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**UTILITY
PATENT APPLICATION
TRANSMITTAL**

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.

First Named Inventor

Gideon Duvall

Title

METHOD OF GENERATING A DESIRED TEMPERATURE OF AN INFUSED BEVERA

Priority Mail Express®
Label No.**APPLICATION ELEMENTS**

See MPEP chapter 600 concerning utility patent application contents.

1. ☒ **Fee Transmittal Form**
(PTO/SB/17 or equivalent)
2. ☒ **Applicant asserts small entity status.**
See 37 CFR 1.27
3. ☐ **Applicant certifies micro entity status.** See 37 CFR 1.29.
Applicant must attach form PTO/SB/15A or B or equivalent.
4. ☒ **Specification** [Total Pages 29]
Both the claims and abstract must start on a new page.
(See MPEP § 608.01(a) for information on the preferred arrangement)
5. ☒ **Drawing(s)** (35 U.S.C. 113) [Total Sheets 6]
6. **Inventor's Oath or Declaration** [Total Pages 1]
(including substitute statements under 37 CFR 1.64 and assignments
serving as an oath or declaration under 37 CFR 1.63(e))
 - a. ☒ Newly executed (original or copy)
 - b. ☐ A copy from a prior application (37 CFR 1.63(d))
7. ☒ **Application Data Sheet** * See note below.
See 37 CFR 1.76 (PTO/AIA/14 or equivalent)
8. **CD-ROM or CD-R**
in duplicate, large table, or Computer Program (Appendix)
☐ Landscape Table on CD
9. **Nucleotide and/or Amino Acid Sequence Submission**
(if applicable, items a. – c. are required)
 - a. ☐ Computer Readable Form (CRF)
 - b. ☐ Specification Sequence Listing on:
 - i. ☐ CD-ROM or CD-R (2 copies); or
 - ii. ☐ Paper
 - c. ☐ Statements verifying identity of above copies

ADDRESS TO:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450**ACCOMPANYING APPLICATION PAPERS**

10. ☐ **Assignment Papers**
(cover sheet & document(s))
Name of Assignee _____
11. ☐ **37 CFR 3.73(c) Statement** ☐ **Power of Attorney**
(when there is an assignee)
12. ☐ **English Translation Document**
(if applicable)
13. ☐ **Information Disclosure Statement**
(PTO/SB/08 or PTO-1449)
☐ Copies of citations attached
14. ☐ **Preliminary Amendment**
15. ☐ **Return Receipt Postcard**
(MPEP § 503) (Should be specifically itemized)
16. ☐ **Certified Copy of Priority Document(s)**
(if foreign priority is claimed)
17. ☐ **Nonpublication Request**
Under 35 U.S.C. 122(b)(2)(B)(i). Applicant must attach form PTO/SB/35
or equivalent.
18. ☐ **Other:** _____

***Note:** (1) Benefit claims under 37 CFR 1.78 and foreign priority claims under 1.55 **must** be included in an Application Data Sheet (ADS).
(2) For applications filed under 35 U.S.C. 111, the application must contain an ADS specifying the applicant if the applicant is an assignee, person to whom the inventor is under an obligation to assign, or person who otherwise shows sufficient proprietary interest in the matter. See 37 CFR 1.46(b).

19. CORRESPONDENCE ADDRESS☒ The address associated with Customer Number: 131368 **OR** ☐ Correspondence address below

Name

Address

City

State

Zip Code

Country

Telephone

Email

Signature

Date

Name
(Print/Type)Registration No.
(Attorney/Agent)

A Federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with an information collection subject to the requirements of the Paperwork Reduction Act of 1995, unless the information collection has a currently valid OMB Control Number. The OMB Control Number for this information collection is 0651-0032. Public burden for this form is estimated to average 12 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the information collection. Send comments regarding this burden estimate or any other aspect of this information collection, including suggestions for reducing this burden to the Chief Administrative Officer, United States Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450 or email InformationCollection@uspto.gov. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. If filing this completed form by mail, send to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Decent Espresso International Ltd., Exhibit 1013

Page 1013-1

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. The United States Patent and Trademark Office (USPTO) collects the information in this record under authority of 35 U.S.C. 2. The USPTO's system of records is used to manage all applicant and owner information including name, citizenship, residence, post office address, and other information with respect to inventors and their legal representatives pertaining to the applicant's/owner's activities in connection with the invention for which a patent is sought or has been granted. The applicable Privacy Act System of Records Notice for the information collected in this form is COMMERCE/PAT-TM-7 Patent Application Files, available in the Federal Register at 78 FR 19243 (March 29, 2013). <https://www.govinfo.gov/content/pkg/FR-2013-03-29/pdf/2013-07341.pdf>

Routine uses of the information in this record may include disclosure to: 1) law enforcement, in the event that the system of records indicates a violation or potential violation of law; 2) a Federal, state, local, or international agency, in response to its request; 3) a contractor of the USPTO having need for the information in order to perform a contract; 4) the Department of Justice for determination of whether the Freedom of Information Act (FOIA) requires disclosure of the record; 5) a Member of Congress submitting a request involving an individual to whom the record pertains, when the individual has requested the Member's assistance with respect to the subject matter of the record; 6) a court, magistrate, or administrative tribunal, in the course of presenting evidence, including disclosures to opposing counsel in the course of settlement negotiations; 7) the Administrator, General Services Administration (GSA), or their designee, during an inspection of records conducted by GSA under authority of 44 U.S.C. 2904 and 2906, in accordance with the GSA regulations and any other relevant (i.e., GSA or Commerce) directive, where such disclosure shall not be used to make determinations about individuals; 8) 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)); 9) the Office of Personnel Management (OPM) for personnel research purposes; and 9) the Office of Management and Budget (OMB) for legislative coordination and clearance.

If you do not furnish the information requested on this form, the USPTO may not be able to process and/or examine your submission, which may result in termination of proceedings, abandonment of the application, and/or expiration of the patent.

Additional Uses

Additional USPTO uses of the information in this record may include disclosure to: 1) the International Bureau of the World Intellectual Property Organization, if the record is related to an international application filed under the Patent Cooperation Treaty; 2) the public i) after publication of the application pursuant to 35 U.S.C. 122(b), ii) after issuance of a patent pursuant to 35 U.S.C. 151, iii) if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections, or an issued patent, or iv) without publication of the application or patent under the specific circumstances provided for by 37 CFR 1.14(a)(1)(v)-(vii); and/or 3) the National Archives and Records Administration, for inspection of records.

Electronic Patent Application Fee Transmittal

Application Number:				
Filing Date:				
Title of Invention:	METHOD OF GENERATING A DESIRED TEMPERATURE OF AN INFUSED BEVERAGE WITHIN A BREWING ASSEMBLY			
First Named Inventor/Applicant Name:	Gideon Duvall			
Filer:	Gideon Williams Duvall			
Attorney Docket Number:	DUVALL_23_DIV1			
Filed as Small Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
UTILITY FILING FEE (ELECTRONIC FILING)	4011	1	64	64
UTILITY SEARCH FEE	2111	1	280	280
UTILITY EXAMINATION FEE	2311	1	320	320
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				664

Electronic Acknowledgement Receipt

EFS ID:	47526425
Application Number:	18109177
International Application Number:	
Confirmation Number:	7946
Title of Invention:	METHOD OF GENERATING A DESIRED TEMPERATURE OF AN INFUSED BEVERAGE WITHIN A BREWING ASSEMBLY
First Named Inventor/Applicant Name:	Gideon Duvall
Customer Number:	131368
Filer:	Gideon Williams Duvall
Filer Authorized By:	
Attorney Docket Number:	DUVALL_23_DIV1
Receipt Date:	13-FEB-2023
Filing Date:	
Time Stamp:	19:27:10
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$664
RAM confirmation Number	E20232CJ29037452
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Decent Espresso International Ltd., Exhibit 1013

Page 1013-5

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Application Data Sheet	WebADS.pdf	198619	no	8
			d735bdd361214df00fee8c0fe0206805318884b		
Warnings:					
Information:					
2	Drawings-only black and white line drawings	DUVALL_23_DIV1_FIGS.pdf	153231	no	6
			bdd68cf43c580aedc8c263a95bae8b7a66427ab0		
Warnings:					
Information:					
3		DUVALL_23_DIV1_Spec.pdf	307575	yes	33
			73474b122c108569205e9993f1fffe689d529d12		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Specification		1	29	
	Claims		30	32	
	Abstract		33	33	
Warnings:					
Information:					
4	Oath or Declaration filed	DUVALL_23_DIV1_OATH.pdf	307469	no	2
			cb0e747222c46a2f8acf2d7096ffa8e1bc81ff9799		
Warnings:					
Information:					
5	Transmittal of New Application	DUVALL_23_DIV1_TRANSMITTAL.pdf	509152	no	2
			31d2db90a7132e89d74ec704372f516e7b7f9799		
Decent Espresso International Ltd Exhibit 1013					

Warnings:					
Information:					
6	Fee Worksheet (SB06)	fee-info.pdf	43821	no	2
			3d47c20738f69072fb6ca499884521943b02f589		
Warnings:					
Information:					
Total Files Size (in bytes):			1519867		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	DUVALL_23_DIV1
		Application Number	
Title of Invention	METHOD OF GENERATING A DESIRED TEMPERATURE OF AN INFUSED BEVERAGE WITHIN A BREWING ASSEMBLY		
The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76. This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.			

Secrecy Order 37 CFR 5.2:

☐	Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)
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Inventor Information:

Inventor 1					
Legal Name					
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Gideon		Duvall		
Residence Information (Select One)		☒ US Residency ☐ Non US Residency ☐ Active US Military Service			
City	Atlanta	State/Province	GA	Country of Residence ⁱ	US
Mailing Address of Inventor:					
Address 1	930 Stallings Ave SE				
Address 2					
City	Atlanta	State/Province	GA		
Postal Code	30316	Country ⁱ	US		
All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the Add button. Add					

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below. For further information see 37 CFR 1.33(a).	
☐ An Address is being provided for the correspondence information of this application.	
Customer Number	131368
Email Address	Add Email Remove Email

Application Information:

Title of the Invention	METHOD OF GENERATING A DESIRED TEMPERATURE OF AN INFUSED BEVERAGE WITHIN A BREWING ASSEMBLY		
Attorney Docket Number	DUVALL_23_DIV1	Small Entity Status Claimed	☒
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	6	Suggested Figure for Publication (if any)	2

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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	DUVALL_23_DIV1
		Application Number	
Title of Invention	METHOD OF GENERATING A DESIRED TEMPERATURE OF AN INFUSED BEVERAGE WITHIN A BREWING ASSEMBLY		

Filing By Reference:

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:						☒ Customer Number	☐ US Patent Practitioner	☐ Limited Recognition (37 CFR 11.9)
Customer Number								
Prefix	Given Name	Middle Name	Family Name	Suffix	Remove			
Registration Number								
Prefix	Given Name	Middle Name	Family Name	Suffix	Remove			
Registration Number								
Additional Representative Information blocks may be generated within this form by selecting the Add button.								

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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	DUVALL_23_DIV1
		Application Number	
Title of Invention	METHOD OF GENERATING A DESIRED TEMPERATURE OF AN INFUSED BEVERAGE WITHIN A BREWING ASSEMBLY		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim information in the Application Data Sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.

When referring to the current application, please leave the "Application Number" field blank.

Prior Application Status	Pending	Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
	Division of	17020799	2020-09-14

Prior Application Status	Patented	Remove			
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
17020799	Division of	16383607	2019-04-13	10772456	2020-09-15

Prior Application Status	Patented	Remove			
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
16383607	Division of	15845946	2017-12-18	10258187	2019-04-16

Prior Application Status	Patented	Remove			
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
15845946	Continuation of	14421362	2015-02-12	9867491	2018-01-16

Prior Application Status		Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
14421362	a 371 of international	PCT/US2013/055348	2013-08-16

Prior Application Status	Pending	Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
PCT/US2013/055348	Claims benefit of provisional	61742688	2012-08-16

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button.

Foreign Priority Information:

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	DUVALL_23_DIV1
		Application Number	
Title of Invention	METHOD OF GENERATING A DESIRED TEMPERATURE OF AN INFUSED BEVERAGE WITHIN A BREWING ASSEMBLY		

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX) the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	Access Code ⁱ (if applicable)
	US		

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button.

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.

NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	DUVALL_23_DIV1
		Application Number	
Title of Invention	METHOD OF GENERATING A DESIRED TEMPERATURE OF AN INFUSED BEVERAGE WITHIN A BREWING ASSEMBLY		

Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant **must opt-out** of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

☐ A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

☐ B. Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

NOTE: Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	DUVALL_23_DIV1
		Application Number	
Title of Invention	METHOD OF GENERATING A DESIRED TEMPERATURE OF AN INFUSED BEVERAGE WITHIN A BREWING ASSEMBLY		

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Applicant 1

If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.

☐ Assignee ☐ Legal Representative under 35 U.S.C. 117 ☐ Joint Inventor

☐ Person to whom the inventor is obligated to assign. ☐ Person who shows sufficient proprietary interest

If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:

Name of the Deceased or Legally Incapacitated Inventor:

If the Applicant is an Organization check here. ☐

Prefix	Given Name	Middle Name	Family Name	Suffix

Mailing Address Information For Applicant:

Address 1			
Address 2			
City		State/Province	GA
Country ⁱ	US	Postal Code	
Phone Number		Fax Number	
Email Address			

Additional Applicant Data may be generated within this form by selecting the Add button.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	DUVALL_23_DIV1
		Application Number	
Title of Invention	METHOD OF GENERATING A DESIRED TEMPERATURE OF AN INFUSED BEVERAGE WITHIN A BREWING ASSEMBLY		

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Assignee 1				
Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.				
If the Assignee or Non-Applicant Assignee is an Organization check here. ☐				
Prefix	Given Name	Middle Name	Family Name	Suffix
Mailing Address Information For Assignee including Non-Applicant Assignee:				
Address 1				
Address 2				
City		State/Province	GA	
Country i	US	Postal Code		
Phone Number		Fax Number		
Email Address				
Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button.				

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	DUVALL_23_DIV1
		Application Number	
Title of Invention	METHOD OF GENERATING A DESIRED TEMPERATURE OF AN INFUSED BEVERAGE WITHIN A BREWING ASSEMBLY		

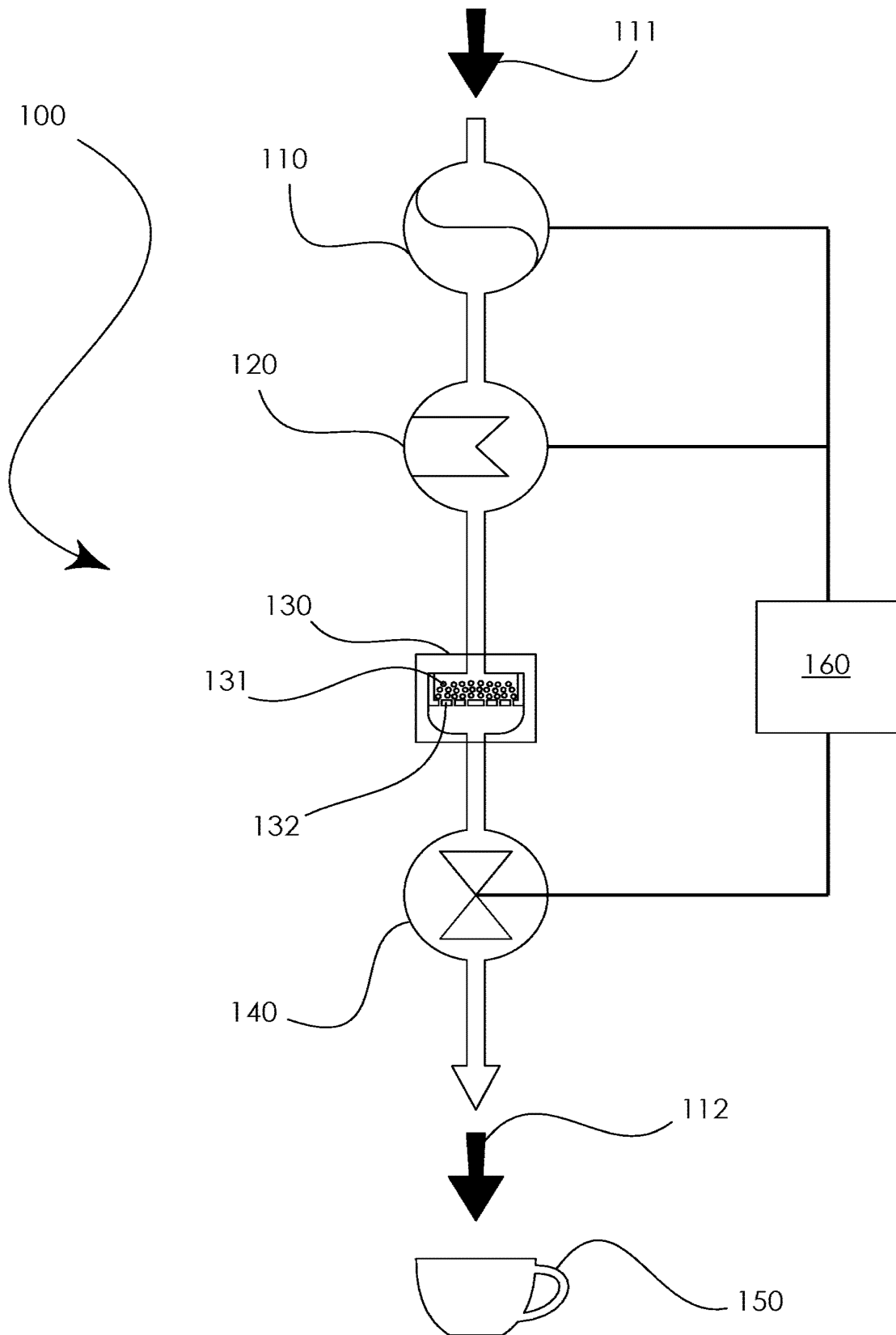
Signature:

NOTE: This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). **However, if this Application Data Sheet is submitted with the INITIAL filing of the application and either box A or B is not checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c).**

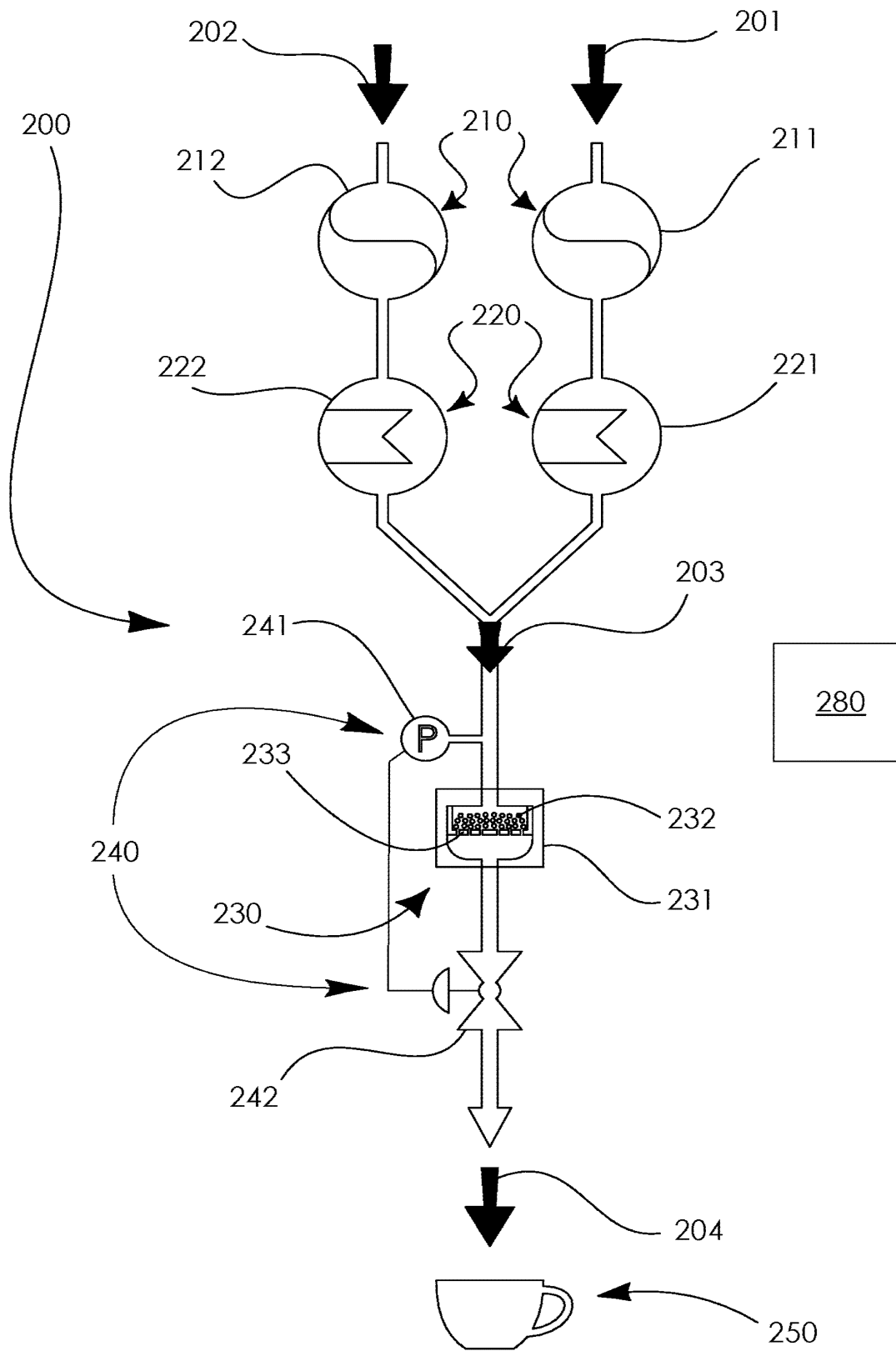
This Application Data Sheet **must** be signed by a patent practitioner if one or more of the applicants is a **juristic entity** (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, **all** joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of **all** joint inventor-applicants.

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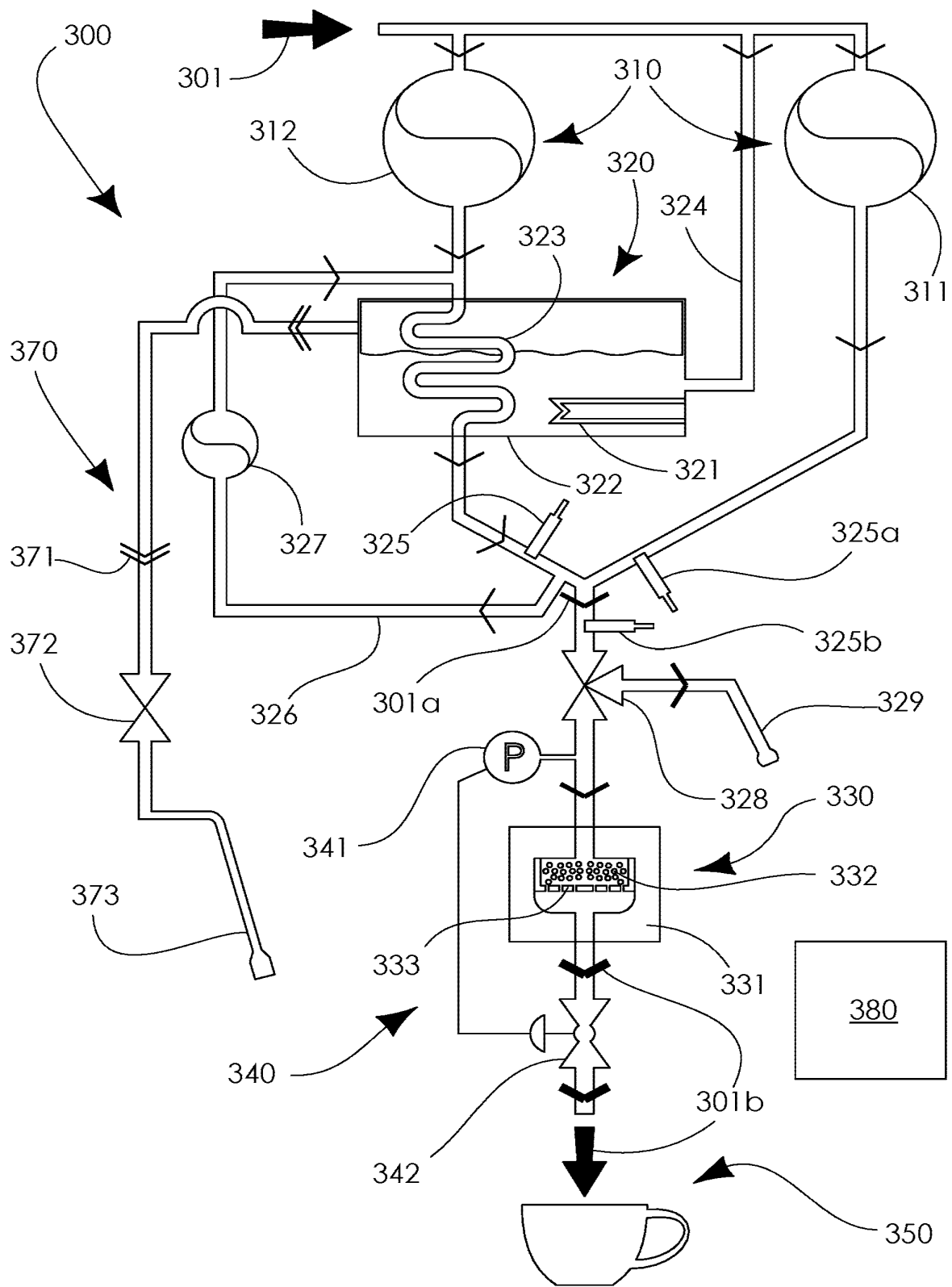
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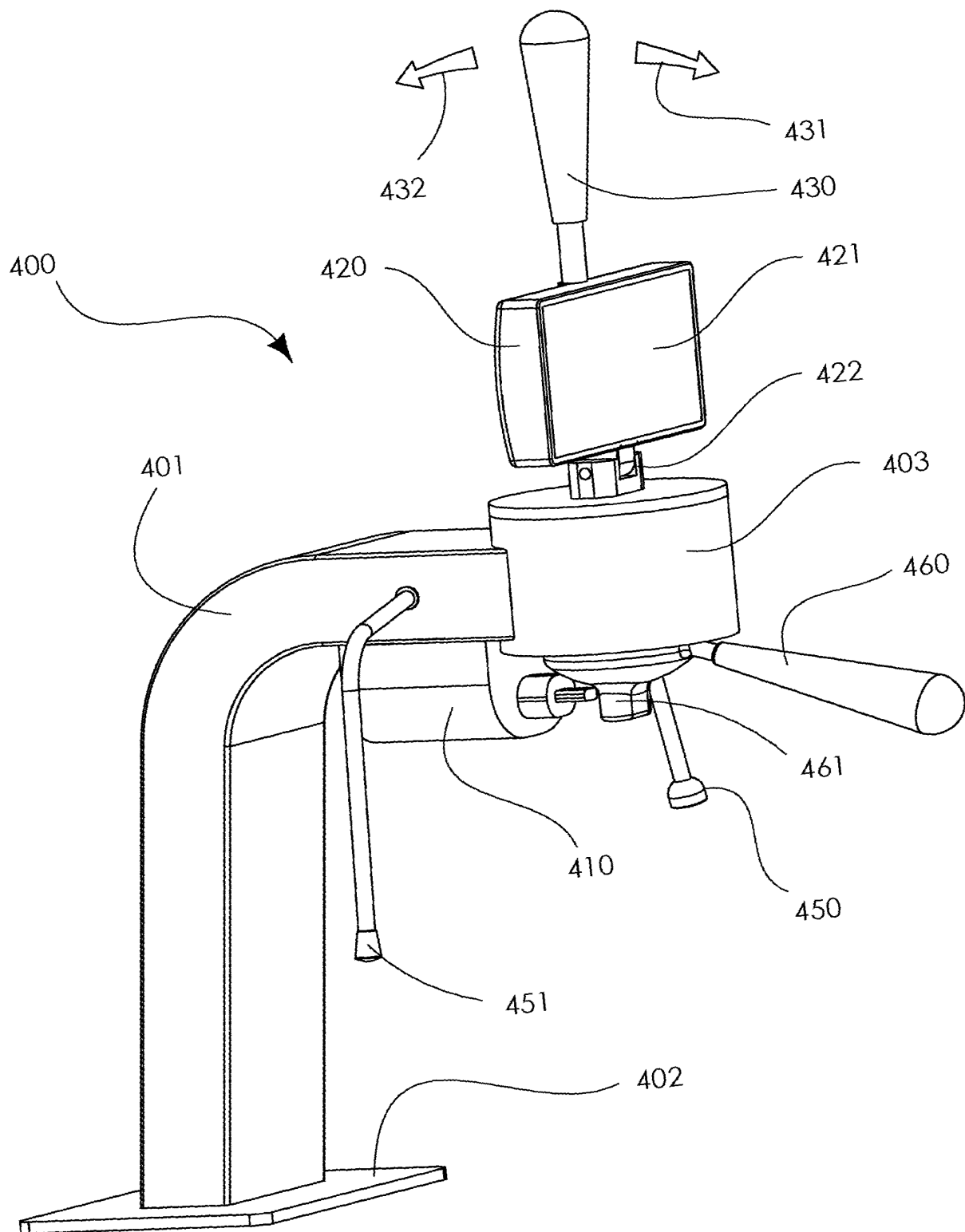
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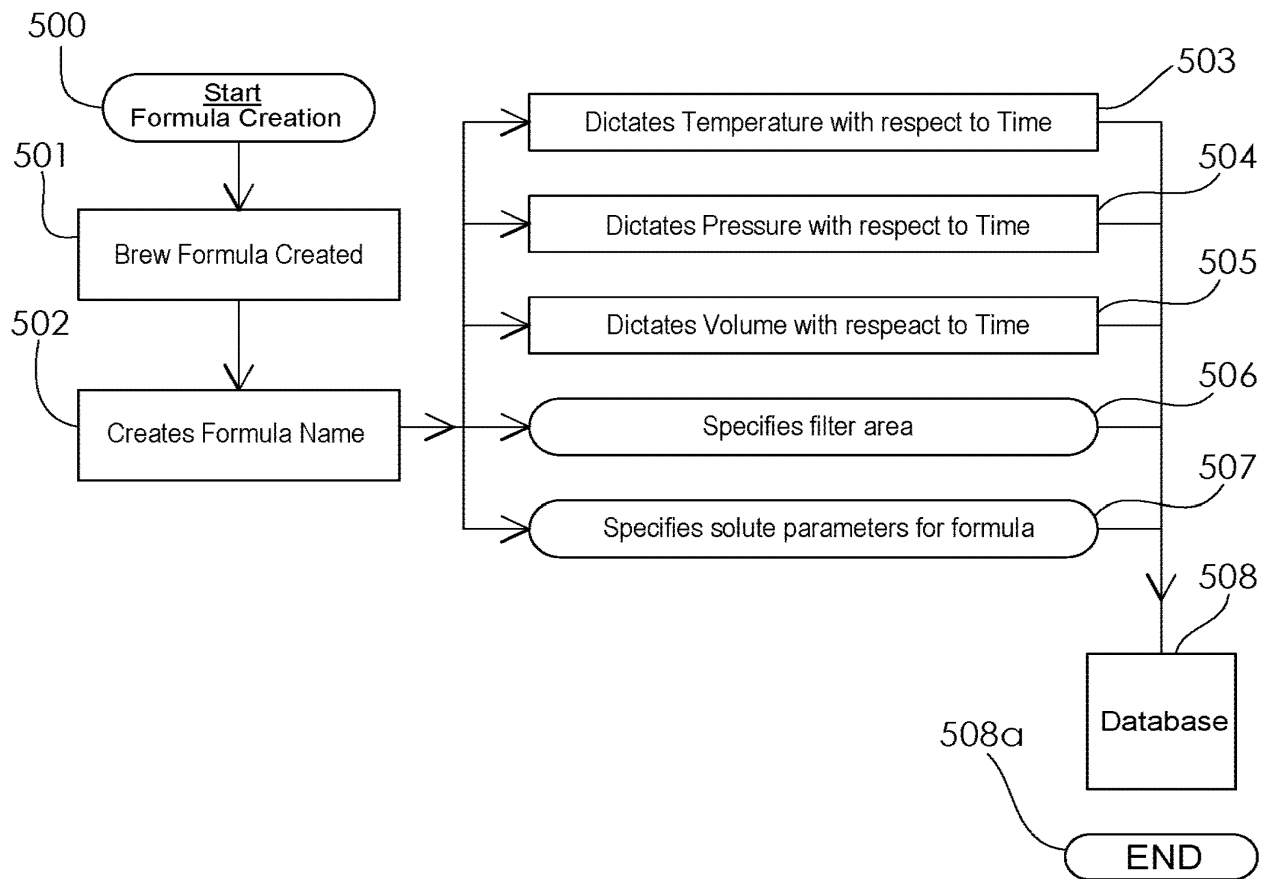
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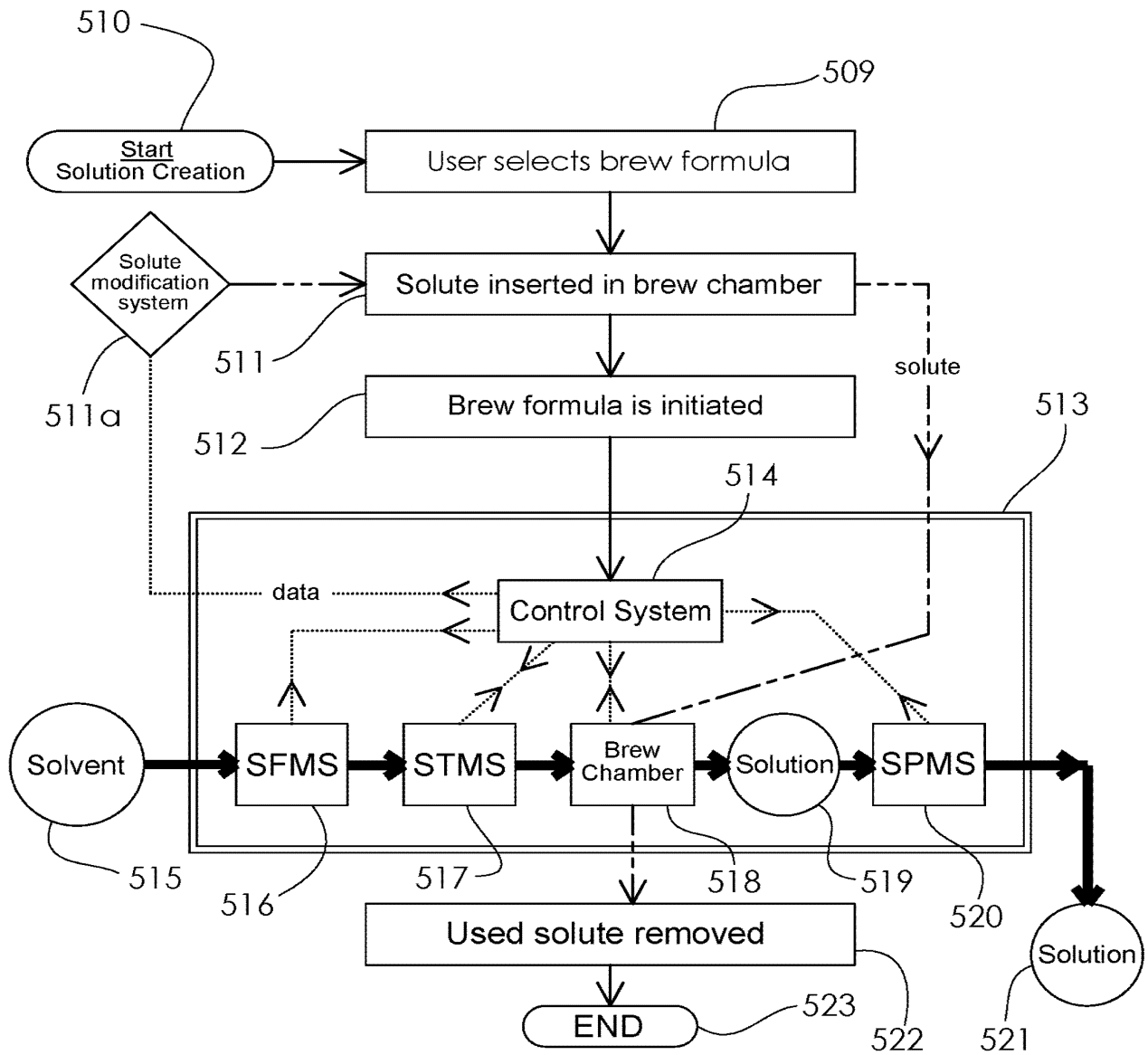
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**METHOD OF GENERATING A DESIRED TEMPERATURE OF AN INFUSED
BEVERAGE WITHIN A BREWING ASSEMBLY**

FIELD OF THE INVENTION

[0001] The present invention relates to beverage brewing systems that utilize pressure, temperature, and flow of a solvent through a solute.

BACKGROUND OF THE INVENTION

[0002] The creation of brewed or infused beverages through the infusion of a solvent with a solute contained within a filter media has been performed for over one hundred years. Over time it has come to be understood that the modification of brewing variables, such as infusion temperature, pressure, and flow rate of solvent through solute, change the resulting beverage's chemical composition and taste. Thus, many brewing systems have been developed that seek to enable flavor modification through selective modulation of one or more brewing variables. However, few, if any, brewing systems facilitate dynamic, i.e., within the brewing cycle, modulation of one or more of these variables during an infusion. Of those that do, modulation of one or more variables during an infusion results in unintended changes to other brewing variables. This lack of independent variable control makes the optimization and modification of infused beverages difficult.

[0003] For instance, currently available brewing systems that enable users to modify pressure during an infusion rely on back pressure generated in a brewing chamber by a resistive media typically composed of a filter and solute. In one configuration, brew chamber pressure modification is achieved by modulating the resistance of said resistive solute media while holding pumping energy constant. While this does result in a change in infusion pressure, it also changes the infusion flow rate. In another conventionally available system, the user modifies infusion

pressure through the variation of solvent pumping force while keeping the resistance of the resistive media constant. This too results in an increase in infusion pressure and simultaneous change in infusion flow rate. Thus, in conventional systems, the variables of pressure and flow rate during the infusion process are dependent upon each other. As pressure and flow rate are both known to affect the chemical composition of the brewed infusion, there is an apparent need for a brewing system that affords independent modulation of infusion pressure and flow rate enabling the user to optimize infused solution chemical composition and produce consistent beverages.

[0004] Some known devices that are configured to modify one or more brewing variables to provide dynamic pressure control, but, again, lack control over flow rate independent of the pressure control. Specifically, said devices enable the user to create and execute brew formulas which modulate brew pressure and temperature with respect to time. This is performed through the use of a pressure sensor to monitor the infusion pressure within a brew chamber and modulating the pumping force of a water pump such that the desired infusion pressure is achieved in the brew chamber. Temperature control of infusion water is performed by utilizing a proportional mixing valve that is controlled by a controller to mix hot and cold water. While the aforementioned device may be capable of providing dynamic temperature and pressure control, it does so at the expense of the ability to regulate flow rate of the exiting infused beverage. The varying exiting flow rate disadvantageously creates inconsistent beverage output, which is costly for many retailers of beverages. The inconsistencies also are problematic for retailers and consumers, alike, as both the taste of the beverage and the amount of the beverage may change at each brewing cycle. Thus, flow rate, total dispensed volume, and ultimately beverage taste are dependent on variables such as fluctuations in solute particle size, packing density, solute quantity, along with filter media

resistivity. As such, this makes it highly difficult to duplicate the flavor of an extraction even if the same brew formula of infusion pressure and temperature with respect to time are used.

[0005] It is well understood that infusion temperature also affects chemical composition of an infused beverage solution. Thus, an operator may find it advantageous to modify brewing infusion temperature during the brewing process to optimize flavor. Current brewing systems utilize boilers and brewing chambers with large thermal masses that are designed to provide consistent brewing temperature thus prohibiting the use of variable infusion temperatures to create optimal flavor. Therefore, a beverage brewing system that affords precise, accurate and dynamic temperature control would enable optimization of beverage flavor and is needed.

[0006] As previously explained, there is an acute need for a brewing system that affords the brewer independent, dynamic variation of brewing variables of temperature, pressure and flow rate during the production of infused beverages. Furthermore, there is a need for a brewing system that mitigates and / or eliminates the impact of external factors such as solute particle size variations and solute compaction on the beverage flavor.

SUMMARY OF THE INVENTION

[0007] The present invention relates to a system and method of brewing beverages that satisfies the outlined need, facilitating dynamic, independent control of pressure, temperature and flow rate of solvent through solute contained within a filter during the infusion process. An exemplary brewing system is composed of a Solvent Flow Management System (SFMS) configured such that a desired flow rate is maintained regardless of pressure variations in the brewing chamber or other areas. This SFMS is operably connected to a Solvent Temperature Management System (STMS) that selectively and dynamically modulates (i.e., keep constant or change) the infusion

temperature. The STMS is operably connected to a brewing chamber where solute resides within a filtering device and the infusion occurs. Operably connected to the brewing chamber is a Solution Pressure Management System (SPMS) which facilitates dynamic modulation of pressure within said brewing chamber.

[0008] Although the invention is illustrated and described herein as embodied in a system and method for brewing beverages with independently controlled flow rate, temperature, and pressure, it is, nevertheless, not intended to be limited to the details shown because various modifications and structural changes may be made therein without departing from the spirit of the invention and within the scope and range of equivalents of the claims. Additionally, well-known elements of exemplary embodiments of the invention will not be described in detail or will be omitted so as not to obscure the relevant details of the invention.

[0009] With the foregoing and other objects in view, there is provided, in accordance with the invention, a method of generating a desired temperature of an infused beverage within a brewing assembly having the steps of inducing a flow of a first solvent within a first solvent conduit upstream of a brewing chamber in a brewing assembly, wherein the first solvent is at a first temperature, inducing a flow of a second solvent within a second solvent conduit, separate from the first solvent conduit, upstream of the brewing chamber, and thermally modulating the second solvent to a second temperature higher and different than the first temperature, selectively combining the first and second solvents at a resulting solvent conduit upstream of the brewing chamber to form a resulting solvent at a selectively desired temperature lower than the second temperature, receiving the resulting solvent at the brewing chamber housing a solute at the selectively desired temperature to produce an infused beverage, and discharging the infused through an outlet on the beverage assembly.

[0010] In accordance with one feature, an embodiment of the present invention includes thermally modulating the first solvent in the first solvent conduit to the first temperature.

[0011] In accordance with yet another feature, an embodiment of the present invention also includes thermally modulating the first solvent in the first solvent conduit with a first thermal modulator and thermally modulating the second solvent in the second solvent conduit with a second thermal modulator.

[0012] In accordance with a further feature, an embodiment of the present invention also includes inducing the flow of the first solvent within the first solvent conduit with a first pump and inducing the flow of the second solvent within the second solvent conduit with a second pump.

[0013] In accordance with yet another feature, an embodiment of the present invention also includes electronically controlling the first and second pumps with an electronic controller to selectively modulate the flows of the first and second solvents, respectively, to generate a desired flow rate of the resulting solvent.

[0014] In accordance with an additional feature, an embodiment of the present invention also includes electronically controlling the first and second thermal modulators with the electronic controller to selectively modulate the temperatures of the first and second solvents, respectively, to generate the selectively desired temperature.

[0015] In accordance with yet another feature, an embodiment of the present invention also includes electronically controlling at least one pump with an electronic controller to selectively modulate the flows of the first and second solvents, respectively, to generate a desired flow rate of the resulting solvent.

[0016] In accordance with an additional feature, an embodiment of the present invention also includes electronically controlling a thermal modulator with an electronic controller to selectively modulate the temperature of the second solvent to generate the selectively desired temperature, thermally modulating the first solvent in the first solvent conduit to the first temperature with the thermal modulator, and electronically controlling the thermal modulator with the electronic controller to selectively modulate the temperature of the first solvent to generate the selectively desired temperature.

[0017] In accordance with yet another feature, an embodiment of the present invention also includes electronically controlling at least one pump with an electronic controller to selectively modulate the flows of the first and second solvents, respectively, to generate a desired flow rate of the resulting solvent.

[0018] In the instance of a beverage brewing system having only SFMS, STMS coupled to a brew chamber, a pressure sensor monitoring infusion pressure may be utilized to track variances in generated infusion pressure for the same brew formula. Said variances may be processed by a control system which modifies performance of a communicatively coupled solute modification system which may modify particle size and /or compaction as previously described in order to maintain a specified infusion pressure. In accordance with a further feature, the present invention also discloses a system for creating an infused beverage, the system including (1) a solvent flow management system configured to flow a solvent through a plurality of conduits in an infused beverage assembly, (2) a solvent temperature modulation system configured to modulate the temperature of the solvent, (3) a brewing chamber in which infusion of a solute and the solvent occurs to generate an infused beverage, the brewing chamber having an infusion process pressure and in fluid communication with at least one of the solvent flow management system and the

solvent temperature modulation system, (4) an infusion pressure regulation system at least partially located downstream of the brewing chamber, the infusion pressure regulation system configured to selectively define and dynamically increase the infusion process pressure greater than a pressure created upstream in the brewing chamber caused by a flow of the solvent through the solute, and (5) an outlet for discharging the infused beverage.

[0019] Other features that are considered as characteristic for the invention are set forth in the appended claims. As required, detailed embodiments of the present invention are disclosed herein; however, it is to be understood that the disclosed embodiments are merely exemplary of the invention, which can be embodied in various forms. Therefore, specific structural and functional details disclosed herein are not to be interpreted as limiting, but merely as a basis for the claims and as a representative basis for teaching one of ordinary skill in the art to variously employ the present invention in virtually any appropriately detailed structure. Further, the terms and phrases used herein are not intended to be limiting; but rather, to provide an understandable description of the invention. While the specification concludes with claims defining the features of the invention that are regarded as novel, it is believed that the invention will be better understood from a consideration of the following description in conjunction with the drawing figures, in which like reference numerals are carried forward. The figures of the drawings are not drawn to scale.

[0020] Before the present invention is disclosed and described, it is to be understood that the terminology used herein is for the purpose of describing particular embodiments only and is not intended to be limiting. The terms “a” or “an,” as used herein, are defined as one or more than one. The term “plurality,” as used herein, is defined as two or more than two. The term “another,” as used herein, is defined as at least a second or more. The terms “including” and/or “having,” as used herein, are defined as comprising (i.e., open language). The term “coupled,” as used herein,

is defined as connected, although not necessarily directly, and not necessarily mechanically. The word “system,” as used herein, is defined as one or more devices or components that form a network for performing or distributing something or operating for a common purpose. The word “correspond” or its equivalent is defined as being similar or equivalent in character, quantity, origin, structure or function

[0021] As used herein, the terms “about” or “approximately” apply to all numeric values, whether or not explicitly indicated. These terms generally refer to a range of numbers that one of skill in the art would consider equivalent to the recited values (i.e., having the same function or result). In many instances these terms may include numbers that are rounded to the nearest significant figure. The terms “program,” “software application,” and the like as used herein, are defined as a sequence of instructions designed for execution on a computer system. A “program,” “computer program,” or “software application” may include a subroutine, a function, a procedure, an object method, an object implementation, an executable application, an applet, a servlet, a source code, an object code, a shared library/dynamic load library and/or other sequence of instructions designed for execution on a computer system.

BRIEF DESCRIPTION OF THE DRAWINGS

[0022] The accompanying figures, where like reference numerals refer to identical or functionally similar elements throughout the separate views and which together with the detailed description below are incorporated in and form part of the specification, serve to further illustrate various embodiments and explain various principles and advantages all in accordance with the present invention.

[0023] FIG. 1 is a schematic diagram depicting an independently controlled beverage brewing system in accordance with one embodiment of the present invention;

[0024] FIG. 2 is a schematic diagram depicting an independently controlled beverage brewing system in accordance with another embodiment of the present invention;

[0025] FIG. 3 is a schematic diagram depicting an independently controlled beverage brewing system in accordance with another embodiment of the present invention;

[0026] FIG. 4 is a fragmentary perspective view of an independently controlled beverage brewing device in accordance with an embodiment of the present invention;

[0027] FIG. 5 is a process flow diagram depicting an exemplary process of programming the beverage brewing system of FIG. 1 in accordance with one embodiment of the present invention;
and

[0028] FIG. 6 is a process flow diagram depicting an exemplary process of operating the beverage brewing system of FIG. 1 in accordance with one embodiment of the present invention.

DETAILED DESCRIPTION

[0029] While the specification concludes with claims defining the features of the invention that are regarded as novel, it is believed that the invention will be better understood from a consideration of the following description in conjunction with the drawing figures, in which like reference numerals are carried forward. It is to be understood that the disclosed embodiments are merely exemplary of the invention, which can be embodied in various forms.

[0030] Although the invention is illustrated and described herein with reference to specific embodiments, the invention is not intended to be limited to the details shown. Rather, various

modifications may be made in the details within the scope and range of equivalents of the claims and without departing from the invention.

[0031] With reference to FIG. 1, a schematic diagram depicting an exemplary brewing system 100 is shown. The brewing system 100 includes a solvent flow management system “SFMS” 110, operably connected to a solvent temperature management system “STMS” 120. The STMS 120 is operably connected to the brewing/infusion chamber 130. The infusion chamber 130 is operably connected to a solution/infusion pressure management/regulation system “SPMS” 140. In operation, a solvent 111 enters the SFMS 110 where it is pumped at a chosen and selectively modulated rate throughout system 100. It can be appreciated by those skilled in the art that the brewing system 100 operates normally under conditions of constant flow (i.e., movement) through the solvent conduits. The term “conduit” is defined as any channel through which something is conveyed. In one embodiment, the conduit may start and terminate where it enters and leaves, respectively, from one component to another within the brewing system 100. In other embodiments, the conduit may start at the beginning of the infusion process (e.g., SFMS) and may terminate at the end of the infusion process (e.g., outlet). The solvent 111 then enters the STMS 120 where it is selectively, whether manually by a user or automated with a control system, thermally modulated to a chosen temperature. Subsequently, the solvent 111 enters the infusion chamber 130 where it comes in contact with the solute 131, thereby creating an infused solution 112. The “infused solution” may be considered any mixture of a single or multi-phase liquid substance. Particulate matter may be removed via a filter 132. The infused solution 112 passes through a SPMS 140. The SPMS 140 selectively modulates the infusion pressure in infusion chamber 130. The infused solution 112 is then dispensed into container 150.

[0032] According to another embodiment, the control system 160 is used to independently and automatically monitor and or modify solvent characteristic variables including, but not limited to, flow rate, temperature and pressure of the infusion in accordance with the user-programmed specifications. The control system 160 is operable to modify the flow rate of solvent 111 by accordingly adjusting the SFMS 110. Additionally, control system 160 modulates solvent temperature through modulating STMS 120. Furthermore, the control system 160 may also adjust the pressure of the infusion by adjusting SPMS 140. During an infusion process, one or more of the aforementioned infusion parameters may be selectively modified during said infusion. This dynamic modification of said variables may be utilized to modify chemicals and/or dissolved solids infused into the resulting solution 112 producing a preferred beverage customizable by the user.

[0033] The parameters required to produce said preferred beverage may be created by a user remotely or on-site. Furthermore, said parameters may be stored as programs or brewing formulas in the control system 160, via a memory, and then may be recalled as desired to reproduce the preferred beverage. The control system 160 may be programmed to provide optimal infusion for numerous solutes or multiple preferred infusions with the same solute. As will be understood by those skilled in the art, to ensure accuracy and precision during the infusion process, feedback sensors, not shown, such as thermocouples, pressure meters, and flow meters may be positioned throughout brewing system 100. These sensors provide feedback to the appropriate control devices affording them the necessary data to modulate aspects of brewing system 100 to ensure programmed infusion conditions are achieved and maintained with consistency, if desired.

[0034] The control system 160 may track performance data such as the number, volume, and/or infusion parameters of infused beverages produced by the brewing system 100. This data may be

combined with any recorded system errors or data that could be used to recommend and/or perform system maintenance. Data recorded by control system 160 may be accessed on-site or remotely.

[0035] As will be commonly understood, the brewing system 100 may be reconfigured such that SFMS 110 and STMS 120 are reversed such that solvent 111 initially flows into STMS 120, where solvent is thermally modulated to the appropriate or desired temperature. Subsequently, the thermally modulated solvent 111 would enter SFMS 110 then flow into infusion chamber 130. The infusion chamber 130 may be any structural housing wherein a solute is capable of being disposed.

[0036] A preferred beverage may be produced by the incorporation of one or more of the dynamically adjustable systems, i.e., the SFMS 110, the STMS 120, and the SPMS 140. Said another way, any of the system 100 components, e.g., SFMS 110, are operable to adjust solvent/infusion parameters during an infusion process. In other embodiments, a beverage may be produced by a brewing system 100 that incorporates a non-dynamically controlled SPMS 140 and a dynamically controlled SFMS 110 and a STMS 120. Alternately, the brewing system 100 may include a non-dynamically controlled SFMS 110 and SPMS 140 and a dynamically controlled STMS 120.

[0037] Referring now to FIG. 2, a schematic diagram of a beverage brewing system 200 in an alternate configuration is shown. In said configuration, solvents 202 and 201 are pumped by two SFMS 210, the SFMS being operably connected to two STMS 220. After passing through the STMS 220, the thermally regulated solvents 202 and 201 combine to create a resulting solvent 203 of a resulting temperature. The resulting solvent 203 then passes into the brewing/infusion chamber 230, through a resulting solvent conduit—which may or may not be considered to be the

same as a solvent conduit—where infusion of solute 232 and solvent 203 occurs. The result of the infusion of the solute 232 and solvent generates an infused solution 204. The infused solution 204 then passes through an infused solution conduit—which may or may not be considered to be the same as the solvent conduit or resulting solvent conduit— to a SPMS 240 and then exits the assembly through an outlet to a receptacle 250.

[0038] In the brewing system 200 shown in the figuration of FIG. 2, the SFMS 210 is composed of independently controlled pumping units 211 and 212, with the pump 212 receiving solvent 202 and the pump 211 receiving solvent 201. Said pumps 211, 212 work in tandem to provide an additive flow rate that is equivalent to the total desired infusion flow rate in the brewing chamber 230. For example, if the desired infusion flow rate is 1 cc/sec, the pump 211 may pump at 0.7 cc/sec and the pump 212 may pump at 0.3 cc/sec. The SFMS 210 may be independently controlled or coupled to control system 280, thereby modulating the pumps 211, 212 to achieve a required flow rate of solvents 201, 202 based on total desired flow rate of resulting solvent 203 and the desired infusion temperature as explained below.

[0039] In one embodiment, the SFMS 210 is operably connected to the STMS 220 where the solvent 202 is thermally modulated by a thermal modulator 222 and the solvent 201 is thermally modulated by a thermal modulator 221, such that the range of infusion temperatures desired by the user may be produced through their selective combination. Thermal modulations provided by thermal modulators 221, 222 dictate the solvent temperature range available for an infusion. For example, if a user desires to perform the infusion between 20° C and 100° C then thermal modulator 221 may yield solvent 201 at a temperature of 20° C or lower and thermal modulator 222 may yield solvent 202 at a temperature of 100° C or higher. In practice, to achieve infusion temperatures within this range, the SFMS 210 will selectively pump solvents 201, 202 through the

STMS 220 at a rate that satisfies the desired overall infusion flow rate and temperature of the resulting solvent 203. For example, assuming a negligible thermal loss from the brewing chamber 230 and system conduits, if the user desires an infusion flow rate of 1 cc/sec and an infusion temperature of 90° C, the solvent 201 may be modulated to 100° C and the solvent 202 may be modulated to 20° C. The pump 212 will flow solvent 202 at a rate of 1/8 cc/sec and pump 211 will flow solvent 201 at a rate of 7/8 cc/sec. In order to improve accuracy of the infusion temperature, the specific heat capacity and thermal conductivity of brewing chamber 230 and system conduits may be accounted for when determining solvents' 201, 202 flow rates. The STMS 220 may also be connected to the control system 280, which may modulate and/or monitor temperature of the respective solvents 201, 202, as necessary. Solvent temperatures and/or data from the STMS may be utilized by control system 280 to modulate the performance of the SFMS, thereby advantageously achieving a desired infusion temperature and infusion flow rate.

[0040] The STMS 220 is operably connected to the brewing chamber 230. In one embodiment, the brewing chamber 230 is composed of a chamber housing 231 and a filter system 233 designed to contain a solute 232. The brew chamber housing 231 may be designed with a removable section that readily facilitates the insertion or removal of the solute 232. In order to facilitate rapid, accurate, and dramatic fluctuations in infusion temperatures, the brew chamber 230 is optimally designed with a minimal specific heat capacity and thermal conductivity. Within the brewing chamber 230, the resulting solvent 203 contacts the solute 232 thereby creating a solution 204.

[0041] Operably connected to brewing chamber 230 is a SPMS 240 which selectively modulates infusion pressure via the addition of flow resistance generated by at least one pressure regulation component, e.g., a valve 242. As the filter 233 and the solute 232 may create a resistance to flow, a pressure monitoring device 241 is inserted antecedent to the solute 232, the pressure monitoring

device 241 operably connected to the solvent 203 to enable accurate infusion pressure measurement. In order to increase infusion pressure (i.e., infusion process pressure) greater than that provided by solute 232 and filter 233, the valve 242 may be selectively activated increasing solution 204 flow resistance thereby increasing infusion pressure. Once activated, the valve 242 may be selectively deactivated, decreasing flow resistance and thus infusion pressure.

[0042] As will be understood by those skilled in the art, in order to control the infusion pressure in accordance with the present invention, the valve 242 is of a class that is not activated based on a defined or determined pressure differential across the valve 242, e.g., blowoff valve. Said another way, the valve 242 is such that the flow of the solvent through the solute is not contingent on a pressure differential across the pressure regulation component. Rather, it is activated or utilized to dictate the infusion pressure independent of pressure differential across itself. As such, the at least one pressure regulation component 242 is operably unaffected by a pressure differential across the at least one pressure regulation component during the infusion process. Any other known infusion systems that may utilize a valve downstream, are solely utilizing this valve 242 as a means to relieve pressure in the lines, thereby are always operably affected by a pressure differential across itself. Therefore, the present invention provides a user the advantage of dictating the infusion pressure independent of releasing the infused solution and controlling other system parameters.

[0043] In one embodiment, the pressure regulation component, e.g., valve 242, may be a needle valve. In other embodiments, the valve 242 may include a butterfly valve, a globe valve, a pinch valve, or any other flow impeding device capable of regulating pressure within brewing chamber 230. Ideal valves are impervious to particulate matter, oils, and other dissolved solids that may exist in infused solution, possess a minimal internal volume, are readily cleaned, and possess a

minimal thermal conductivity and specific heat capacity. In practice, the pressure monitoring device 241 is used to monitor the infusion pressure, which, in turn, modulates the valve 242 to adjust infusion pressure. The SPMS 240 may be connected to a control system 280 which may modulate the valve 242 based on inputs from the pressure monitoring device 241 to achieve a desired infusion pressure. Operably connected to the SPMS 240 is solution receptacle 250 which receives the solution 204 once it exits beverage brewing system 200.

[0044] As will be commonly understood, the brewing system 200 may be reconfigured such that SFMS 210 and STMS 220 are reversed such that solvents 201, 202 initially flow into STMS 220 where they are heated to the appropriate temperature, before subsequently entering the SFMS 210, and then flowing into brewing/infusion chamber 230.

[0045] According to another embodiment of the present invention, the control system 280 is used to independently and automatically modify flow rate, temperature, and pressure of the infusion. The control system 280 modifies flow rate of solvents 201, 202 by accordingly adjusting the SFMS 210. Additionally, the control system 280 modulates the solvent temperature through modulation of STMS 220. Furthermore, the control system 280 adjusts pressure of the infusion by adjusting SPMS 240. For example, during an infusion process, the control system 280 may selectively modify one or more of the aforementioned infusion parameters in accordance with user's desires. This dynamic modification may be utilized to modify chemicals and/or dissolved solids infused into the resulting solution producing a preferred beverage by the user or a consumer. The parameters required to produce said preferred beverage may be stored as programs or brewing formulas in control system 280 and recalled as desired to reproduce and replicate the preferred beverage formula. As such, the infused beverage formulate may be any recipe or formulation made up of infusion process parameters.

[0046] With reference now to FIG. 3, another schematic diagram is shown depicting a beverage brewing system 300 in accordance with an alternate embodiment of present invention. The beverage brewing system 300 is adapted to enable the brewing system to produce infused beverages while also producing steam for frothing beverages and enabling the selective dispensing of thermally modulated solvent without its passage through the brewing chamber.

[0047] As shown, the solvent 301 is pumped by SFMS 310, which may include solvent pumps 311, 312, (operable equivalents of solvent pump 211 and 212) and is in fluid communication with the STMS 320. STMS 320 in the present embodiment is configured to selectively thermally modulate one of the solvent flows from the SFMS 310 or other solvent sources, i.e., a boiler. As will be obvious to those skilled in the art, thermal modulation of one solvent dictates that the minimum temperature for an infusion will be that of solvent 301. The STMS 320 is operable to selectively heat the solvent 301 pumped from solvent pumps 311, 312 through the use of a heat exchanger 323. The heat exchanger 323 may be contained within a steam boiler 322 which is heated by a heating element 321 and supplied solvent from a boiler solvent supply line 324.

[0048] A solvent recirculation system 326 is preferably in fluid connection with the heat exchanger 323, such that it is connected downstream and upstream the steam boiler 322. The solvent recirculation system 326 is operable to selectively recirculate the thermally modulated solvent 301 in order to maintain an optimal temperature. A solvent recirculation pump 327 may also be utilized to aid in the recirculation of the solvent 301. The temperature of the solvent 301 may be monitored by a temperature measuring device 325. The temperature measuring device 325 may be communicatively coupled to the recirculation pump 327, through the use of a controller 380 or other means, to modulate its performance and maintain a desired temperature and/or a uniform temperature within the solvent conduits. In other embodiments, the temperature measuring device

325 may also be communicatively coupled to a valve downstream of the steam boiler that is operable to inhibit the flow of the solvent until a desired temperature is reached.

[0049] The system 300 may also utilize a steam dispensing system 370 that is in fluid communication with steam boiler 322, through use of one or more conduits, and is preferably configured to facilitate in dispensing steam 371. Dispensing of said steam 371 is controlled by a steam valve 372, which is also in fluid communication with the steam boiler 322 and operable to control the flow of the steam 371. The steam dispensing system 370 may also include a steam dispensing nozzle 373 that may be uniquely adapted to dispense steam 371 in a manner which is optimized for the frothing of beverages. As will be obvious to those skilled in the art, the steam boiler 322 is configured to supply steam 371 at a pressure controlled by a pressure switch or alternate equivalent (not shown). The steam boiler 322 may also be configured to maintain a sufficient volume solvent level through the use of a selectively operable fill valve and fluid level switches (not shown).

[0050] In an operable equivalent manner to the beverage brewing system 200 depicted in FIG. 2, the thermally modulated solvent 301 pumped by solvent pump 312 may be mixed with the solvent 301 pumped by the solvent pump 311 which has not been appreciably thermally modulated and thus is of a different temperature thereby creating a resulting solvent 301a of a resulting temperature. Depending on the desired temperature and flow rate, the SFMS pumps solvent 301 based on solvent temperatures measured by temperature measuring devices 325 and 325a. The system 300 may also include a temperature measuring device 325b that measures the temperature of the resulting solvent 301a. In one embodiment, the temperature measuring device 325b may provide feedback to a controller 380 that may modify performance of SFMS to ensure the resulting solvent 301a is maintained at the desired temperature. In other embodiments, the temperature

measuring device 325b may be communicatively coupled to the heating element 321 or other system 300 components to operably modulate the resulting solvent 301a to a desired temperature.

[0051] Flow of the resulting solvent 301a to the brew chamber 330 is preferably controlled by a valve 328 that is operably configured to selectively prevent or inhibit the flow of the resulting solvent 301a, facilitate flow of resulting solvent 301a to the brew chamber 330, facilitate flow of the resulting solvent 301a to an external non-brew chamber location, and/or facilitate flow to a drain (not shown). The valve 328 may be manually operated or automatically operated by a controller 380. In practice, when brewing system 300 is in its default state, the valve 328 is closed thereby preventing or otherwise inhibiting fluid flow. The active state of the system 300 may include, but is not necessarily limited to, when the user desires to dispense a specific temperature and/or volume of resulting solvent 301a without passing the solvent 301a through the brew chamber 330 or desires to pass the solvent 301a through the brewing chamber. Therefore, the active state may include modifying the valve 328 such that the solvent 301a is directed to flow out a dispensing spout 329 with the SFMS and the STMS providing the solvent 301a at the desired temperature, volume, and flow rate. Said independent control of system components is what advantageously gives the user optimum control not available with prior art brewing systems.

[0052] Alternately, the valve 328 may direct the solvent 301a to a drain (not shown), which will enable the flushing of solvent 301a or any gas within the system. The valve 328 may also be utilized to ensure solvent 301a is at a desired temperature prior to being directed to the brew chamber 330 for an infusion or dispensing spout 329 for dispensing. This is accomplished by a valve 328 directing solvent 301a to a drain until temperature measuring device 325b indicates that solvent 301a is the proper temperature. In other embodiments, the valve 328 may recirculate the solvent 301a to the steam boiler 322 or the recirculation pump 327. When the solvent 301a is at

the proper temperature then the valve 328 may switch to direct solvent 301a to the infusion chamber 330 or dispensing spout 329.

[0053] When creating an infusion, i.e., the result of an infusion process, the solvent 301a passes through the valve 328 and is directed to the brewing chamber 330. The brewing chamber may be composed of a chamber housing 331 that is preferably configured to readily facilitate the removal and replacement of a filter system 333. In one embodiment, the chamber housing 331 is of a size slightly larger in dimensions than the filter system 333 to facilitate a taut and relatively unyielding coupling with one another. In an alternate embodiment, the internal volume of chamber housing 331 is roughly equivalent to that of solute 332 and filter system 333. In other embodiments, the coupling with the housing 331 and filter system 333 may have dimensional variance with one another. The filter system 333 may include a solute 332 that is placed in fluid communication with the solvent 301a to facilitate infusion, thereby creating a solution 301b (a solvent 301a/solute 332 mixture). In fluid communication with the brew chamber 330 is a SPMS 340, which is the operable equivalent to the aforementioned SPMS 240. The SPMS 340 may include a valve 342 and a pressure monitoring device 341, e.g., a pump or valve. The valve 342 is configured to selectively resist flow of the solution 301b out of the brew chamber 330, advantageously modulating the infusion pressure within brew chamber 330. After the solution 301b passes through the valve 342 it exits the brewing system 300 to a removable cup 350 or an operable equivalent.

[0054] As will be obvious to those skilled in the art, the configuration of brewing system 300 should take into account potential cavitations within said brewing system 300 which may diminish the performance of said brewing system. Thus it may be advantageous to configure said system 300 such that the solvent 301a and 301 are under constant positive pressure.

[0055] The control system 380, which may be an operable equivalent to the control system 280 described and shown with reference to FIG. 2, is adapted to the brewing system 300 to be communicatively coupled to one or more devices in the system 300. The control system 380 may modulate the performance of the SFMS 310, the STMS 320, and the SPMS 340 to ensure that the user's specifications for an extraction manifested during the infusion or dispensing of the solvent 301a.

[0056] One benefit of the disclosed beverage brewing system 300 is the ability to substantially separate the brewing chamber 330 from the STMS 320 and SPMS 340 without adverse effects on infused solution quality. A system of the aforementioned configuration is preferably configured such that solvent 301a is produced proximate brewing chamber 330 thereby ensuring an accurate infusion temperature regardless of brew chamber 330 to STMS 320 and SPMS 340 separation distance. Said separation preferably enables the minimization of the overall appearance of the beverage brewing system 300 to the viewing public, including the user. In practice, one methodology of minimizing brewing system appearance is positioning the STMS 320 and the SFMS 310 out of the user's view with the SPMS and brewing chamber 330 visible. Figure 4 depicts an exemplary embodiment of the visible portion of the aforementioned visually minimized system.

[0057] FIG. 4 depicts a visible brewing component 400 that may include a mechanical support 401 with a platform mounting plate 402. The visible brewing component 400 may include a brew chamber 403, which is an operable equivalent of the brew chamber 330 described and shown in reference to FIG. 3. The component 400 also includes a SPMS 410, which is also an operable equivalent of the SPMS 340 described and shown in reference to FIG. 3. The component 400 may

also include a steam dispensing nozzle 451 and a dispensing spout 450 which are also operable equivalents to those comparable components described and shown in reference to FIG. 3.

[0058] The component 400, which may also be referred to as a body, may also include a user interface 421 housed in a user interface housing 420 that is preferably made in operable attachment to mechanical support 401 by hinge support 422 which may be configured to facilitate rotation about said hinge of an interface housing 420 indicated by a directional indicator 431 or reverse rotation indicated by a directional indicator 432. An interface housing control lever 430 may be attached to interface housing 420 thereby aiding in the selective movement. A sensor means (not shown) may be utilized to detect motion of interface housing 420 about hinge support 422 which may be utilized to selectively activate components of said beverage brewing system. An exemplary use of said switching means is the actuation of steam dispensing valve (not shown) facilitating the dispensing of steam from steam dispensing nozzle 451. Said dispensing may be initiated by movement in one direction resulting in manually controlled steam dispensing and movement in the other direction initiating an automated dispensing of steam that may be controlled with respect to temperature rise of a frothed beverage.

[0059] The brew chamber 403 is configured to contain a filter system (not shown) within a removable filter housing 461, both of which may be operable in an equivalent above-described manner. The filter housing 461 preferably has a filter system handle 460 attached thereto, which is configured to aid in its removal and replacement. In operable engagement with removable filter housing 461 is the SPMS 410 which is configured to modulate infusion pressure as described above.

[0060] Figure 5 depicts a process flow diagram for the present invention. The process of brew formula creation begins in step 500. Step 501 is the initialization of the brew formula creation mechanism. In this step the user will access software or alternate means of creating said brew formula. In step 502, a formula name is created, preferably, said name is unique, distinctive and indicative of the solute to be used to create said brew. Steps 503-507 specify the brew parameters. In step 503 the temperature with respect to time is preferably specified. In step 504, the pressure is preferably dictated with respect to time, and in step 505 the volume is specified with respect to time. As will be understood by those skilled in the art, the aforementioned brew parameters may be specified with respect to other parameters as long as the parameters of temperature, solution flow rate and infusion pressure are specified. Additionally, said brew formula may include step 506, the specification of filter area, and step 507, the specification of solute parameters. Said solute parameters may include average solute particle size, compaction and any other pertinent information which may be useful to an operator when executing the brew formula. In step 508, the aforementioned parameters are stored in a storage media known as a database. The process of brew formula creation is complete at step 508a.

[0061] With reference now to FIG. 6, a process flow diagram depicting an exemplary process of operating the beverage brewing system is shown. Electing to brew a beverage, a user starts at step 510. In step 509, a brewing formula is selected by the user. During step 511a solute is modified to the appropriate size based by a solute modification system according to a user's desires and/or information provided from a communicatively coupled control system 160. During step 511 the solute is inserted in brewing/infusion chamber 130. Subsequently, brew formula execution is initiated in step 512. In step 514, a signal is sent to the control system 160 of the brewing device 513 which is the operable equivalent to brewing device 100. In Step 515, the control system 160

causes solvent to enter brewing device 513. During step 516, the SFMS 110, 210, 310, receives a control signal from control system 160, causing flow of solvent at a rate dictated by the chosen brew formula. During step 517, the STMS 120 receives a control signal from the control system 160 and thermally modulates the solvent in accordance with the brew formula. The infusion of solvent and solute within brew chamber 130 occurs during step 518. During step 519, the infused solution/beverage exits from said brewing chamber 130. During step 520, the solution traverses through the SPMS 140, which receives a control signal from the control system 160, resulting in pressure regulation during the infusion process. During step 521, solution exits brewing device 513.

[0062] As will be obvious to those skilled in the art, steps 516, 517, 518, 519, 520 may all occur concurrently. At the conclusion of step 521, the removal of used solute from brewing chamber 130, occurs during step 522. After solute removal, the process concludes at step 523.

[0063] The SFMS 110, 210, 310 is a system of moving fluid that provides accurate, metered, variable flow of solvent through the brewing system. Applicable systems may include a pumping means capable of providing flow at pressures and rates equal to or greater than those required by the brewer. Exemplary pumps are preferably volumetric in operation however, gear pumps, piston pumps, rotary vane pumps or any others that satisfy the aforementioned criteria. Pumping means is preferably in operable connection with a solvent flow meter(s) or an equivalent mechanism that acts as a feedback mechanism ensuring the desired flow rate and volume is dispensed. Preferably, pumping is performed by a pump with 100% volumetric efficiency driven by a prime mover with feedback and/or position control such as a servo or stepper motors whereby the use of a flow meter is not required to achieve accurate flow rates. Additionally, the pumping means is capable of modulating and maintaining the required fluid flow rate during the brewing process regardless of

system pressure. SFMS may be a self-controlled system or coupled to an external system controller that monitors and modulates performance.

[0064] The STMS, 120, 220, 320 is a system for providing rapidly variable, accurate and precise temperature solvent to the brewing chamber. Exemplary systems include instant or tankless solvent heating systems and the use of thermostatic mixing valves / systems. Regardless of the system utilized, an ideal STMS is capable of providing variations in temperature that are equal to or greater than those desired by the operator. Ideal STMS have the ability to provide solvent temperature modulations at a rate of at least $10^{\circ}\text{C} / \text{sec}$ or 10°C/mL flow that contacts solute and provide a minimum accuracy of $\pm 3^{\circ}\text{C}$ during the infusion. An optimal system takes into account specific heat capacity and thermal conductivity of solvent conduits in operable connection to solute material when delivering solvent.

[0065] An ideal brewing chamber 130, 230, 330 is a system that is operably connected to the SFMS, STMS, and SPMS. It includes a chamber configured to facilitate contact of solution and solute creating an infused solution, selectively contain solute media, and allow said infused solution to exit said brew chamber. An ideal brewing chamber has a minimal specific heat capacity and thermal conductivity such that infusion temperature can be rapidly modified. Preferably it is configured such that the material contacting solvent has a thermal conductivity at or below $1\text{W} / \text{m}^{\circ}\text{K}$, exemplary materials include the class of polymers of Polyetherimide (PEI) and polyetheretherketone (PEEK). Additionally, said brewing chamber is capable of withstanding pressures greater than those provided by the brewing system.

[0066] Operably connected to brewing chamber is a SPMS, 140, 240, 340, that modulates the pressure within said brewing chamber by modifying infused solution flow resistance. The SPMS

may include a pressure measuring device operably connected to solute within brew chamber and a valve that is capable of modulating infused solution flow resistance thus increasing pressure within brewing chamber. Exemplary valves include pressure regulators, needle, butterfly, globe and pinch valves or any other flow regulating device capable of regulating pressure within brew chamber. Ideal valves are impervious to particulate matter, oils, and other dissolved solids that may exist in infused solution. Furthermore, SPMS optimally contains a minimal internal volume and adjusts pressure within the chamber to an accuracy of at least ± 0.5 Bar and a minimum rate of pressure change greater than 1 Bar/sec. Additionally the internal volume should be readily cleaned.

[0067] An electronic control system 160, 280, 380, is ideally used to selectively modulate and monitor performance of SFMS, STMS, and SPMS during the infusion process. Additionally, the control system is able to be pre-programmed with brewing “formulas” that may be tailored to different personal preferences and solute. These formulas may be recalled when desired thus minimizing the amount of labor, skill and time required to reproduce brewing results. The control system may include networking capabilities such as being connected to the Internet, thereby enabling remote system monitoring and transmission of brewing “formulas” to the brewing system. Preferably, the said control system will be capable of processing a multitude of user imputed variables to create an executable extraction. Said variables include pressure, flow rate, temperature, overall time, and dispensed volume.

[0068] As will be obvious to those skilled in the art, the variables of flow rate, infusion time and dispensed infusion volume are not all independent variables, thus, the control system is preferably capable of affording the user the ability to select the two independent variables desired. For instance, the user may elect to dictate infusion flow rate with respect to infusion time thus making

dispensed volume the dependent variable. Alternately, the user may elect to dictate dispensed volume with respect to time making flow rate a dependent variable determined by the control system.

[0069] Furthermore, the said control system is preferably capable of enabling the user to dynamically (i.e., during the brewing process) modify all the brew variables with respect to the other variables. For instance, the user may decide to dictate the variable of temperature with respect to pressure, time, or volume. Likewise, the pressure may be dictated with respect to time or volume or temperature. However, for the sake of simplicity, it is preferable for all the variables to be dictated with respect to the same parameter of either time or dispensed volume with absolute limits and rates of change governed by the capabilities of the STMS, SFMS, brew chamber, and SPMS. In the event that the feedback mechanisms indicate that the actual infusion deviated from any of the set values of the brew formula, an error message is preferably generated communicating the error to the user whereby the user may modify the brew formula or modify solute and or filter media to enable the brewing system to successfully execute the brew formula.

[0070] In the event that a brew formula is generated for a set volume and the user desires to increase the volume of solution brewed while maintaining the effective brew parameters, the control system is preferably capable of taking the original brew formula and modulating the dispensed flow rate in a temporary fashion thus, keeping total time constant, and also recommending an increase in filter media size to ensure the increased infusion volume is of consistent flavor with the original brew formula.

[0071] Benefits of the aforementioned system may be derived from inclusion of less than all three solution control systems: SFMS, STMS and SPMS. For instance a beverage brewing system may

include a STMS and SFMS or an alternate configuration may include a SFMS and SPMS operably connected to a brewing chamber.

[0072] In this embodiment, flow rate of solvent is dictated and modified by the SFMS, temperature of solvent is modulated and controlled by the STMS and the pressure within the brewing chamber is modified by the SPMS. All of the aforementioned brewing variables are able to be independently varied by the user during the infusion. Additionally, due to the complexity of the aforementioned systems, it may be found advantageous to utilize a programmable controller to control and modify the aforementioned brewing variables of said brewing system.

[0073] While the disclosed beverage brewing/infusion system mitigates the impact effect variances in solute size and solute compaction have on the infusion flavor, it may be found useful to utilize data recorded by the control system to modify solute parameters such as solute size or solute compaction. This may be accomplished through a solute modification system, which may include a solute grinder and/or compaction tool operably connected with the brewing chamber where the solute is disposed. In one exemplary system, a control system, as described above, is communicatively coupled to a solute modification system, specifically a solute grinder, whereby sensor data from an infusion process may be utilized to modify performance of said grinder to improve the performance of the total system. One such example is utilizing pressure sensor data during an infusion process to modify the performance of a grinder to produce smaller or larger solute in order to ensure a consistent beverage flavor.

[0074] For instance, if a beverage is brewed/infused utilizing a formula and the SPMS 140, 240, 340 is unable to produce the pressure profile specified by the formula or SPMS requires excessive or inordinate levels of flow modulation, the control system may communicate with a solute grinder

causing it to reduce or increase or decrease the size of solute disposed within the brew chamber. As will be obvious, assuming the same level of solute compaction and solute mass, a decrease in average solute particle size will result in higher solute resistance and an increase in average solute particle size will result in decreased resistance enabling lower infusion pressures. Likewise, the system may be configured to utilize control system data to modify solute compaction rather than average solute particle size.

What is claimed is:

CLAIMS

1. A method of generating a desired temperature of an infused beverage within a brewing assembly comprising the steps of:

inducing a flow of a first solvent within a first solvent conduit upstream of a brewing chamber in a brewing assembly, the first solvent at a first temperature;

inducing a flow of a second solvent within a second solvent conduit, separate from the first solvent conduit, upstream of the brewing chamber, and thermally modulating the second solvent to a second temperature higher and different than the first temperature;

selectively combining the first and second solvents at a resulting solvent conduit upstream of the brewing chamber to form a resulting solvent at a selectively desired temperature lower than the second temperature;

receiving the resulting solvent at the brewing chamber housing a solute at the selectively desired temperature to produce an infused beverage; and

discharging the infused through an outlet on the beverage assembly.

2. The method according to claim 1, further comprising:

thermally modulating the first solvent in the first solvent conduit to the first temperature.

3. The method according to claim 2, further comprising:

thermally modulating the first solvent in the first solvent conduit with a first thermal modulator and thermally modulating the second solvent in the second solvent conduit with a second thermal modulator.

4. The method according to claim 3, further comprising:

inducing the flow of the first solvent within the first solvent conduit with a first pump and inducing the flow of the second solvent within the second solvent conduit with a second pump.

5. The method according to claim 4, further comprising:

electronically controlling the first and second pumps with an electronic controller to selectively modulate the flows of the first and second solvents, respectively, to generate a desired flow rate of the resulting solvent.

6. The method according to claim 5, further comprising:

electronically controlling the first and second thermal modulators with the electronic controller to selectively modulate the temperatures of the first and second solvents, respectively, to generate the selectively desired temperature.

7. The method according to claim 1, further comprising:

electronically controlling at least one pump with an electronic controller to selectively modulate the flows of the first and second solvents, respectively, to generate a desired flow rate of the resulting solvent.

8. The method according to claim 1, further comprising:

electronically controlling a thermal modulator with an electronic controller to selectively modulate the temperature of the second solvent to generate the selectively desired temperature.

9. The method according to claim 8, further comprising:

thermally modulating the first solvent in the first solvent conduit to the first temperature with a second thermal modulator; and

electronically controlling a second thermal modulator with the electronic controller to selectively modulate the temperature of the first solvent to generate the selectively desired temperature.

10. The method according to claim 9, further comprising:

electronically controlling at least one pump with an electronic controller to selectively modulate the flows of the first and second solvents, respectively, to generate a desired flow rate of the resulting solvent.

**METHOD OF GENERATING A DESIRED TEMPERATURE OF AN INFUSED
BEVERAGE WITHIN A BREWING ASSEMBLY**

ABSTRACT OF THE DISCLOSURE

A method of generating a desired temperature of an infused beverage within a brewing assembly that includes inducing a flow of a first solvent at a first temperature within a first solvent conduit upstream of a brewing chamber in a brewing assembly, inducing a flow of a second solvent within a second solvent conduit, separate from the first solvent conduit, upstream of the brewing chamber, and thermally modulating the second solvent to a second temperature higher and different than the first temperature. The method also includes selectively combining the first and second solvents at a resulting solvent conduit upstream of the brewing chamber to form a resulting solvent at a selectively desired temperature lower than the second temperature, receiving the resulting solvent at the brewing chamber housing a solute at the selectively desired temperature to produce an infused beverage, and discharging the infused through an outlet on the beverage assembly.

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DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of Invention	METHOD OF GENERATING A DESIRED TEMPERATURE OF AN INFUSED BEVERAGE WITHIN A BREWING ASSEMBLY
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As the below named inventor, I hereby declare that:

This declaration is directed to: ☒ The attached application, or
☐ United States application or PCT international application number _____
 filed on _____.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

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LEGAL NAME OF INVENTOR

Inventor: Gideon Duvall Date (Optional): 2/13/2023
 Signature: /Gideon Duvall/

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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
18/109,177	02/13/2023		664	DUVALL_23_DIV1	10	1

CONFIRMATION NO. 7946

131368

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FILING RECEIPT



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Date Mailed: 03/13/2023

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Power of Attorney: None

Domestic Priority data as claimed by applicant

This application is a DIV of 17/020,799 09/14/2020 PAT 11,576,524
which is a DIV of 16/383,607 04/13/2019 PAT 10,772,456
which is a DIV of 15/845,946 12/18/2017 PAT 10,258,187
which is a CON of 14/421,362 02/12/2015 PAT 9,867,491
which is a 371 of PCT/US2013/055348 08/16/2013
which claims benefit of 61/742,688 08/16/2012

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.) - None.

Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

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The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 18/109,177**

Projected Publication Date: To Be Determined - pending completion of Corrected Papers.

Non-Publication Request: No

Early Publication Request: No

**** SMALL ENTITY ****

Title

METHOD OF GENERATING A DESIRED TEMPERATURE OF AN INFUSED BEVERAGE WITHIN
A BREWING ASSEMBLY

Preliminary Class

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

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The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop

technology, manufacture products, deliver services, and grow your business, visit <http://www.SelectUSA.gov> or call +1-202-482-6800.

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number
18/109,177

APPLICATION AS FILED - PART I

(Column 1)		(Column 2)	SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)		RATE(\$)	FEE(\$)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	64		N/A	
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A	280		N/A	
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	320		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	10 minus 20 =	*	x	= 0	OR		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	1 minus 3 =	*	x	= 0			
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			0			
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				0			
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	664		TOTAL	

APPLICATION AS AMENDED - PART II

(Column 1)		(Column 2)	(Column 3)	SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
Total (37 CFR 1.16(i))	*	Minus **	=	x	=	OR	x	=
Independent (37 CFR 1.16(h))	*	Minus ***	=	x	=	OR	x	=
Application Size Fee (37 CFR 1.16(s))						OR		
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						OR		
				TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

(Column 1)		(Column 2)	(Column 3)	SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
Total (37 CFR 1.16(i))	*	Minus **	=	x	=	OR	x	=
Independent (37 CFR 1.16(h))	*	Minus ***	=	x	=	OR	x	=
Application Size Fee (37 CFR 1.16(s))						OR		
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						OR		
				TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.



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United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
18/109,177	02/13/2023	Gideon Duvall	DUVALL_23_DIV1

CONFIRMATION NO. 7946

131368
Gideon Duvall
6850 North Grande Drive
Boca Raton, FL 33433

FORMALITIES LETTER



OC00000054772370

Date Mailed: 03/13/2023

NOTICE TO FILE CORRECTED APPLICATION PAPERS

Filing Date Granted

An application number and filing date have been accorded to the above-identified nonprovisional application. The application is informal since it does not comply with the regulations for the reason(s) indicated below. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

• **Drawing Items**

The drawings submitted on 02/13/2023 are not acceptable because:

- More than one figure is present and at least one figure appears to be unnumbered or misnumbered in comparison to the brief description of the figures contained in the specification. See Figure(s) 1 - 6. The figures must be labeled "Fig." with a consecutive Arabic numeral (1, 2, etc.) or an Arabic numeral and capital letter in the English alphabet (1A, 1B, etc.) and correspond with a brief description having the same figure number. See 37 CFR 1.84(u)(1).
 - To correct the figure numbering, replacement drawing sheets with proper figure labeling in compliance with 37 CFR 1.84 and 1.121(d) are required.
 - To add a brief description of a figure that was not previously numbered, or correct the reference in the specification to the figures, a proper substitute specification in compliance with 37 CFR 1.52, 1.121(b)(3), and 1.125, providing a brief description of each drawing figure presented, added or amended to correspond to the corrected numbering of the figures, is required. See also 37 CFR 1.77(b)(9).

Replies must be received in the USPTO within the set time period or must include a proper Certificate of Mailing or Transmission under 37 CFR 1.8 with a mailing or transmission date within the set time period. For more information and a suggested format, see Form PTO/SB/92 and MPEP 512.

Replies should be addressed to:

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

REPLY VIA ELECTRONIC FILING

A reply may be submitted via electronic filing only by registered users of the appropriate USPTO patent electronic filing system and must include:

- A separate document having the document description, "**Applicant response to Pre-Exam Formalities Notice**"; and
- the item(s) for which a reply period is set forth above.

For more information about electronic filing, contact the Patent Electronic Business Center (EBC) 1-866-217-9197 or visit <https://www.uspto.gov/ebc>

NOTE: If the reply is not being submitted electronically, a copy of this notice must be included.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/mhaile/

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 18/109,177
Applicant : Gideon Duvall
Filed : 02/13/2023
TC/A.U. : N/A
Examiner : N/A
Docket No. : DUVALL_23_DIV1
Customer No. : 131368

Confirmation No. 7946

Commissioner for Patents
VIA ELECTRONIC FILING
MAIL STOP AMENDMENT
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Amendment

Sir:

In response to the notice to file corrected application papers of March 13, 2023, corrected drawings of Figures 1 through 6 is attached with Figure numbers corrected to the required format:

Respectfully submitted,

Date: May 11, 2023

By:


Gideon Duvall

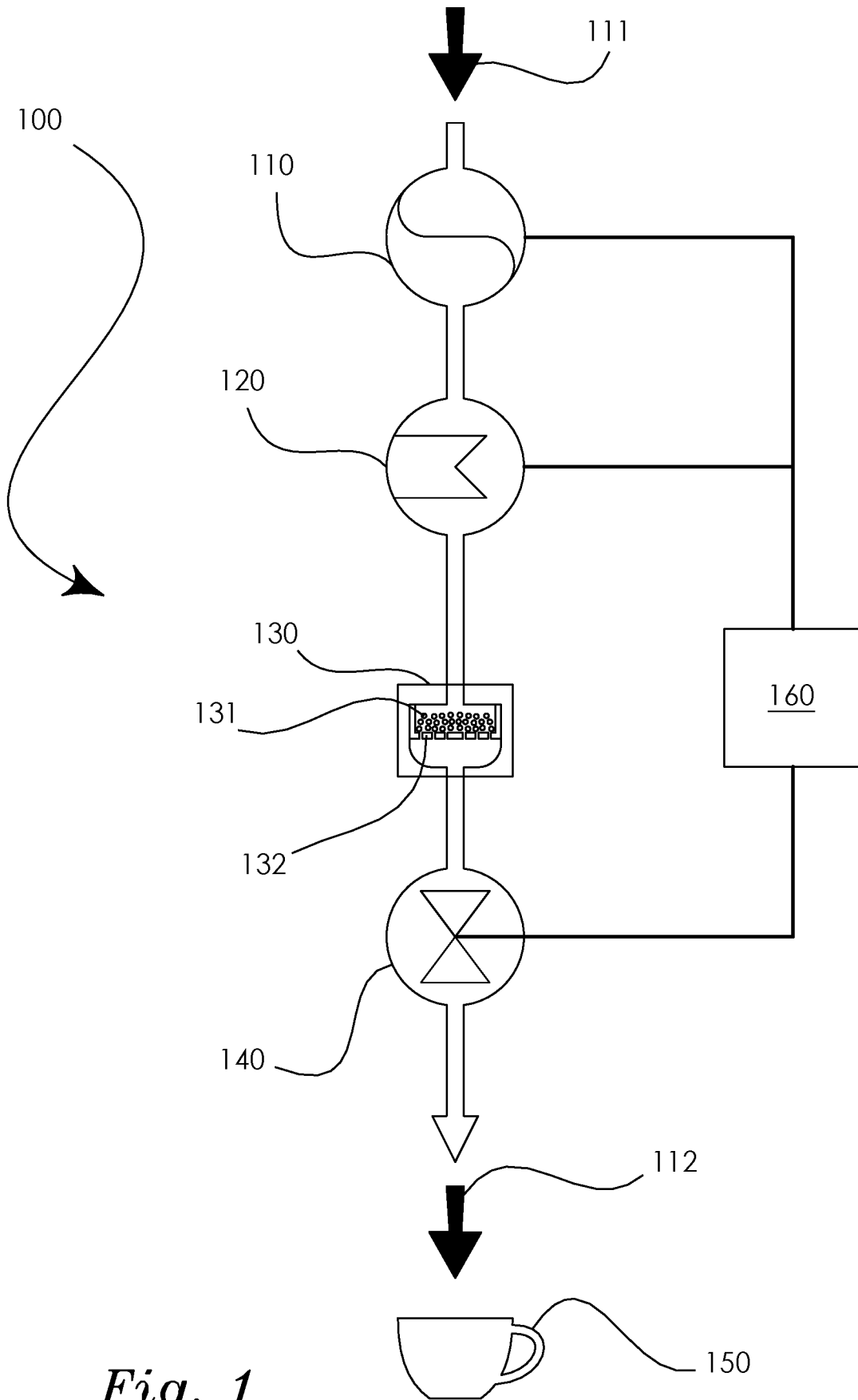


Fig. 1

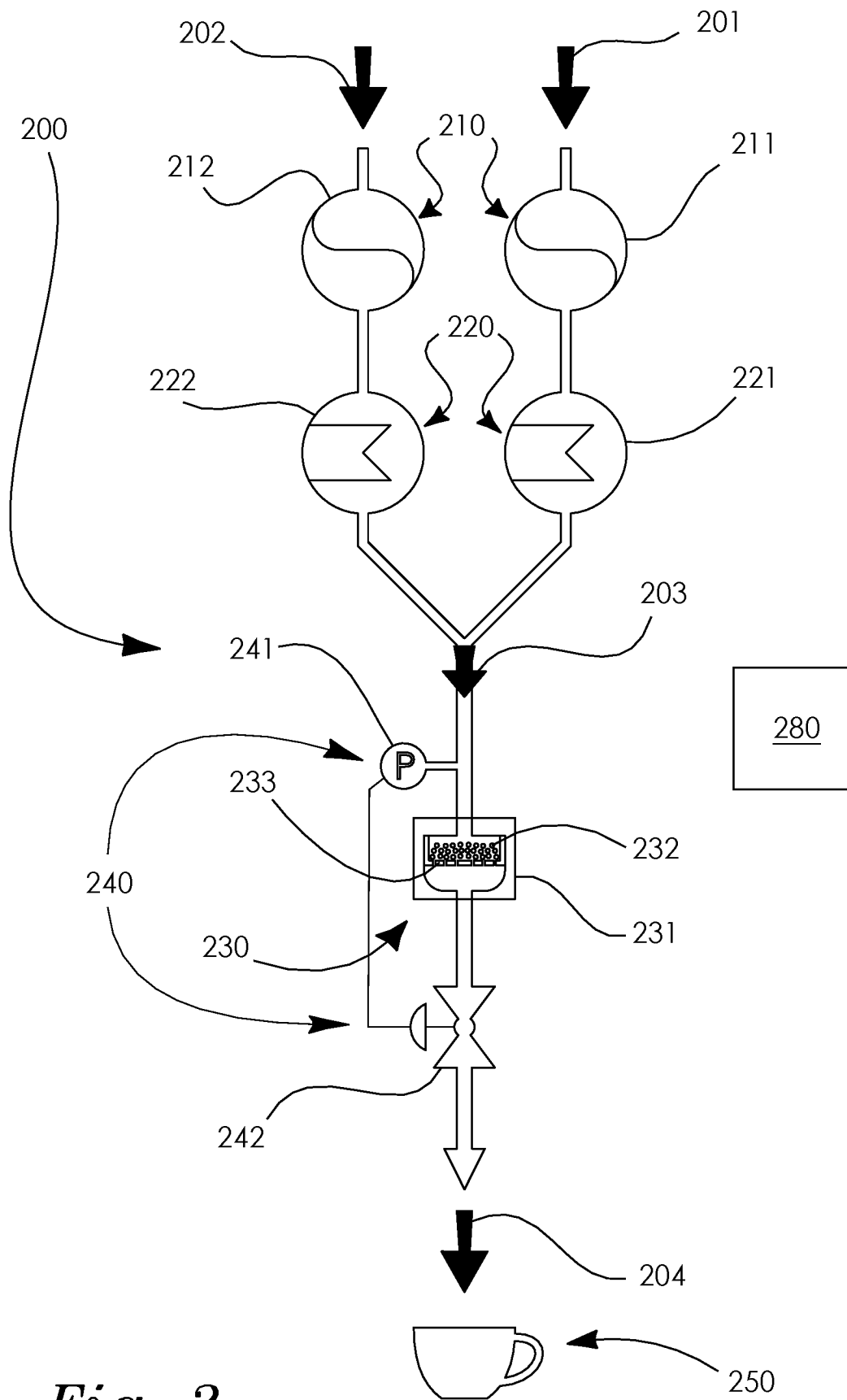


Fig. 2

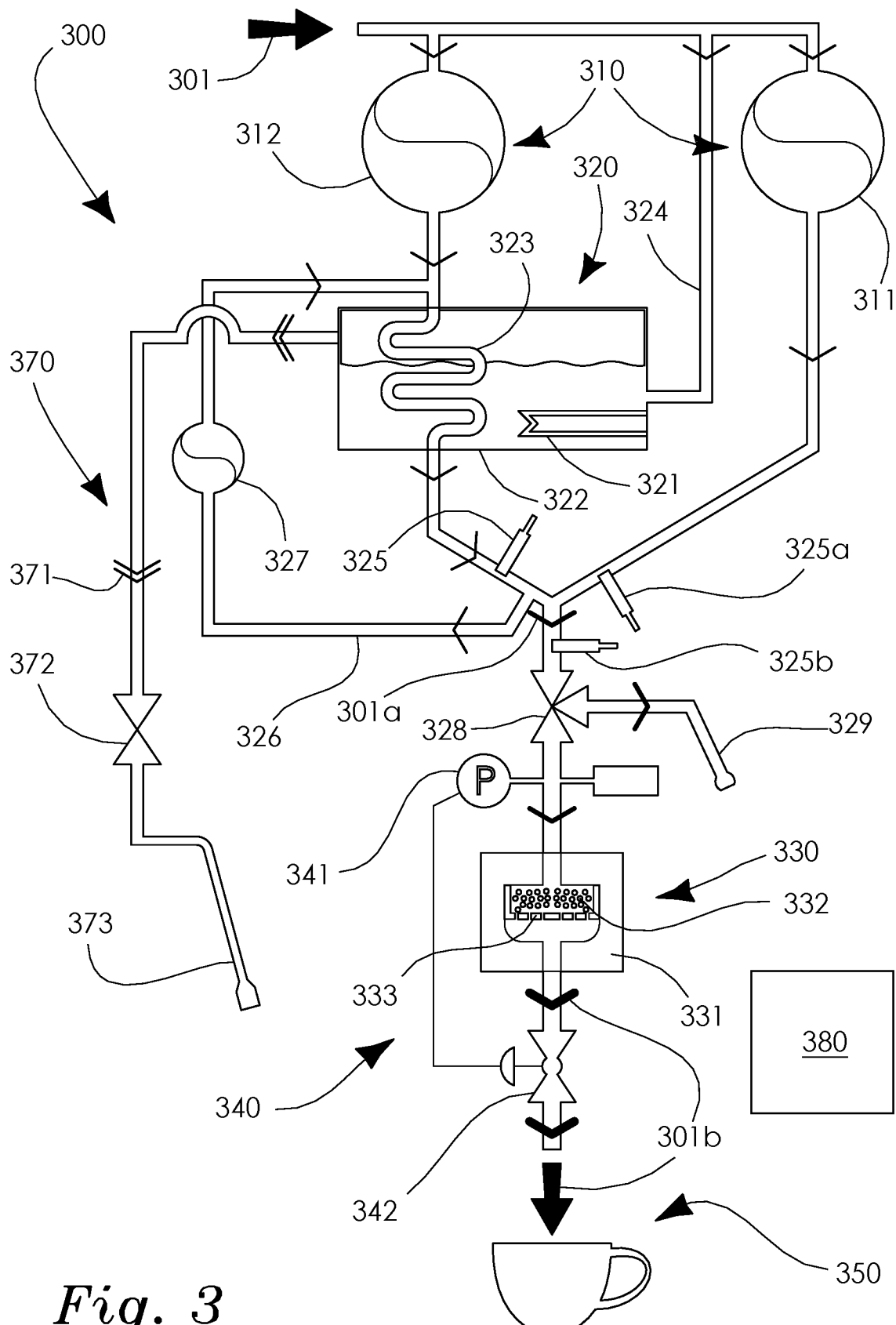


Fig. 3

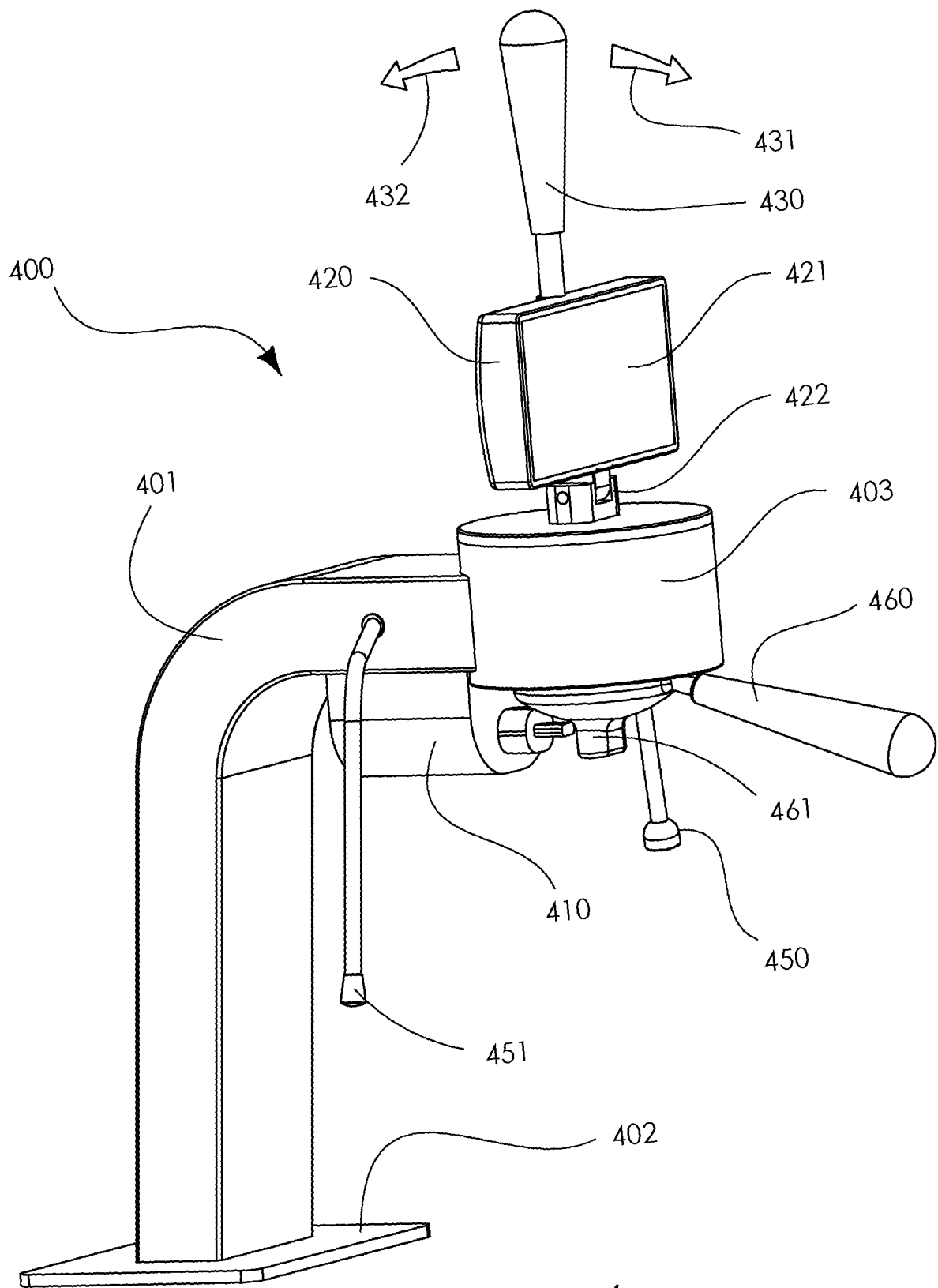


Fig. 4

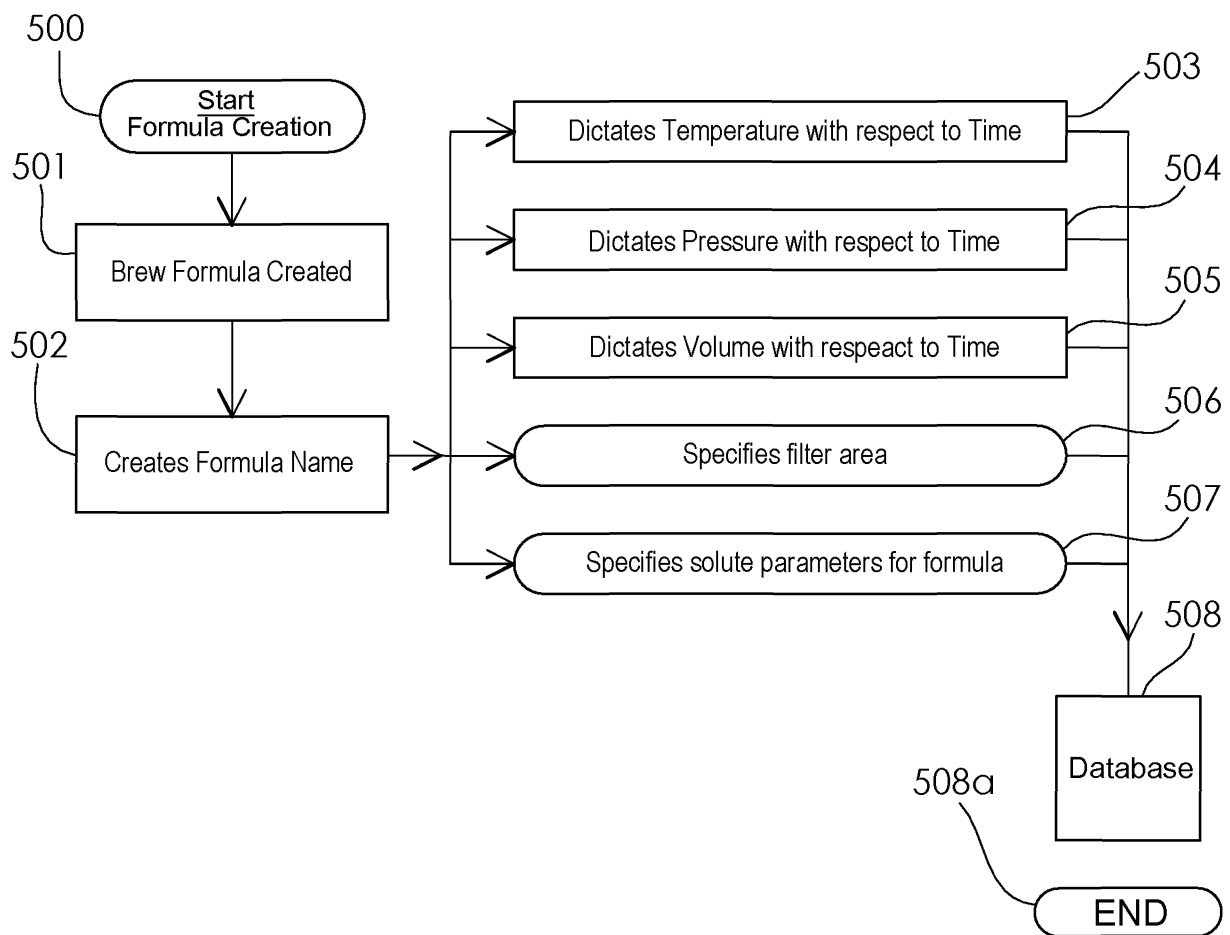


Fig. 5

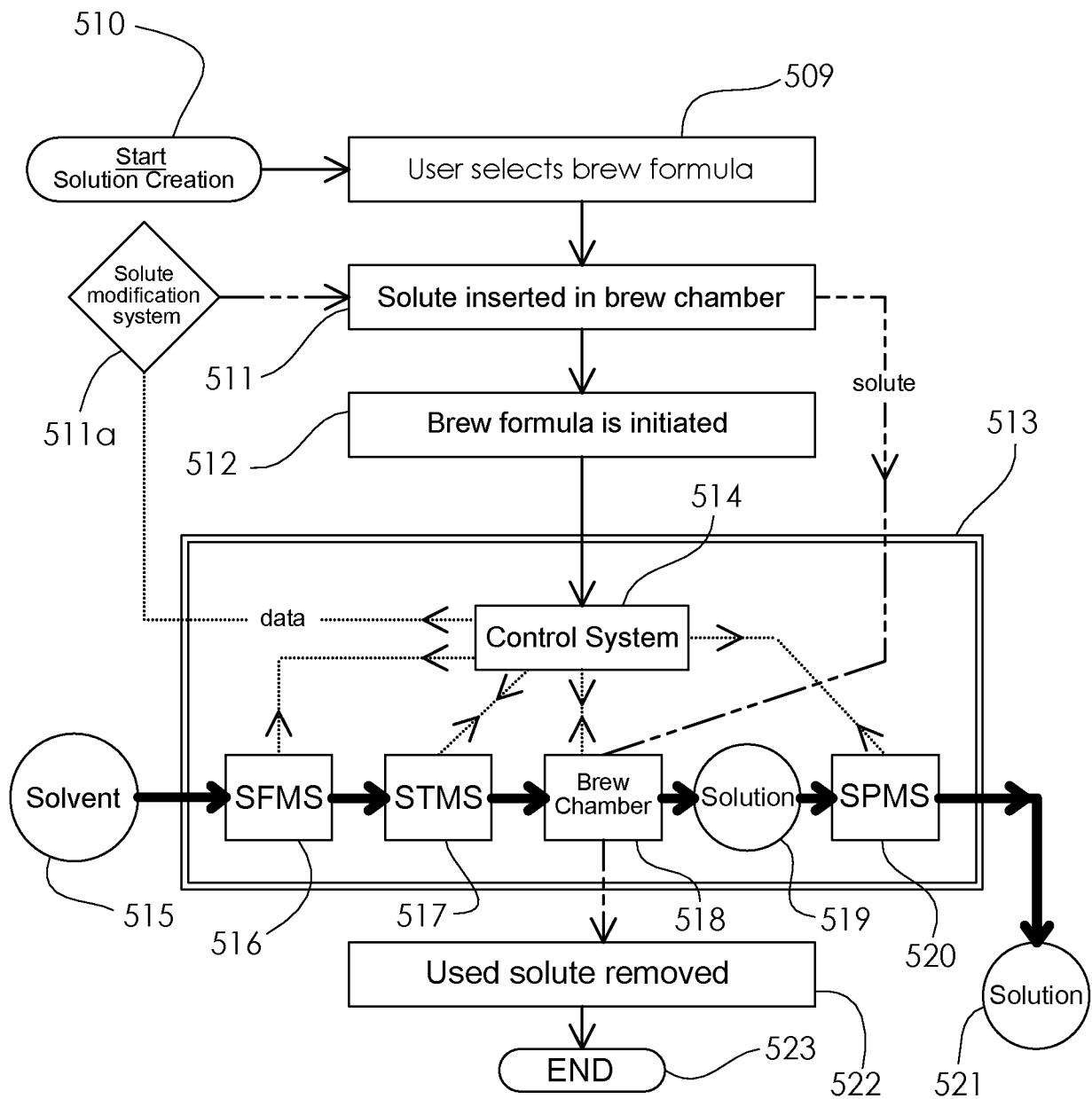
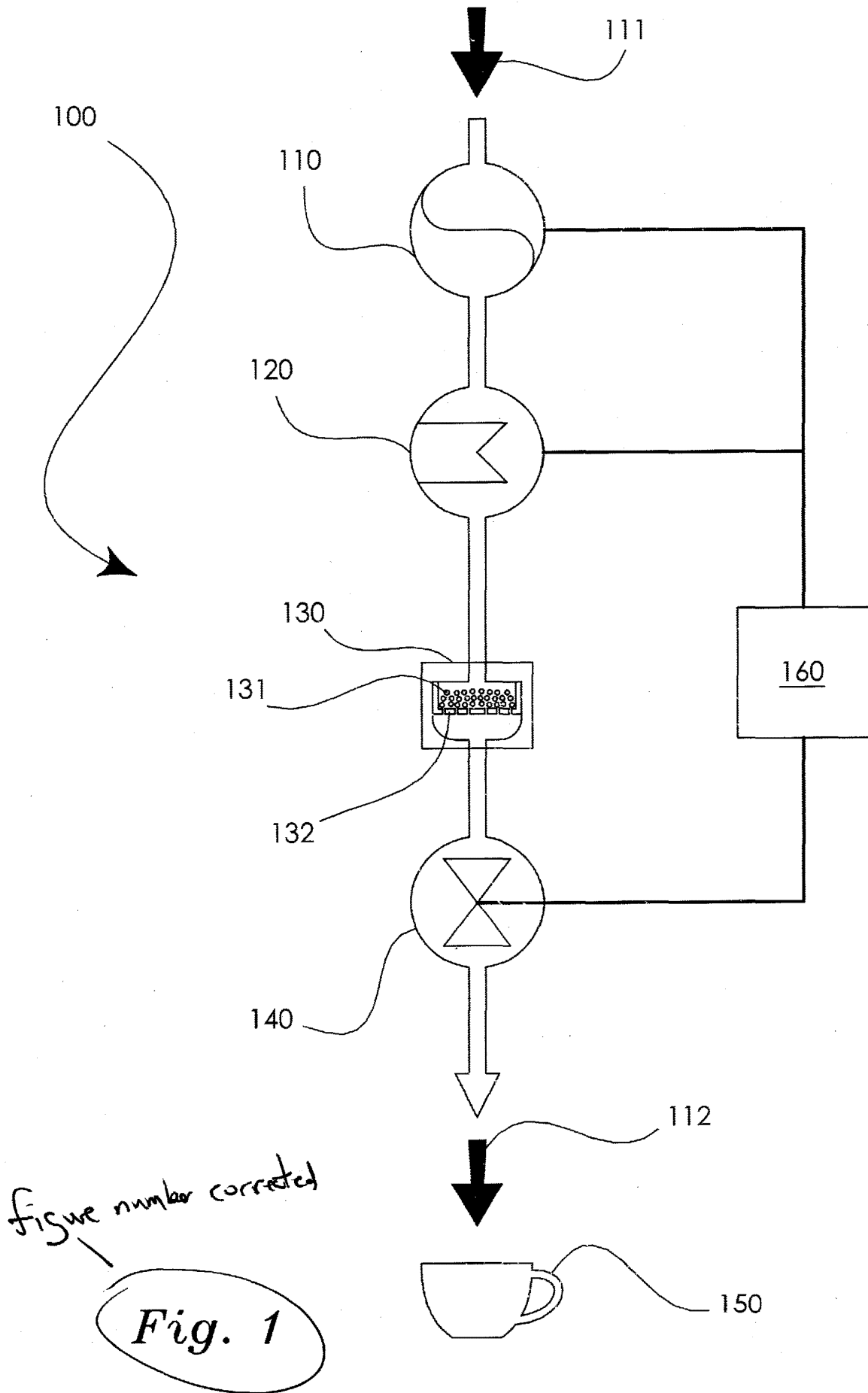


Fig. 6



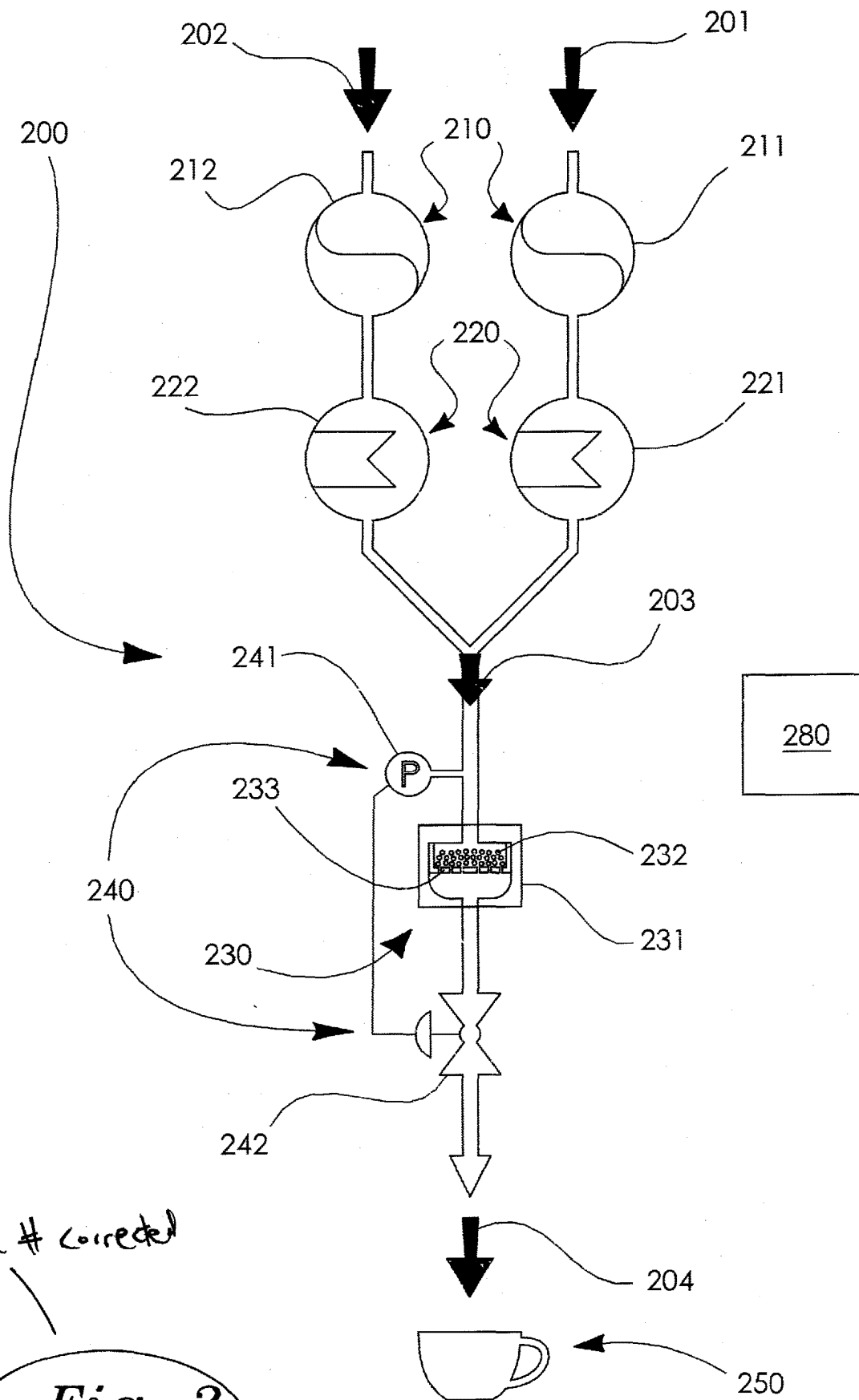


Figure # corrected
Fig. 2

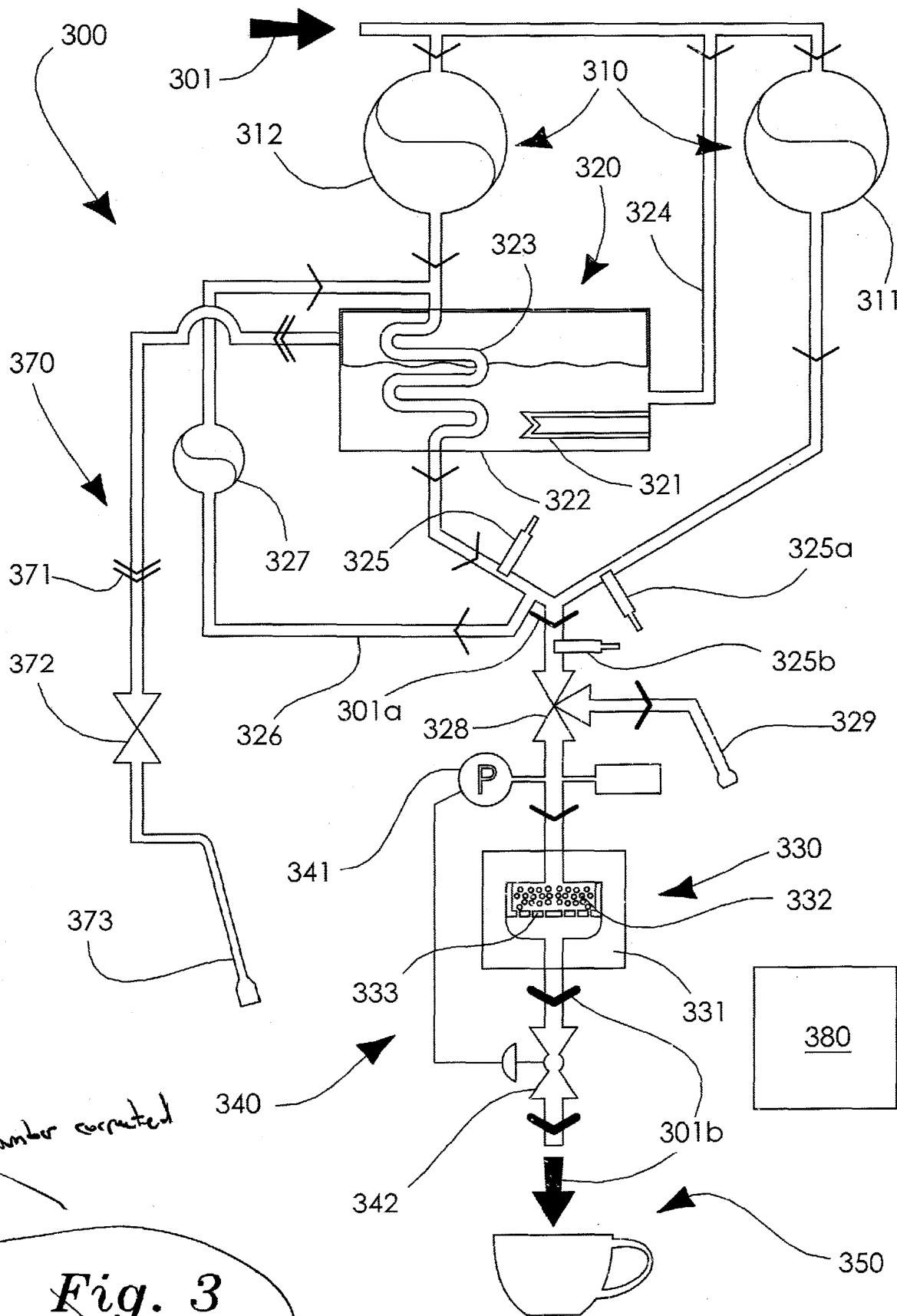


figure number corrected

Fig. 3

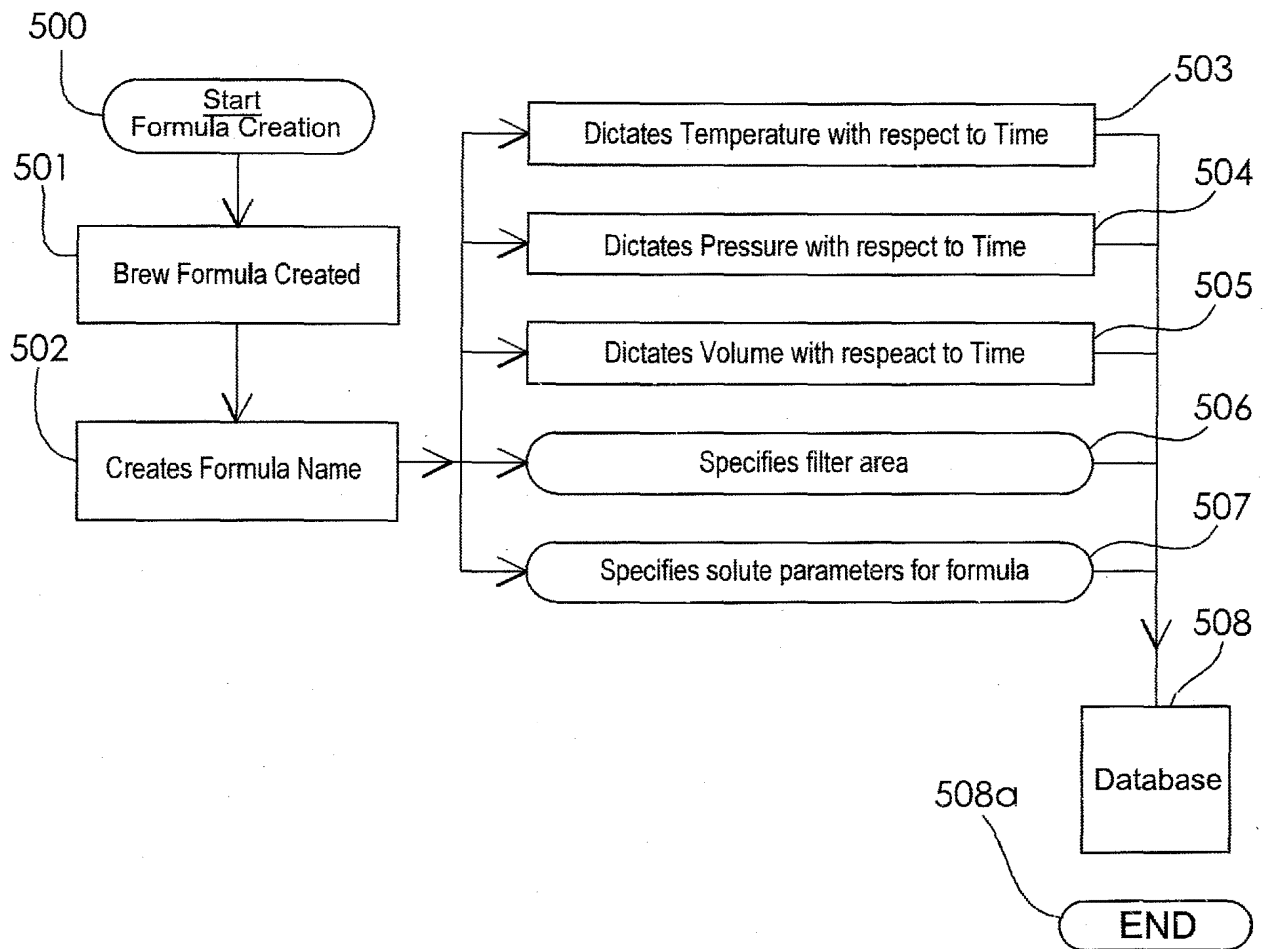


Figure number corrected

Fig. 5

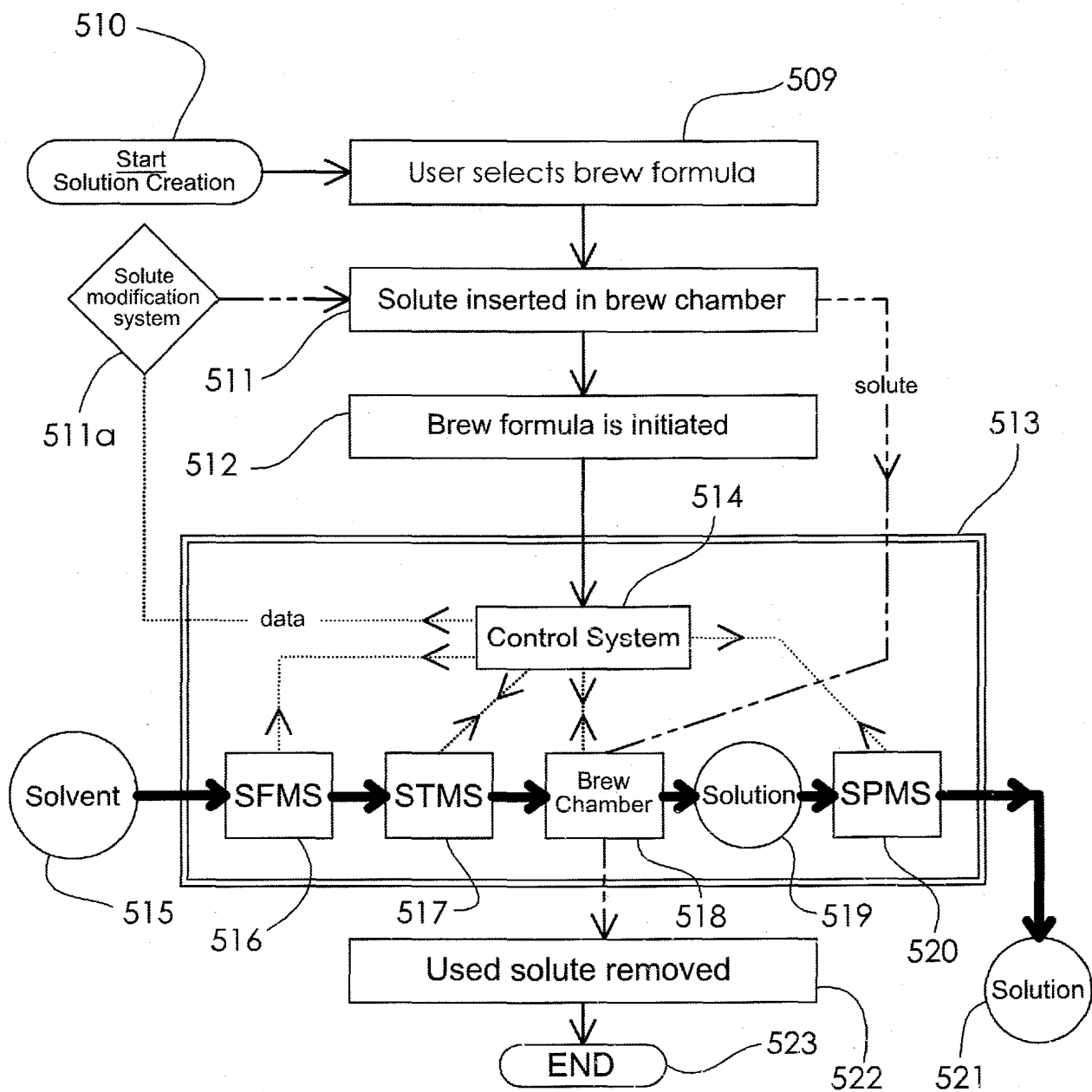


Figure number corrected

Fig. 6

Electronic Acknowledgement Receipt

EFS ID:	47994958
Application Number:	18109177
International Application Number:	
Confirmation Number:	7946
Title of Invention:	METHOD OF GENERATING A DESIRED TEMPERATURE OF AN INFUSED BEVERAGE WITHIN A BREWING ASSEMBLY
First Named Inventor/Applicant Name:	Gideon Duvall
Customer Number:	131368
Filer:	Gideon Williams Duvall
Filer Authorized By:	
Attorney Docket Number:	DUVALL_23_DIV1
Receipt Date:	12-MAY-2023
Filing Date:	13-FEB-2023
Time Stamp:	15:34:46
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Applicant Arguments/Remarks Made in an Amendment	Drawing_Amendment_Modified_05_11_23_signed.pdf	81459 02a42240917bdd0ea7c575671817579e09d85e7a	no	1

Warnings:

Decent Espresso International Ltd., Exhibit 1013

Page 1013-77

Information:					
2	Drawings-only black and white line drawings	DUVALL_23_DIV1_Drawings_Corrected.PDF	167665 0f40c067a8055ef8102fce96c57adcf2e788a157	no	6
Warnings:					
Information:					
3	Applicant Arguments/Remarks Made in an Amendment	DUVALL_23_DIV1_Drawings_Corrected_Notated.pdf	474559 fc6b8227cb509cc9dcdefd7da024c98c5a177e27	no	6
Warnings:					
Information:					
Total Files Size (in bytes):			723683		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number
18/109,177

APPLICATION AS FILED - PART I

(Column 1)		(Column 2)	SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)		RATE(\$)	FEE(\$)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	64		N/A	
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A	280		N/A	
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	320		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	10 minus 20 =	*	x =	0	OR		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	1 minus 3 =	*	x =	0			
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			0			
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				0			
			TOTAL	664		TOTAL	

* If the difference in column 1 is less than zero, enter "0" in column 2.

APPLICATION AS AMENDED - PART II

		(Column 1)	(Column 2)	(Column 3)	SMALL ENTITY		OR	OTHER THAN SMALL ENTITY		
AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))							OR		
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR			
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE		

		(Column 1)	(Column 2)	(Column 3)	SMALL ENTITY		OR	OTHER THAN SMALL ENTITY		
AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))							OR		
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR			
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE		

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.



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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
18/109,177	02/13/2023		664	DUVALL_23_DIV1	10	1

131368
Gideon Duvall
6850 North Grande Drive
Boca Raton, FL 33433

CONFIRMATION NO. 7946

UPDATED FILING RECEIPT



0000000057423513

Date Mailed: 05/25/2023

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a corrected Filing Receipt, including a properly marked-up ADS showing the changes with strike-through for deletions and underlining for additions. If you received a "Notice to File Missing Parts" or other Notice requiring a response for this application, please submit any request for correction to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections provided that the request is grantable.

Inventor(s)

Gideon Duvall, Atlanta, GA;

Applicant(s)

Gideon Duvall, Atlanta, GA;

Power of Attorney: None

Domestic Priority data as claimed by applicant

This application is a DIV of 17/020,799 09/14/2020 PAT 11,576,524
which is a DIV of 16/383,607 04/13/2019 PAT 10,772,456
which is a DIV of 15/845,946 12/18/2017 PAT 10,258,187
which is a CON of 14/421,362 02/12/2015 PAT 9,867,491
which is a 371 of PCT/US2013/055348 08/16/2013
which claims benefit of 61/742,688 08/16/2012

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.) - None.

Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 03/10/2023

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 18/109,177**

Projected Publication Date: 08/31/2023

Non-Publication Request: No

Early Publication Request: No

**** SMALL ENTITY ****

Title

METHOD OF GENERATING A DESIRED TEMPERATURE OF AN INFUSED BEVERAGE WITHIN
A BREWING ASSEMBLY

Preliminary Class

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific

page 2 of 4

countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER
Title 35, United States Code, Section 184
Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

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The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop

technology, manufacture products, deliver services, and grow your business, visit <http://www.SelectUSA.gov> or call +1-202-482-6800.



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United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
18/109,177	02/13/2023	Gideon Duvall	DUVALL_23_DIV1

CONFIRMATION NO. 7946

RESEND COVER LETTER



OC000000057789654

131368
Gideon Duvall
6850 North Grande Drive
Boca Raton, FL 33433

Date Mailed: 06/02/2023

COVER LETTER FOR RESENDING CORRESPONDENCE

A courtesy copy of the Notice mailed on 05/25/2023 is enclosed. The time period for reply continues to run from the mail date of that Notice.

A copy of this notice MUST be returned with the reply.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/tvo/



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UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
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Alexandria, Virginia 22313-1450
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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
18/109,177	02/13/2023		664	DUVALL_23_DIV1	10	1

131368
Gideon Duvall
6850 North Grande Drive
Boca Raton, FL 33433

CONFIRMATION NO. 7946

UPDATED FILING RECEIPT



0000000057423513

Date Mailed: 05/25/2023

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a corrected Filing Receipt, including a properly marked-up ADS showing the changes with strike-through for deletions and underlining for additions. If you received a "Notice to File Missing Parts" or other Notice requiring a response for this application, please submit any request for correction to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections provided that the request is grantable.

Inventor(s)

Gideon Duvall, Atlanta, GA;

Applicant(s)

Gideon Duvall, Atlanta, GA;

Power of Attorney: None

Domestic Priority data as claimed by applicant

This application is a DIV of 17/020,799 09/14/2020 PAT 11,576,524
which is a DIV of 16/383,607 04/13/2019 PAT 10,772,456
which is a DIV of 15/845,946 12/18/2017 PAT 10,258,187
which is a CON of 14/421,362 02/12/2015 PAT 9,867,491
which is a 371 of PCT/US2013/055348 08/16/2013
which claims benefit of 61/742,688 08/16/2012

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.) - None.

Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 03/10/2023

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 18/109,177**

Projected Publication Date: 08/31/2023

Non-Publication Request: No

Early Publication Request: No

**** SMALL ENTITY ****

Title

METHOD OF GENERATING A DESIRED TEMPERATURE OF AN INFUSED BEVERAGE WITHIN
A BREWING ASSEMBLY

Preliminary Class

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific

page 2 of 4

countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER
Title 35, United States Code, Section 184
Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

SelectUSA

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop

technology, manufacture products, deliver services, and grow your business, visit <http://www.SelectUSA.gov> or call +1-202-482-6800.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
18/109,177	02/13/2023	Gideon Duvall	DUVALL_23_DIV1

CONFIRMATION NO. 7946

131368
Gideon Duvall
6850 North Grande Drive
Boca Raton, FL 33433

PUBLICATION NOTICE



OC000000061328268

Date Mailed: 08/31/2023

Title:METHOD OF GENERATING A DESIRED TEMPERATURE OF AN INFUSED BEVERAGE WITHIN A BREWING ASSEMBLY

Publication No.US-2023-0270282-A1

Publication Date:08/31/2023

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently <http://www.uspto.gov/patft/>.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Public Records Division. The Public Records Division can be reached by telephone at (571) 272-3150 or (800) 972-6382, by facsimile at (571) 273-3250, by mail addressed to the United States Patent and Trademark Office, Public Records Division, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently <https://portal.uspto.gov/pair/> PublicPair. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

131368 7590 12/11/2023
Gideon Duvall
6850 North Grande Drive
Boca Raton, FL 33433

EXAMINER

MICHALSKI, SEAN M

ART UNIT

PAPER NUMBER

3724

DATE MAILED: 12/11/2023

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/109,177	02/13/2023	Gideon Duvall	DUVALL_23_DIV1	7946

TITLE OF INVENTION: METHOD OF GENERATING A DESIRED TEMPERATURE OF AN INFUSED BEVERAGE WITHIN A BREWING ASSEMBLY

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$480	\$0.00	\$0.00	\$480	03/11/2024

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 40% the amount of undiscounted fees, and micro entity fees are 20% the amount of undiscounted 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. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

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

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

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via the USPTO patent electronic filing system.

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

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

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence 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. **Because electronic patent issuance may occur shortly after issue fee payment, any desired continuing application should preferably be filed prior to payment of this issue fee in order not to jeopardize copendency.**

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.

Certificate of Mailing or Transmission

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

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/109,177	02/13/2023	Gideon Duvall	DUVALL_23_DIV1	7946

TITLE OF INVENTION: METHOD OF GENERATING A DESIRED TEMPERATURE OF AN INFUSED BEVERAGE WITHIN A BREWING ASSEMBLY

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$480	\$0.00	\$0.00	\$480	03/11/2024

EXAMINER	ART UNIT	CLASS-SUBCLASS
MICHALSKI, SEAN M	3724	099-280000

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/AIA/122 or PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/AIA/47 or 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 must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

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

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

4a. Fees submitted: ☐ Issue Fee ☐ Publication Fee (if required)

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

☐ Electronic Payment via the USPTO patent electronic filing system ☐ Enclosed check ☐ Non-electronic payment by credit card (Attach form PTO-2038)

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

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

☐ Applicant certifying micro entity status. See 37 CFR 1.29

☐ Applicant asserting small entity status. See 37 CFR 1.27

☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

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

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/109,177	02/13/2023	Gideon Duvall	DUVALL_23_DIV1	7946
131368	7590	12/11/2023	EXAMINER	
Gideon Duvall 6850 North Grande Drive Boca Raton, FL 33433			MICHALSKI, SEAN M	
			ART UNIT	PAPER NUMBER
			3724	
DATE MAILED: 12/11/2023				

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

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

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

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

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

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

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. The United States Patent and Trademark Office (USPTO) collects the information in this record under authority of 35 U.S.C. 2. The USPTO's system of records is used to manage all applicant and owner information including name, citizenship, residence, post office address, and other information with respect to inventors and their legal representatives pertaining to the applicant's/owner's activities in connection with the invention for which a patent is sought or has been granted. The applicable Privacy Act System of Records Notice for the information collected in this form is COMMERCE/PAT-TM-7 Patent Application Files, available in the Federal Register at 78 FR 19243 (March 29, 2013).

<https://www.govinfo.gov/content/pkg/FR-2013-03-29/pdf/2013-07341.pdf>

Routine uses of the information in this record may include disclosure to:

- 1) law enforcement, in the event that the system of records indicates a violation or potential violation of law;
- 2) a federal, state, local, or international agency, in response to its request;
- 3) a contractor of the USPTO having need for the information in order to perform a contract;
- 4) the Department of Justice for determination of whether the Freedom of Information Act (FOIA) requires disclosure of the record;
- 5) a Member of Congress submitting a request involving an individual to whom the record pertains, when the individual has requested the Member's assistance with respect to the subject matter of the record;
- 6) a court, magistrate, or administrative tribunal, in the course of presenting evidence, including disclosures to opposing counsel in the course of settlement negotiations;
- 7) the Administrator, General Services Administration (GSA), or their designee, during an inspection of records conducted by GSA under authority of 44 U.S.C. 2904 and 2906, in accordance with the GSA regulations and any other relevant (i.e., GSA or Commerce) directive, where such disclosure shall not be used to make determinations about individuals;
- 8) 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));
- 9) the Office of Personnel Management (OPM) for personnel research purposes; and
- 10) the Office of Management and Budget (OMB) for legislative coordination and clearance.

If you do not furnish the information requested on this form, the USPTO may not be able to process and/or examine your submission, which may result in termination of proceedings, abandonment of the application, and/or expiration of the patent.

Notice of Allowability	Application No. 18/109,177	Applicant(s) Duvall, Gideon	
	Examiner SEAN M MICHALSKI	Art Unit 3724	AIA (FITF) Status Yes

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

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

1. ☒ This communication is responsive to 2/13/2023.
☐ 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 1-10. 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 ____.
--	---

/SEAN M MICHALSKI/
Primary Examiner, Art Unit 3724

Notice of Pre-AIA or AIA Status

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

Allowable Subject Matter

2. Claims 1-10 are allowed.

3. The following is an examiner's statement of reasons for allowance:

In the art of record, considered the best art available, there is no disclosure or teaching of the essential features of claim 1. Specifically, the use of two solvents upstream of the brewing chamber, thermal modulation of the second solvent and a resultant brewing infusion interaction with a solute is not seen in the art. The closest art may be considered to be Anson (US 5,584,229) which discloses a beverage infusion device, common in the art. The similarity with the present invention is based on the inclusion of first and second reservoirs (see figure 3) which are used to adjust the temperature of a mixed prepared beverage, by the addition of a lower temperature liquid to an infused beverage after infusion (See figure 2 at 50/52). While it is known to provide for mixing of liquids to have a resultant temperature beverage, the Anson reference indicates that the adjustment of the temperature of the infusion temperature is not known to be the product of mixed solvents before the infusion, which is required by the claim. While a mixing valve to accomplish a general adjustment of a water temperature is known in the broader art of valving/mixing liquids (See, e.g. 8,225,961) the inclusion of such a mixing valve and control is not seen to be warranted by the problems and desires faced in the brewing device area, nor would duplication of pumps to effect such a change be considered obvious in this context. It would not be a simple duplication of pumps for added effect—but a duplication to add a different function (mixing temperature adjustment pre-brew/infusion).

5. Also noted as similar, but ineffective to reject the claims at issue here, is Smeller (US 8,807,392) which includes a mixing head (44 “chamber”) with mixing blades 46 and sources of distinct fluids for processing together into a single beverage. For example, adding a coffee component to a vanilla flavoring component. This is not the addition and controllability of solvents to a brew process, and the mixability of different ingredients in proportionate control would not have motivated the adjustment of known beverage infusers to control temperature by mixing valve for the solvent, since the adjustment of temperature does not solve a problem in the prior art, and would not have suggested itself to that particular use as now claimed.

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

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to SEAN M MICHALSKI whose telephone number is (571)272-6752. The examiner can normally be reached Typically M-F 6a-3:30p East Coast Time.

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

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Adam Eiseman can be reached on (571) 270-3818. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of published or unpublished applications may be obtained from Patent Center. Unpublished application information in Patent Center is available to registered users. To file and manage patent submissions in Patent Center, visit: <https://patentcenter.uspto.gov>. Visit <https://www.uspto.gov/patents/apply/patent-center> for more information about Patent Center and <https://www.uspto.gov/patents/docx> for information about filing in DOCX format. For additional questions, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SEAN M. MICHALSKI
Primary Examiner
Art Unit 3724

/SEAN M MICHALSKI/
Primary Examiner, Art Unit 3724

<i>Notice of References Cited</i>	Application/Control No. 18/109,177		Applicant(s)/Patent Under Reexamination Duvall, Gideon	
	Examiner SEAN M MICHALSKI		Art Unit 3724	Page 1 of 4

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date YYYY-MM-DD	Name	CPC Classification	US Classification
*	A	US-20190365913-A1	2019-12-05	Wooster; Richard	A61K47/6425	1/1
*	B	US-20190365145-A1	2019-12-05	Duvall; Gideon	A47J31/5251	1/1
*	C	US-20190308172-A1	2019-10-10	Zou; Weiqing Joe	B01J37/031	1/1
*	D	US-20180369717-A1	2018-12-27	WATANABE; Akira	B01D11/02	1/1
*	E	US-10349774-B2	2019-07-16	Duvall; Gideon	A47J31/521	1/1
*	F	US-9480359-B1	2016-11-01	Kalenian; Paul	A23F5/262	1/1
*	G	US-20160144292-A1	2016-05-26	Crandall; Matthias K.	B01D11/0207	422/255
*	H	US-8807392-B2	2014-08-19	Smeller; Donald W.	B67D1/0044	239/419
*	I	US-20220248898-A1	2022-08-11	Widmer; Markus	A47J31/56	1/1
*	J	US-20200095108-A1	2020-03-26	Cook; Christopher Michael	B67D1/1252	1/1
*	K	US-20170086618-A1	2017-03-30	BOLOGNESE; Danilo	A47J31/469	1/1
*	L	US-20160023879-A1	2016-01-28	Walker; Debra L .	B67D1/003	141/105
*	M	US-8739687-B1	2014-06-03	Tacklind; Christopher	A47J31/42	99/290

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date YYYY-MM-DD	Country	Name	CPC Classification
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NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
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*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in YYYY-MM-DD format are publication dates. Classifications may be US or foreign.

<i>Notice of References Cited</i>	Application/Control No. 18/109,177		Applicant(s)/Patent Under Reexamination Duvall, Gideon	
	Examiner SEAN M MICHALSKI		Art Unit 3724	Page 2 of 4

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date YYYY-MM-DD	Name	CPC Classification	US Classification
*	A	US-20120298258-A1	2012-11-29	Rithener; Blaise	A47J31/407	141/285
*	B	US-20080148959-A1	2008-06-26	Bockbrader; Robert H.	A47J31/402	99/323.3
*	C	US-7861646-B2	2011-01-04	Bockbrader; Robert H.	A47J31/465	99/302R
*	D	US-20050104493-A1	2005-05-19	Hart, Burton L	A47J31/401	312/334.1
*	E	US-6142063-A	2000-11-07	Beaulieu; Roderick H.	A47J31/3623	99/302R
*	F	US-6082247-A	2000-07-04	Beaulicu; Roderick H.	A47J31/402	222/394
*	G	US-5584229-A	1996-12-17	Anson; James H.	A47J31/465	99/280
*	H	US-4745852-A	1988-05-24	Sager; Peter	A47J31/402	99/280
*	I	US-10610049-B2	2020-04-07	Doglioni Majer; Andrea	A47J31/469	1/1
*	J	US-20180168391-A1	2018-06-21	Eriksson; Anders	A47J31/545	1/1
*	K	US-20180098658-A1	2018-04-12	ANGELL; Jonathan Russell	A47J31/44	1/1
*	L	US-10278533-B2	2019-05-07	Angell; Jonathan Russell	A47J31/44	1/1
*	M	US-20170354290-A1	2017-12-14	Jones; Curt	A47J31/40	1/1

FOREIGN PATENT DOCUMENTS

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NON-PATENT DOCUMENTS

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Dates in YYYY-MM-DD format are publication dates. Classifications may be US or foreign.

<i>Notice of References Cited</i>	Application/Control No. 18/109,177		Applicant(s)/Patent Under Reexamination Duvall, Gideon	
	Examiner SEAN M MICHALSKI		Art Unit 3724	Page 3 of 4

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date YYYY-MM-DD	Name	CPC Classification	US Classification
*	A	US-20060196363-A1	2006-09-07	Rahn; Christopher W.	A47J31/5253	99/279
*	B	US-5309821-A	1994-05-10	Knepler; John T.	A47J31/54	99/291
*	C	US-5158793-A	1992-10-27	Helbling; Edward	A47J31/467	99/291
*	D	US-20220117437-A1	2022-04-21	LIN; Shu Jing	A23F5/26	1/1
*	E	US-20220079376-A1	2022-03-17	Duvall; Gideon	A47J31/468	1/1
*	F	US-20190174950-A1	2019-06-13	Hendrickson; Kyle Johan	A47J31/4482	1/1
*	G	US-20190125123-A1	2019-05-02	Startz; Armin	A47J31/44	1/1
*	H	US-20190014942-A1	2019-01-17	Juve; Ronald A.	A47J31/469	1/1
*	I	US-20180255962-A1	2018-09-13	Vetterli; Heinz	A47J31/52	1/1
*	J	US-10506893-B2	2019-12-17	Thakkar; Viral	A23F3/18	1/1
*	K	US-8695481-B2	2014-04-15	Carbonini; Carlo	A47J31/469	99/279
*	L	US-8225961-B2	2012-07-24	Anson; James H.	A47J31/469	222/14
*	M	US-6571685-B1	2003-06-03	Lassota; Zbigniew G.	A47J31/0615	99/283

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date YYYY-MM-DD	Country	Name	CPC Classification
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Dates in YYYY-MM-DD format are publication dates. Classifications may be US or foreign.

<i>Notice of References Cited</i>	Application/Control No. 18/109,177		Applicant(s)/Patent Under Reexamination Duvall, Gideon	
	Examiner SEAN M MICHALSKI		Art Unit 3724	Page 4 of 4

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date YYYY-MM-DD	Name	CPC Classification	US Classification
*	A	US-6460735-B1	2002-10-08	Greenwald; Shlomo	A47J31/467	222/145.5
*	B	US-5858437-A	1999-01-12	Anson; James H.	A47J31/402	99/305
*	C	US-20060042470-A1	2006-03-02	Anson; James H.	G05D23/1393	99/275
*	D	US-9603482-B2	2017-03-28	McHale; James	F16K19/00	1/1
*	E	US-6250558-B1	2001-06-26	Dogre Cuevas; Miguel E.	G05D23/1393	236/94
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FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date YYYY-MM-DD	Country	Name	CPC Classification
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	R					
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*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
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*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in YYYY-MM-DD format are publication dates. Classifications may be US or foreign.

<i>Search Notes</i> 	Application/Control No. 18/109,177	Applicant(s)/Patent Under Reexamination Duvall, Gideon
	Examiner SEAN M MICHALSKI	Art Unit 3724

CPC - Searched*		
Symbol	Date	Examiner
a47j31/5253,5255		

CPC Combination Sets - Searched*		
Symbol	Date	Examiner
B67D1/0044	12/02/2023	smm
B67D1/0047.cpc.	12/02/2023	SMM
A47J31/402.cpc. OR B67D1/0036.cpc. OR B67D1/0047.cpc.	12/02/2023	SMM
a47j31/467,468	12/02/2023	SMM
a47j31/5253,5255	12/02/2023	SMM

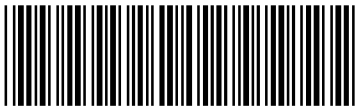
US Classification - Searched*			
Class	Subclass	Date	Examiner

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

Search Notes		
Search Notes	Date	Examiner
Searched FWD BKWD from pertinent references, Checked parent search history at 17/020799	12/02/2023	SMM
Text for "solvent" "diluent" and related	12/02/2023	SMM

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
a47j	31/5253,5255	12/02/2023	smm

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Issue Classification 	Application/Control No. 18/109,177	Applicant(s)/Patent Under Reexamination Duvall, Gideon
	Examiner SEAN M MICHALSKI	Art Unit 3724

CPC						
Symbol					Type	Version
A47J	/	31	/	5255	F	2018-08-01
A47J	/	31	/	5253	I	2018-08-01
A47J	/	31	/	468	I	2018-08-01

CPC Combination Sets				
Symbol		Type	Set	Ranking
	/		/	

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	10	
/SEAN M MICHALSKI/ Primary Examiner, Art Unit 3724	02 December 2023	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	2

<i>Issue Classification</i> 	Application/Control No. 18/109,177	Applicant(s)/Patent Under Reexamination Duvall, Gideon
	Examiner SEAN M MICHALSKI	Art Unit 3724

INTERNATIONAL CLASSIFICATION			
CLAIMED			
A47J31/52	/	31	/ 52
A47J31/46	/	31	/ 46

NON-CLAIMED			
/		/	

US ORIGINAL CLASSIFICATION	
CLASS	SUBCLASS

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

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	10	
/SEAN M MICHALSKI/ Primary Examiner, Art Unit 3724	02 December 2023	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	2

Issue Classification 	Application/Control No. 18/109,177	Applicant(s)/Patent Under Reexamination Duvall, Gideon
	Examiner SEAN M MICHALSKI	Art Unit 3724

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

NONE	Total Claims Allowed:					
(Assistant Examiner)	(Date)	10				
/SEAN M MICHALSKI/ Primary Examiner, Art Unit 3724 (Primary Examiner)	02 December 2023 (Date)	<table><tr><td>O.G. Print Claim(s)</td><td>O.G. Print Figure</td></tr><tr><td>1</td><td>2</td></tr></table>	O.G. Print Claim(s)	O.G. Print Figure	1	2
O.G. Print Claim(s)	O.G. Print Figure					
1	2					

Bibliographic Data

Application No: 18/109,177

Foreign Priority claimed: ☐ Yes ☒ No

35 USC 119 (a-d) conditions met: ☐ Yes ☐ No ☐ Met After Allowance

Verified and Acknowledged: /SEAN M MICHALSKI/

Examiner's Signature

Initials

Title:

METHOD OF GENERATING A DESIRED TEMPERATURE OF AN
INFUSED BEVERAGE WITHIN A BREWING ASSEMBLY

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
02/13/2023	099	3724	DUVALL_23_DIV1
RULE			

APPLICANTS

INVENTORS

Gideon Duvall, Atlanta, GA, UNITED STATES

CONTINUING DATA

This application is a DIV of 17020799 09/14/2020 PAT 11576524

17020799 is a DIV of 16383607 04/13/2019 PAT 10772456

16383607 is a DIV of 15845946 12/18/2017 PAT 10258187

15845946 is a CON of 14421362 02/12/2015 PAT 9867491

14421362 is a 371 of PCT/US2013/055348 08/16/2013

PCT/US2013/055348 has PRO of 61742688 08/16/2012

FOREIGN APPLICATIONS

IF REQUIRED, FOREIGN LICENSE GRANTED**

03/10/2023

**** SMALL ENTITY ****

STATE OR COUNTRY

UNITED STATES

ADDRESS

Gideon Duvall
6850 North Grande Drive
Boca Raton, FL 33433
UNITED STATES

FILING FEE RECEIVED

\$664

PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L1	2143	(solvent diluent) near4 (duplicate dual second clone ancillary) AND (beverage coffee espresso drink) AND pump AND (thermal temperature heater cooling cooler chiller chilling heated boiler)	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/29 06:41 AM
L2	965	(solvent diluent) near4 (duplicate dual second clone ancillary) AND (beverage coffee espresso drink) AND pump AND (thermal temperature heater cooling cooler chiller chilling heated boiler) WITH (control controller automated)	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/29 06:42 AM
L3	19503816	B "67" D 1/0044.cpc. OR B "67" D 1/07.cpc. OR A "47" J 31/402.cpc. OR B "67" D 1/0036.cpc. OR B "67" D 1/0047.cpc.	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/29 08:02 AM
L4	1690	B67D1/0044.cpc. OR B67D1/07.cpc. OR A47J31/402.cpc. OR B67D1/0036.cpc. OR B67D1/0047.cpc.	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/29 08:03 AM
L5	104	L4 AND (infused infusion brewing brewed brewer) near4 (chamber container vessel body)	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/29 08:04 AM
L6	528	a47j31/467,468.cpc.	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/29 09:14 AM
L7	653	a47j31/5253,5255.cpc.	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/29 09:44 AM
L8	56	("4064795" "4621571" "4809594" "4920871" "5025714" "5113752" "5245914" "5460078").pn. OR ("5584229").urpn. AND (PGPB USPT USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/29 09:47 AM
L9	50	(Artificial Intelligence) More like doc:	(US-PGPUB; USPAT; USOCR; FIT (AU, AP,	OR	ON	ON	2022/09/29 10:09 AM

		US-8695481-B2 Text: (EP-1969979-B1 OR WO-2008110961-A1 OR EP-1969979-A1 OR ES-2349077-T3 OR US-20100043647-A1 OR PT-1969979-E OR EP-1354543-A1 OR ES-2751905-T3 OR CA-2517044-A1 OR CN-105722441-A OR FR-2683135-A1 OR US-20090101019-A1 OR EP-2050372-A1 OR EP-2050372-B1 OR EP-2991530-A1 OR WO-2014177925-A1 OR ES-2371098-T3 OR FR-2692129-A1 OR US-20220248897-A1 OR AU-2020319152- A1).did.	AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L10	16	("2983487" "5038752" "5584229" "5975365" "6164189" "6250558" "6286764" "6290139" "20020179723" "20030080194").pn. OR ("8225961").urpn. AND (PGPB USPT USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/29 10:10 AM
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		OR US-20190125123-A1 OR US-20190014942-A1 OR US-20180255962-A1).did. AND PGPB.dbnm.) OR ((US-10349774-B2 OR US-9480359-B1 OR US-8807392-B2 OR US-8739687-B1 OR US-7861646-B2 OR US-6142063-A OR US-6082247-A OR US-5584229-A OR US-4745852-A OR US-10610049-B2 OR US-10278533-B2 OR US-5309821-A OR US-5158793-A OR US-10506893-B2 OR US-8695481-B2 OR US-8225961-B2 OR US-6571685-B1 OR US-6460735-B1 OR US-5858437-A OR US-9603482-B2 OR US-6250558-B1).did. AND USPT.dbnm.) OR ((US-20060042470-A1).did. AND DWPI.dbnm.)					
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L13	70	(Duvall NEAR gideon).in.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO,	OR	ON	ON	2022/09/29 10:52 AM

			RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
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PE2E SEARCH - Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
N1	414	a47j31/5253,5255.cpc.	(US-PGPUB)	OR	ON	ON	2022/09/29 10:31 AM
N2	317	a47j31/467,468.cpc.	(US-PGPUB)	OR	ON	ON	2022/09/29 10:31 AM

PE2E SEARCH - Search History (Similarity Search)

No Similarity Results available

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via the USPTO patent electronic filing system.

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

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

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence 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. **Because electronic patent issuance may occur shortly after issue fee payment, any desired continuing application should preferably be filed prior to payment of this issue fee in order not to jeopardize copendency.**

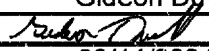
CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

131368 7590 12/11/2023
Gideon Duvall
6850 North Grande Drive
Boca Raton, FL 33433

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 transmitted to the USPTO via the USPTO patent electronic filing system or by facsimile to (571) 273-2885, on the date below.

Gideon Duvall	(Typed or printed name)
	(Signature)
03/11/2024	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/109,177	02/13/2023	Gideon Duvall	DUVALL_23_DIV1	7946

TITLE OF INVENTION: METHOD OF GENERATING A DESIRED TEMPERATURE OF AN INFUSED BEVERAGE WITHIN A BREWING ASSEMBLY

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$480	\$0.00	\$0.00	\$480	03/11/2024

EXAMINER	ART UNIT	CLASS-SUBCLASS
MICHALSKI, SEAN M	3724	099-280000

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/AIA/122 or PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/AIA/47 or 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 Mark C. Johnson

2 Johnson | Dalal

3

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

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

(A) NAME OF ASSIGNEE

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

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government4a. Fees submitted: ☒ Issue Fee ☐ Publication Fee (if required)

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

☒ Electronic Payment via the USPTO patent electronic filing system ☐ Enclosed check ☐ Non-electronic payment by credit card (Attach form PTO-2038)☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

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

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

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

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

Authorized Signature



Date

March, 11 2024

Typed or printed name

Gideon Duvall

Registration No. _____

Decent Espresso International Ltd., Exhibit 1013

Page 2 of 3



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PATENT AND TRADEMARK OFFICE

P.O. Box 1450
Alexandria, VA 22313 - 1450
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ELECTRONIC PAYMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
18/109,177	03/11/2024 02:39:31 PM Z ET	DUVALL_23_DIV1

Title of Invention

METHOD OF GENERATING A DESIRED TEMPERATURE OF AN INFUSED BEVERAGE WITHIN A BREWING ASSEMBLY

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	7946	FILED BY	Gideon Duvall
PATENT CENTER #	64632626	AUTHORIZED BY	-
CUSTOMER #	131368	FILING DATE	02/13/2023
CORRESPONDENCE ADDRESS	-	FIRST NAMED INVENTOR	Gideon Duvall

Payment Information

PAYMENT METHOD	PAYMENT TRANSACTION ID	PAYMENT AUTHORIZED BY
CARD / 1020	E20243AE40486185	Gideon Duvall

FEE CODE	DESCRIPTION	ITEM PRICE(\$)	QUANTITY	ITEM TOTAL(\$)
2501	UTILITY ISSUE FEE	480.00	1	480.00
TOTAL AMOUNT:				\$480.00

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage

Decent Espresso International Ltd., Exhibit 1013

Page 1013-113

submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #
18/109,177

RECEIPT DATE / TIME
03/11/2024 02:39:31 PM Z ET

ATTORNEY DOCKET #
DUVALL_23_DIV1

Title of Invention

METHOD OF GENERATING A DESIRED TEMPERATURE OF AN INFUSED BEVERAGE WITHIN A BREWING ASSEMBLY

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	7946	FILED BY	Gideon Duvall
PATENT CENTER #	64632626	FILING DATE	02/13/2023
CUSTOMER #	131368	FIRST NAMED INVENTOR	Gideon Duvall
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	-

Documents

TOTAL DOCUMENTS: 1

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
18109177 PTOL-85 partb.pdf	1	Issue Fee Payment (PTO-85B)	269 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
18109177 PTOL-85 partb.pdf	1B4EC96594AF27BE24E46D81F0C34DE31CC47A91A2E265360 B458CAD8CD57FD9F204A09E5B3A85514567037BB82B06E2D D1C9EB00E76C8AC8EB1977D7568EDDE

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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/109,177	04/16/2024	11957271	DUVALL_23_DIV1	7946

131368 7590 03/27/2024
Gideon Duvall
6850 North Grande Drive
Boca Raton, FL 33433

ISSUE NOTIFICATION

The projected patent number and issue date are specified above. The patent will issue electronically. The electronically issued patent is the official patent grant pursuant to 35 U.S.C. § 153. The patent may be accessed on or after the issue date through Patent Center at <https://patentcenter.uspto.gov/>. The patent will be available in both the public and the private sides of Patent Center. Further assistance in electronically accessing the patent, or about Patent Center, is available by calling the Patent Electronic Business Center at 1-888-217-9197.

The USPTO is implementing electronic patent issuance with a transition period, during which period the USPTO will mail a ceremonial paper copy of the electronic patent grant to the correspondence address of record. Additional copies of the patent (i.e., certified and presentation copies) may be ordered for a fee from the USPTO's Certified Copy Center at <https://certifiedcopycenter.uspto.gov/index.html>. The Certified Copy Center may be reached at (800)972-6382.

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

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Center (<https://patentcenter.uspto.gov>).

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 Application Assistance Unit (AAU) of the Office of Patents Stakeholder Experience (OPSE), Stakeholder Support Division (SSD) at (571)-272-4200.

INVENTOR(s) (Please see PATENT CENTER site <https://patentcenter.uspto.gov> for additional inventors):

Gideon Duvall, Atlanta, GA;

APPLICANT(s) (Please see PATENT CENTER site <https://patentcenter.uspto.gov> for additional applicants):

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/109,177	02/13/2023	Gideon Duvall	DUVALL_23_DIV1	7946
131368	7590	04/17/2024		
Gideon Duvall 6850 North Grande Drive Boca Raton, FL 33433			EXAMINER MICHALSKI, SEAN M	
			ART UNIT	PAPER NUMBER
			3724	
			MAIL DATE	DELIVERY MODE
			04/17/2024	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.

APPLICATION NO.	ISSUE DATE	PATENT NO.
18/109,177	16-Apr-2024	11957271

Gideon Duvall
6850 North Grande Drive
Boca Raton, FL 33433

EGRANT NOTIFICATION

Your electronic patent grant (eGrant) is now available, which can be accessed via Patent Center at <https://patentcenter.uspto.gov>

The electronic patent grant is the official patent grant under 35 U.S.C. 153. For more information, please visit <https://www.uspto.gov/electronicgrants>