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NOTICE OF ALLOWANCE AND FEE(S) DUE

27081 7590 10/17/2016
OWENS-ILLINOIS, INC.
ONE MICHAEL OWENS WAY, THREE O-I PLAZA
PERRYSBURG, OH 43551-2999

EXAMINER

DEHGHAN, QUEENIE S

ART UNIT

PAPER NUMBER

1741

DATE MAILED: 10/17/2016

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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14/573,847

12/17/2014

Joshua D. Peeno

19122

6259

TITLE OF INVENTION: Glassware Mold Pyrometry

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	01/17/2017

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)

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.

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PERRYSBURG, OH 43551-2999

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.
14/573,847	12/17/2014	Joshua D. Peeno	19122	6259

TITLE OF INVENTION: Glassware Mold Pyrometry

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	01/17/2017

EXAMINER	ART UNIT	CLASS-SUBCLASS
DEGHAN, QUEENIE S	1741	065-158000

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, 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 _____
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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:

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

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

- ☐ 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 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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OWENS-ILLINOIS, INC. ONE MICHAEL OWENS WAY, THREE O-I PLAZA PERRYSBURG, OH 43551-2999			DEHGHAN, QUEENIE S	
			ART UNIT	PAPER NUMBER
			1741	
DATE MAILED: 10/17/2016				

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 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. 14/573,847	Applicant(s) PEENO ET AL.	
	Examiner QUEENIE DEGHAN	Art Unit 1741	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 9/26/16.
☐ 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 1,3 and 5-20. 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) | 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 <u>PTO-2323</u> . |
| 4. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____. | |

/QUEENIE DEGHAN/
Primary Examiner, Art Unit 1741

REASONS FOR ALLOWANCE

1. The following is an examiner's statement of reasons for allowance: The prior art discloses a mold body comprising a mold cavity and a blind hole having a closed end adjacent and spaced from the interior mold surface and an open end in the outboard side of the mold body within the hanger recess, such as that disclosed by Nebelung. However, Nebelung fails to teach a mold hanger for carrying the mold body, the mold hanger comprising a hanger hole that extends between the outboard side and the inboard side and is aligned with the blind hole of the mold body in a straight line. Instead the hanger hole of Nebelung is offset from the blind hole and does not line up the blind hole of the mold body. The prior art fails to teach the alignment of such holes, wherein a light collector is disposed within the blind hole.

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."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to QUEENIE DEGHAN whose telephone number is (571)272-8209. The examiner can normally be reached on Monday through Friday 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Ortiz can be reached on 571-272-1206. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1741

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.

/QUEENIE DEGHAN/
Primary Examiner, Art Unit 1741

**REPLY UNDER 37 CFR 1.116
EXPEDITED PROCEDURE
TECHNOLOGY CENTER 1700
GROUP ART UNIT NO. 1741**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

App. No.: 14/573,847
Inventor(s): James D. Peeno et al.
Applicant(s): Owens-Brockway Glass Container, Inc.
Filed: December 17, 2014
Confirmation No.: 6259
Title: GLASSWARE MOLD PYROMETRY
Art Unit: 1741
Examiner: Queenie S. Deeghan
Docket No.: 19122
Responsive To: Final Office Action Mailed July 25, 2016

**REPLY TO FINAL OFFICE ACTION AND AMENDMENT
UNDER 37 CFR § 1.116 AND AFCP**

*Filed via EFS
September 26, 2016*

In response to the Final Office Action mailed July 25, 2016 (“Office Action”), please enter the amendments below and consider the remarks that follow. Because the due date for this amendment is September 25, 2016 but falls on a weekend, this amendment is timely filed on Monday, September 26, 2016.

Amendments to the Claims begin on page : 2

Remarks follow.

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application, using double brackets or strikethrough for deletions and underlining for additions.

1. (Currently Amended)

Apparatus to sense temperature in a glassware forming machine, comprising:

a mold body including a longitudinally extending inboard axis, an inboard side, an outboard side, a lower end, and an upper end, a hanger recess at the outboard side, an exterior surface, a mold cavity having an interior mold surface, and a blind hole having a closed end including a closed end surface adjacent to and spaced outwardly from the interior mold surface, wherein the blind hole extends outwardly from the closed end surface toward the exterior surface and includes an open end in the outboard side of the mold body within the hanger recess;

a mold hanger on which the mold body is removably carried, wherein the mold hanger is at least partially carried in the hanger recess of the mold body and includes an inboard side, an outboard side, a lower end, and an upper end, and a hanger hole that extends between the outboard side and the inboard side and is aligned with the blind hole of the mold body; and

a light collector carried by the mold hanger to collect infrared light emitted within the blind hole.

2. (Canceled)

3. (Currently Amended)

The apparatus set forth in claim 3 wherein the blind hole extends radially with respect to the axis.

4. (Canceled)

5. (Currently Amended)

The apparatus set forth in claim 4~~1~~ wherein ~~the mold hanger is at least partially carried in the hanger recess of the mold body and includes an inboard side, an outboard side, a lower end, and an upper end, and a hanger hole that extends between the outboard side and the inboard side and is aligned with the blind hole of the mold body, and~~ wherein the light collector is at least partially disposed in the hanger hole.

6. (Previously Presented)

The apparatus set forth in claim 5 wherein the hanger hole is a through hole extending between the inboard and outboard sides of the hanger and the light collector is coupled to the hanger at an outboard end of the hanger through hole.

7. (Original)

The apparatus set forth in claim 1 wherein the light collector includes a light pipe.

8. (Original)

The apparatus set forth in claim 7, wherein the light pipe is a sapphire light pipe.

9. (Original)

The apparatus set forth in claim 1 wherein the light collector has a free end and is carried in such a manner that the free end does not extend into the blind hole of the mold body.

10. (Original)

The apparatus set forth in claim 9 wherein the free end is substantially flush with and immediately adjacent the inboard surface of the inboard side of the hanger.

11. (Original)

The apparatus set forth in claim 1 wherein the blind hole has a depth to diameter ratio of at least 4:1, wherein the diameter of the blind hole is two to four mm.

12. (Original)

The apparatus set forth in claim 1 wherein the thickness of the mold body in a location between the interior mold surface and the closed end surface is at least two millimeters.

13. (Original)

A glassware forming apparatus that includes:

a glassware mold body including a longitudinally extending inboard axis, an inboard side, an outboard side, a lower end, and an upper end, a mold cavity in the inboard side for forming a glassware article, and a blind hole in the glassware mold body extending outwardly toward an exterior surface of the mold body from a closed end surface of the blind hole adjacent to an interior surface of the mold body cavity;

a mold hanger disposed at the outboard side of the mold body and on which the mold body is removably carried and including an inboard side, an outboard side, a lower end, and an upper end, and a hanger hole extending between the outboard side and the inboard side in alignment with the blind hole of the mold body; and

a pyrometric apparatus including a pyrometer, and a light collector at least partially disposed in the hanger hole to collect infrared light from the blind hole for transmission to the pyrometer.

14. (Original)

The apparatus set forth in claim 13 wherein the blind hole extends radially with respect to the axis.

15. (Original)

The apparatus set forth in claim 13 wherein light collector includes a light pipe.

16. (Original)

The apparatus set forth in claim 15 wherein the light pipe is a sapphire light pipe

17. (Original)

The apparatus set forth in claim 13 wherein the hanger hole is a through hole extending between the inboard and outboard sides of the hanger and the light collector is coupled to the hanger at an outboard end of the hanger through hole.

18. (Original)

The apparatus set forth in claim 13 wherein the light collector has a free end and is carried in such a manner that the free end does not extend into the blind hole of the mold body.

19. (Original)

The apparatus set forth in claim 18 wherein the free end is substantially flush with and immediately adjacent the inboard surface of the inboard side of the hanger.

20. (Original)

The apparatus set forth in claim 13 wherein the blind hole has a depth to diameter ratio of at least 4:1, wherein the diameter of the blind hole is two to four mm, and the thickness of the mold body in a location between the interior surface of the mold body and the closed end surface is at least two millimeters.

REMARKS

Claims 2 and 4 are currently canceled, and claims 1, 3, and 5 are currently amended to place all of the claims in the application in condition for allowance. Thus, claims 1, 3, and 5-20 are pending in the present application. Applicant respectfully asserts that the subject matter of the amended claims is fully supported by the specification and drawings as originally filed at least under MPEP 2163, and that no new matter has been presented. Entry thereof is respectfully requested.

Also, independent claim 1 has been amended to include subject matter from cancelled claims 2 and 4 and some subject matter from amended claim 5. Accordingly, independent claim 1 has been amended merely to incorporate subject matter from several dependent claims, and no new claims have been added. Therefore, Applicant respectfully asserts that this after-final amendment does not require additional searching and should be entered as a matter of right.

Allowed Claims

Applicant acknowledges the Examiner's allowance of claims 13-20.

Claim Objections / Allowable Subject Matter

Claims 5 and 6 are objected to as being dependent upon a rejected base claim, but are indicated as being allowable if amended into independent form.

For the reasons set forth below, reconsideration and withdrawal of the objection is respectfully requested.

Claim Rejections Under 35 U.S.C. § 103

Independent claim 1 and dependent claims 2-4 and 9-12, were rejected under 35 U.S.C. § 103 as being unpatentable over Jones 4,519,827 in view of the teachings of Nebelung 3,666,433.

Dependent claims 7-8 were rejected under 35 U.S.C. § 103 as being unpatentable over Jones and Nebelung further in view of the teachings of Chubb 6,746,149.

Applicant respectfully traverses the 35 U.S.C. § 103 rejections set forth herein because Applicant's claimed subject matter is patentably distinguishable, and not obvious, in view of the cited references.

It bears reminding that the subject matter of claim 1 was indicated as having novelty and an inventive step in corresponding PCT Application PCT/US2015/066309, and that Applicant cited the primary and secondary references to the USPTO in an information disclosure statement originally filed with the subject application.

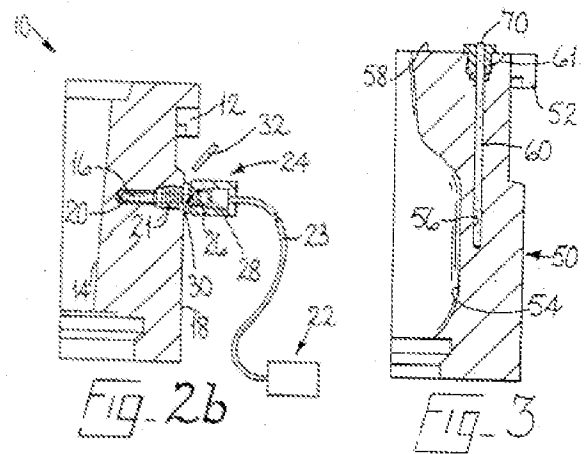
Amended independent claim 1 recites, *inter alia*, apparatus to sense temperature in a glassware forming machine, comprising:

a mold body including a longitudinally extending inboard axis, an inboard side, an outboard side, a lower end, and an upper end, a hanger recess at the outboard side, an exterior surface, a mold cavity having an interior mold surface, and a blind hole having a closed end including a closed end surface adjacent to and spaced outwardly from the interior mold surface, wherein the blind hole extends outwardly from the closed end surface toward the exterior surface and includes an open end in the outboard side of the mold body within the hanger recess;

a mold hanger on which the mold body is removably carried, wherein the mold hanger is at least partially carried in the hanger recess of the mold body and includes an inboard side, an outboard side, a lower end, and an upper end, and a hanger hole that extends between the outboard side and the inboard side and is aligned with the blind hole of the mold body; and

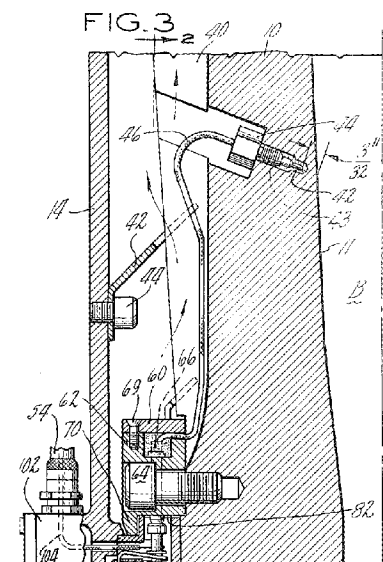
a light collector carried by the mold hanger to collect infrared light emitted within the blind hole.

Jones identifies difficulties with prior attempts to obtain mold temperatures, such as electrical connection damage and electrical noise associated with prior electrical temperature reading apparatuses, and such as interference from radiation reflection associated with infrared sensors external to a mold. Accordingly, Jones teaches an arrangement for glassware mold surface temperature measurement in which an infrared transmitter 20 or 60 is inserted into a cavity 16 or 56 in a glassware mold body 10 or 50 to detect mold surface temperature. A fiber optic 23 transmits the detected infrared light energy to temperature sensing electronics 22.



As acknowledged in the Office Action, Jones fails to disclose a light collector carried by a mold hanger to collect infrared light from a mold blind hole. And Nebelung fails to cure this deficiency.

Nebelung discloses a glassware mold temperature sensing arrangement in which an electrical temperature sensor 42/43/44 is threadably coupled to a threaded hole in a mold body 10. To be clear, Nebelung's sensor 42/43/44 is carried by Nebelung's mold body 10 and ONLY Nebelung's mold body 10. Also, Nebelung's discloses a wire 104 that extends through a hole in a mold holder 14.



So although Nebelung may disclose a sensor 42/43/44 *carried by* a mold body, and a wire 104 that *extends through* a hole in a mold holder 14, Nebelung fails to disclose, teach, or suggest that Nebelung's sensor 42/43/44 is carried by Nebelung's mold holder. Also, the hole in Nebelung's holder 14 through which Nebelung's wire 104 extends is certainly not aligned with Nebelung's hole

in Nebelung's mold body; in fact, it is axially spaced apart from it and at a different angle with respect thereto. Notably, the temperature sensors of both Jones and Nebelung are carried by mold bodies but not by mold hangers.

Besides, it would not be obvious to apply Nebelung's teachings to Jones. A combination of prior art references is nonobvious if it can be shown that the combination would render a prior art reference inoperable or unsatisfactory for its intended purpose or change the principle of operation of a prior art reference. See MPEP §§ 2145 III and 2143.01(V-VI)

Here, Jones specifically teaches that electrical sensors and associated electrical wires and other hardware like that taught in Nebelung are unsatisfactory. Accordingly, the combination suggested in the Office Action would render Jones unsatisfactory for its intended purpose and, thus, it would not be obvious to make such a combination.

Applicant notes that the aforementioned improper combination argument was not at all addressed and, thus, certainly was not overcome in the office action.

Based upon the above arguments, Applicant respectfully submits that the cited references do not disclose each and every element arranged as in Applicant's independent claim 1. Therefore, in applying the test for obviousness as set forth above, the cited references do not render unpatentable independent claim 1. Thus, claim 1 defines novel and patentable subject matter and is allowable for at least these reasons.

Further, claims 2-12 are ultimately dependent on independent claim 1 and, under principles of claim dependency, define novel and patentable subject matter for at least the foregoing reasons and because of the additional novel limitations set forth therein.

For example, dependent claim 9 recites that a light collector has a free end and is carried in such a manner that the free end does NOT extend into a blind hole of the mold body. Jones' infrared transmitters 20 or 60 are inserted into cavities 16 or 56 in glassware mold bodies 10 or 50 such that free ends of the transmitters unequivocally DO extend into Jones' mold body cavities. Contrary to

the assertion in the Office Action, the ends of the transmitters 20/60 that are fixed to the mold bodies 10/50 by fasteners 21/61 are, by definition, the fixed ends of the transmitters, not the free ends of the transmitters.

In view of the foregoing remarks, Applicant respectfully submits that the pending independent and dependent claims are in proper form, define patentable subject matter over the cited references, and are all allowable. Applicant, therefore, respectfully requests that the Examiner's objections and rejections under 35 U.S.C. § 103 be reconsidered and withdrawn and that a formal and timely Notice of Allowance be issued in this case.

In view of the finality of the Office Action, every attempt was made to remove any issues remaining in the application and to place all the claims in condition for allowance. It is respectfully asserted that there are no further issues, formal or substantive, that remain for prosecution. Formal allowance of the application is, therefore, respectfully solicited. If the Examiner is not persuaded that all issues are resolved, the undersigned respectfully requests that the Examiner contact the undersigned to attempt to resolve any remaining issues. Otherwise, in the event the Examiner is not persuaded of the patentability of the claims, the Examiner is respectfully requested to enter the amendment for purposes of appeal.

Please grant any required extensions of time and charge any fees due in connection with this request to Account No. 15-0875 (Owens-Illinois).

Respectfully submitted,

REISING ETHINGTON P.C.

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SBW/dim



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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14/573,847

12/17/2014

Joshua D. Peeno

19122

6259

27081

7590

07/25/2016

OWENS-ILLINOIS, INC.

ONE MICHAEL OWENS WAY, THREE O-I PLAZA
PERRYSBURG, OH 43551-2999

EXAMINER

DEGHAN, QUEENIE S

ART UNIT

PAPER NUMBER

1741

MAIL DATE

DELIVERY MODE

07/25/2016

PAPER

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

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

Office Action Summary	Application No. 14/573,847	Applicant(s) PEENO ET AL.	
	Examiner QUEENIE DEGHAN	Art Unit 1741	AIA (First Inventor to File) 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 6/14/16.
☐ 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) 1-20 is/are pending in the application.
5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) ☒ Claim(s) 13-20 is/are allowed.
- 7) ☒ Claim(s) 1-4 and 7-12 is/are rejected.
- 8) ☒ Claim(s) 5-6 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 ____ 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 6/14/16.
- 3) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 4) ☐ Other: ____.

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

DETAILED ACTION

Claim Rejections - 35 USC § 103

2. 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 of this title, 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.

3. 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.

4. Claims 1-6 and 9-12 are rejected under 35 U.S.C. 103 as being unpatentable over Jones (4,519,827) in view of Nebelung et al. (3,666,433). Regarding claim 1, Jones discloses an apparatus comprising a mold body including an exterior surface, a mold cavity having an interior mold surface (col. 2 lines 54-65), and a blind hole having

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a closed end, wherein the hole extends outwardly toward the exterior surface (col. 2 lines 67-68, col. 3 lines 1-7). Jones further discloses the closed end has a surface adjacent to and spaced outwardly from the interior mold surface (figures 1 and 2). Jones further teaches a hook portion that is carried by a moving means, i.e. a mold hanger, wherein the hook makes the mold body removable (col. 2 lines 58-61). Jones also teaches a light collector (lens 26 and optical guide 23) that is capable of collecting infrared light emitted within the blind hole (col. 3 lines 8-37). Furthermore, Jones discloses an infrared detecting device 22 capable of receiving infrared radiation for indicating the temperature of the mold (col. 3 lines 21-22, 31-37), which essentially is a pyrometer.

5. However, Jones does not disclose the light collector is carried by the mold hanger. Nebelung teaches a similar mold body comprising an exterior surface, a mold cavity having an interior mold surface and blind hole with a closed end. Like Jones, Nebelung teaches an apparatus for sensing temperature in the mold. Nebelung teaches one end of the temperature sensor is inserted at the closed end of the hole and the other end of the sensor is coupled to the mold body by plug part 60. Nebelung also teaches a complimentary plug part 80 carried by the mold holder for receiving the mold mounted plug part 60 to provide an electrical connection for the sensor (col. 4 lines 60-75), wherein the mold holder is a hanger on which the mold body is removably carried (col. 6 lines 15-29) and is disposed at the outboard side of the mold body. Thus, the sensor continues from the mold body through the mold hanger in order to send the signal downstream to operate a control device 50 for maintaining a temperature of the

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mold (col. 6 lines 2-12). Accordingly, it would have been obvious to one of ordinary skill in the art to have modified the apparatus of Jones to have the light collector carried by the mold hanger to provide for a communication link between the light collector and infrared light signal, thereby providing feedback for controlling the mold temperature.

6. Regarding claim 2 and in further regards to claim 13, Jones further shows the mold body includes a longitudinally extending inboard axis, an inboard side, an outboard side, a lower end, and an upper end, and a hanger recess at the outboard side (see figures 1-3).

7. Regarding claims 3 and 14, Jones shows the blind hole extends radially with respect to the axis (figures 1 and 2).

8. Regarding claim 4, Jones shows the blind hole includes an open end in the outboard side of the mold body with the hanger recess (figures 1 and 2).

9. ones would be coupled to the hanger at an outboard end of the hanger through hole.

10. Regarding claim 9, Jones teaches the transmitter/emitter 20 is located within the mold body, wherein the light collector (optical fiber) is located on the outboard side of the mold body (col. 3 lines 26-31). Thus the light collector has a free end and is carried in such a manner that the free end does not extend into the blind hole of the mold body.

11. Regarding claim 10, Jones teaches the free end is substantially flushed with the and immediately adjacent the outboard side of the mold body (col. 3 lines 26-29). In applying the mold hanger with the hanger hole of Nebelung, the free end of the light

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collector would naturally be immediately adjacent the inboard surface of the inboard side of the hanger.

12. Regarding claims 11-12, Jones teaches the closed end surface of the blind hole is very close to the interior mold surface. Nebelung specifies the distance from the closed end to the interior mold surface is $\frac{3}{32}$ " of an inch (col. 4 lines 10-13), which is about 2.4mm. According to figure 3, the diameter of the blind hole appears be approximately 2mm and the ratio of the depth of the hole (the thickness of mold body 10 minus the spacing of $\frac{3}{32}$ ") to the diameter of the blind hole appears to be greater than 4:1 (figure 3).

13. Claims 7-8 are rejected under 35 U.S.C. 103 as being unpatentable over Jones (4,519,827) in view of Nebelung et al. (3,666,433) as applied to claims 1 and 13 above, and further in view of Chubb et al. (6,746,149). Jones teaches an emitter 20 and light collector, optical fiber 23, but does not disclose a light sapphire light pipe. Chubb teaches an emitter that emits infrared radiation coupled to a light pipe, wherein the light pipe can be an optical fiber. Chubb also teaches the light pipe can compose of sapphire or quartz (col. 2 lines 10-25). Accordingly, it would have been obvious to one of ordinary skill in the art to have employed a sapphire light pipe as the light collector in the apparatus of Jones and Nebelung, as Chubb teaches an optical fiber comprising sapphire serves as a successful light collector for infrared radiation.

Allowable Subject Matter

14. Claims 13-20 allowed.

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15. Claims 5-6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

16. The following is a statement of reasons for the indication of allowable subject matter: the prior art fails to disclose a glass forming apparatus comprising a mold body with a blind hole and a mold hanger on which the mold is hung, the mold hanger having a hanger hole aligned with the blind hole, so that light collector is disposed in the hanger hole to collect infrared light from the blind hole. Nebelung teaches a hanger hole within a mold hanger and a mold with a blind hole, in which a temperature sensor is disposed. However, the hanger hole is not in alignment with the blind hole. Although Jones discloses a light collector protruding from the outboard side of the mold from the blind hole, Jones also teaches such a protrusion is possible if the side portion is accessible on the outboard side, otherwise, the pyrometer apparatus can be disposed vertically parallel the axis of the mold cavity.

Response to Arguments

17. Applicant's arguments filed June 14, 2016 have been fully considered but they are not persuasive. The applicant argues Nebelung does not disclose carrying the thermocouple in a mold hanger. Nebelung discloses a mold hanger with a hanger hole through which the thermocouple relays temperature readings through electrical connections made through the hanger hole. In applying this arrangement, the pyrometric apparatus which comprises the optical guide (23), which is a light collector, would have been similar carried within the hanger hole.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to QUEENIE DEGHAN whose telephone number is (571)272-8209. The examiner can normally be reached on Monday through Friday 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Ortiz can be reached on 571-272-1206. 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.

/QUEENIE DEGHAN/
Primary Examiner, Art Unit 1741