism (actuator) for selectively changing the angle of the upper surface of the build plate relative to a first, horizontal position, by tilting or rotating the plate about one axis or about two axes, thus rotating the platen to a second position that is not horizontal. The tilting may set a tilt angle of the build plate to a plurality of differing angles in the range of 0-75 degrees or more as measured between a horizontal plane and the upper surface of the plate. The apparatus may print layers of the object while the platen is angled to create overhanging layers (¶0034 L1-13). *Voris* does not disclose tilting the platen after the 3D object is formed on the platen, and *Voris* does not disclose the claim limitations recited above.
- 16) An updated search of the relevant prior art failed to turn up any other prior art references which anticipated or could be used individually or in combination to set forth a *prima facie* case of obviousness, and upon which to base a prior art rejection for claims reciting these limitations.

17) 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

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence D. Hohenbrink Jr. whose telephone number is 571-270-5549. The examiner can normally be reached Monday - Friday, 7:00 am to 3:00 pm Eastern Time U.S.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph S. Del Sole can be reached on 571-272-1130. 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.

/LAWRENCE D. HOHENBRINK, JR./
Examiner, Art Unit 1743

/SEYED MASOUD MALEKZADEH/
Primary Examiner, Art Unit 1743