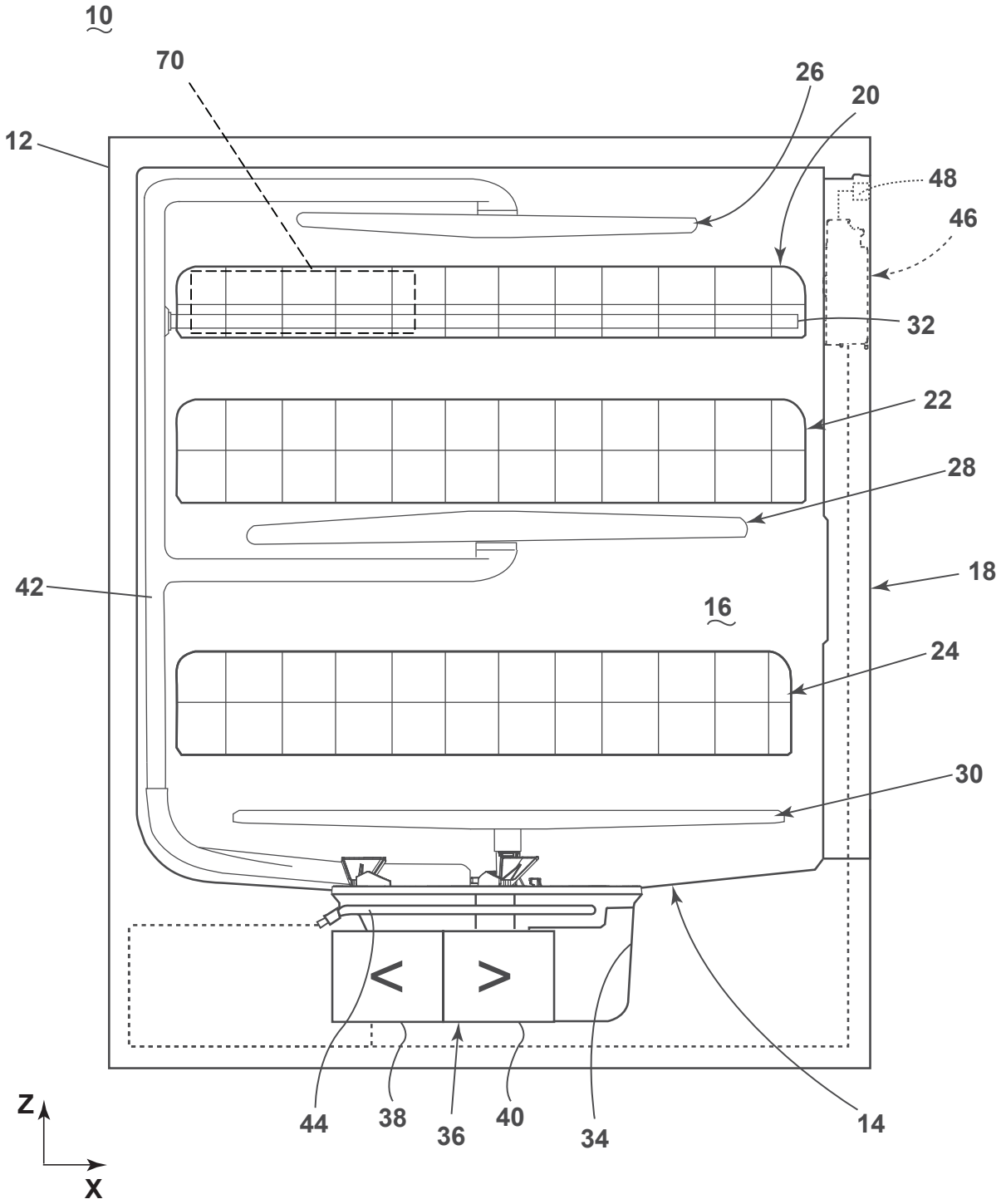


FIG. 1

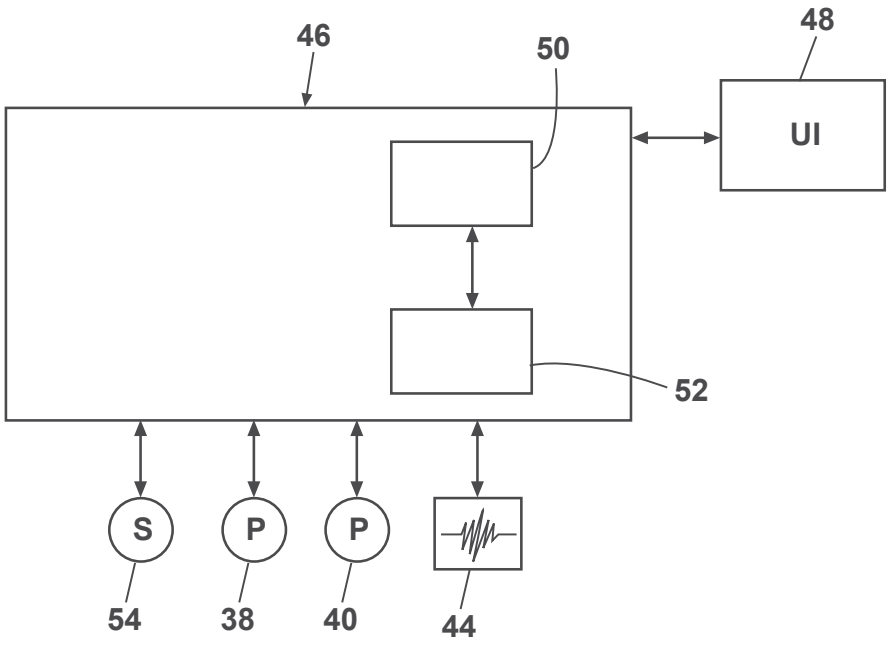


FIG. 2

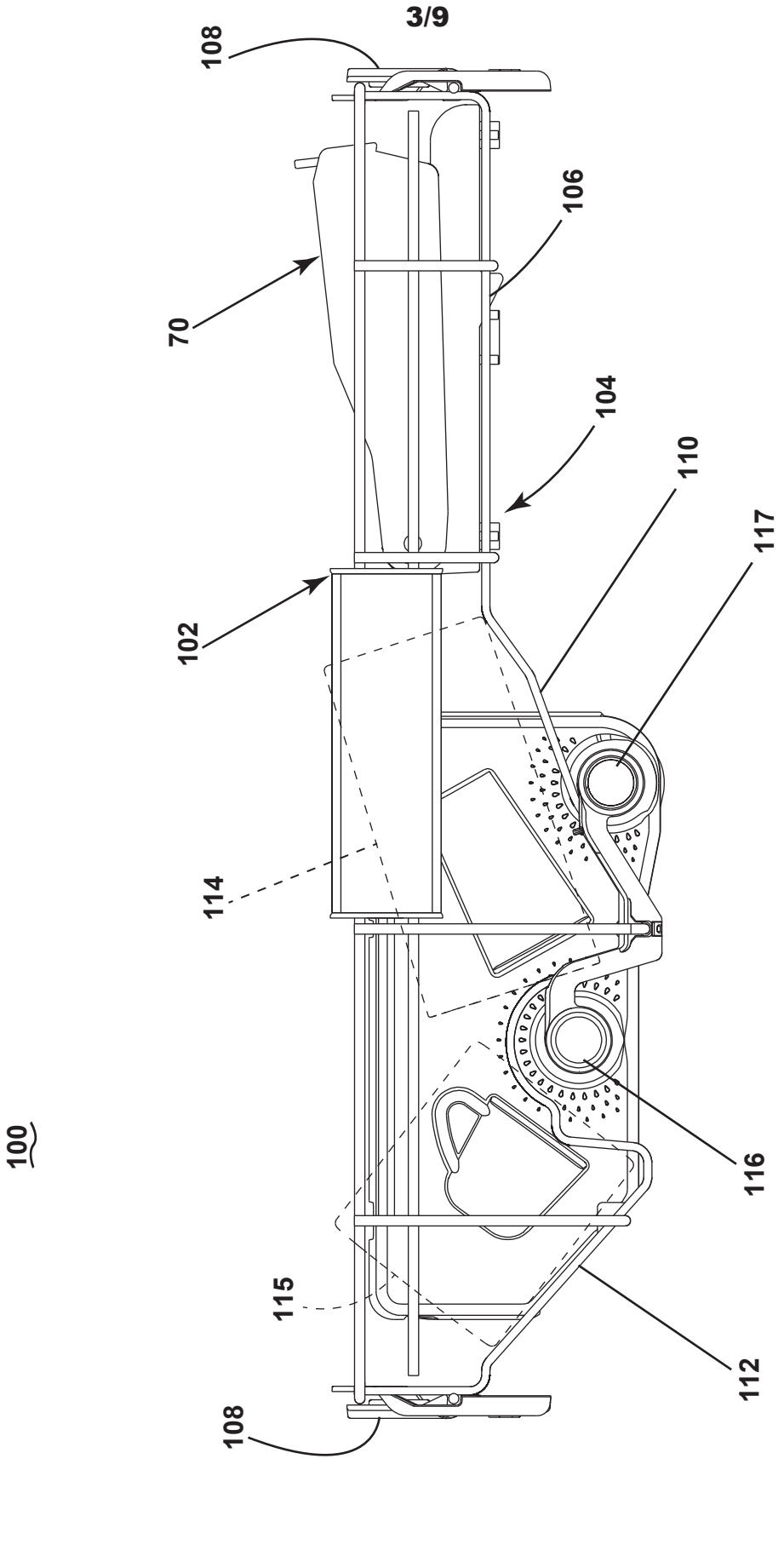


FIG. 3

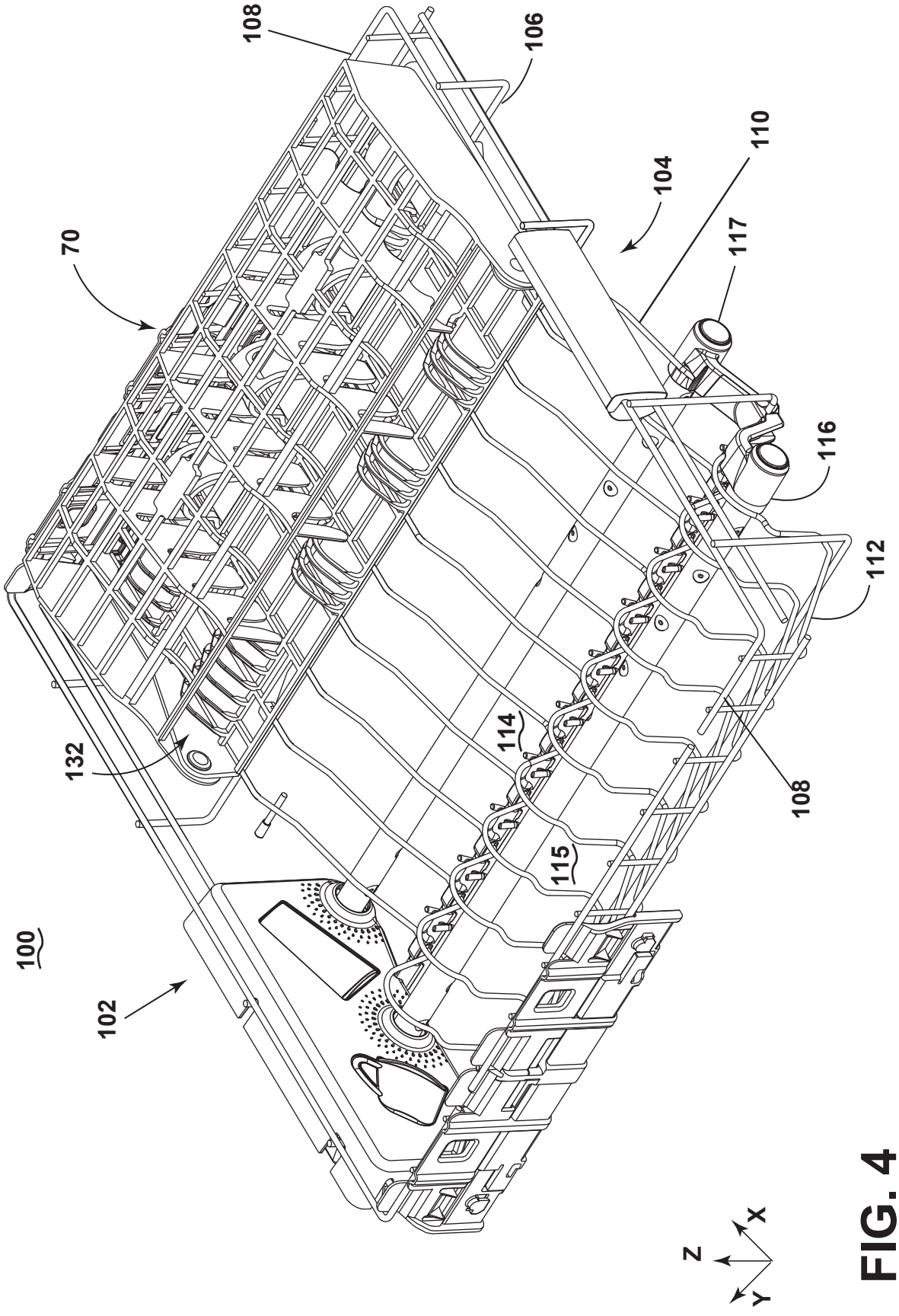


FIG. 4

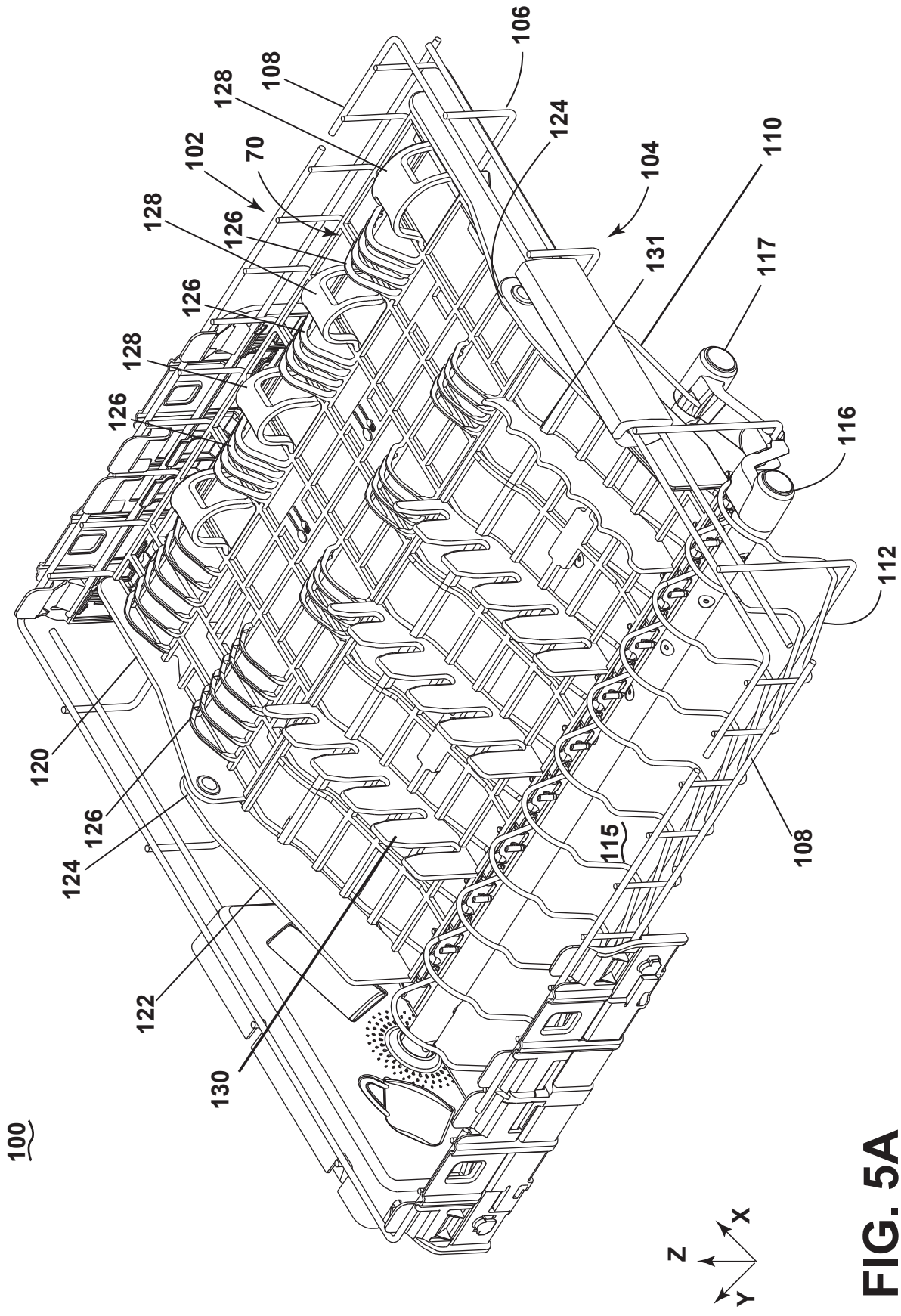

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FIG. 5A

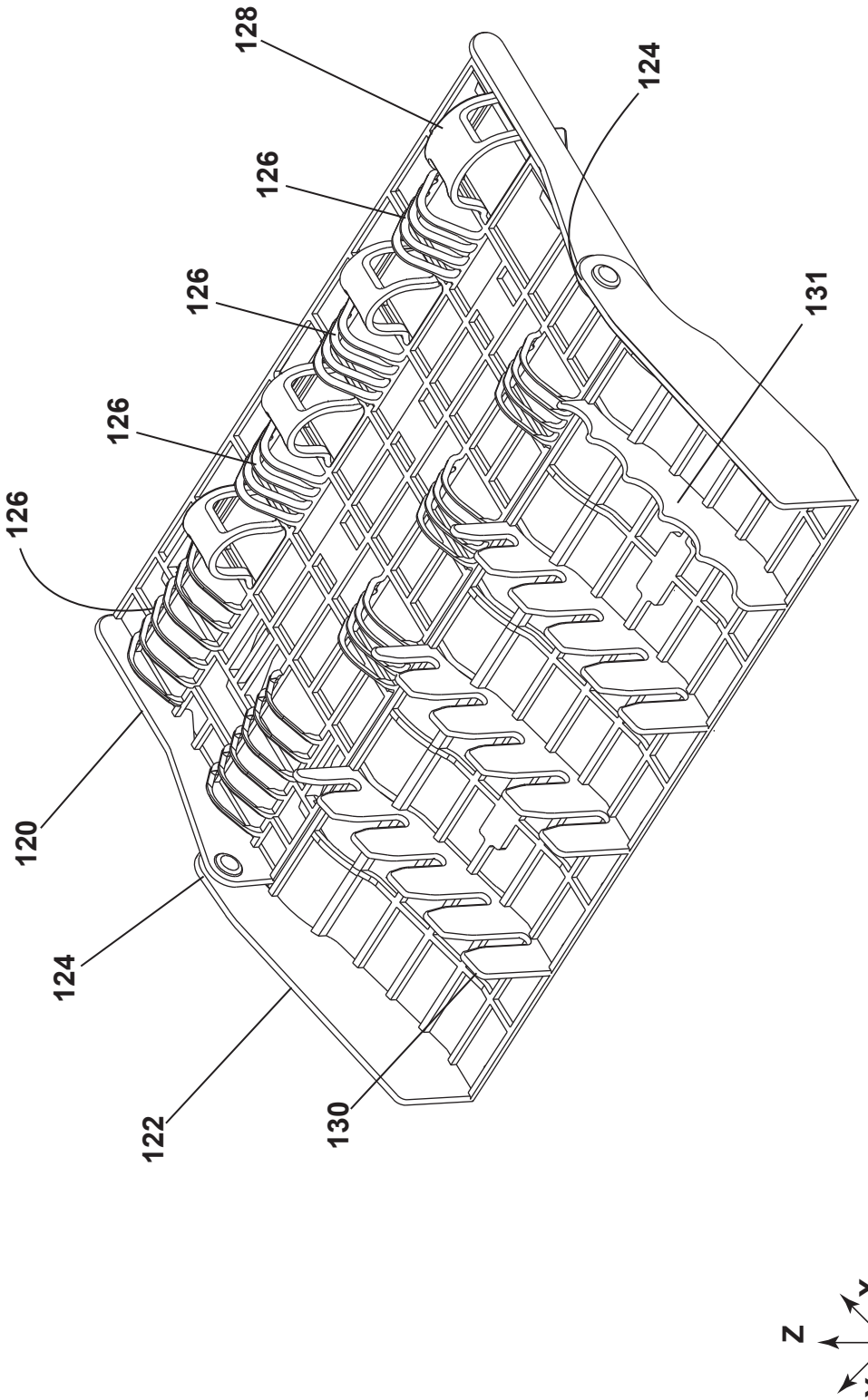


FIG. 5B

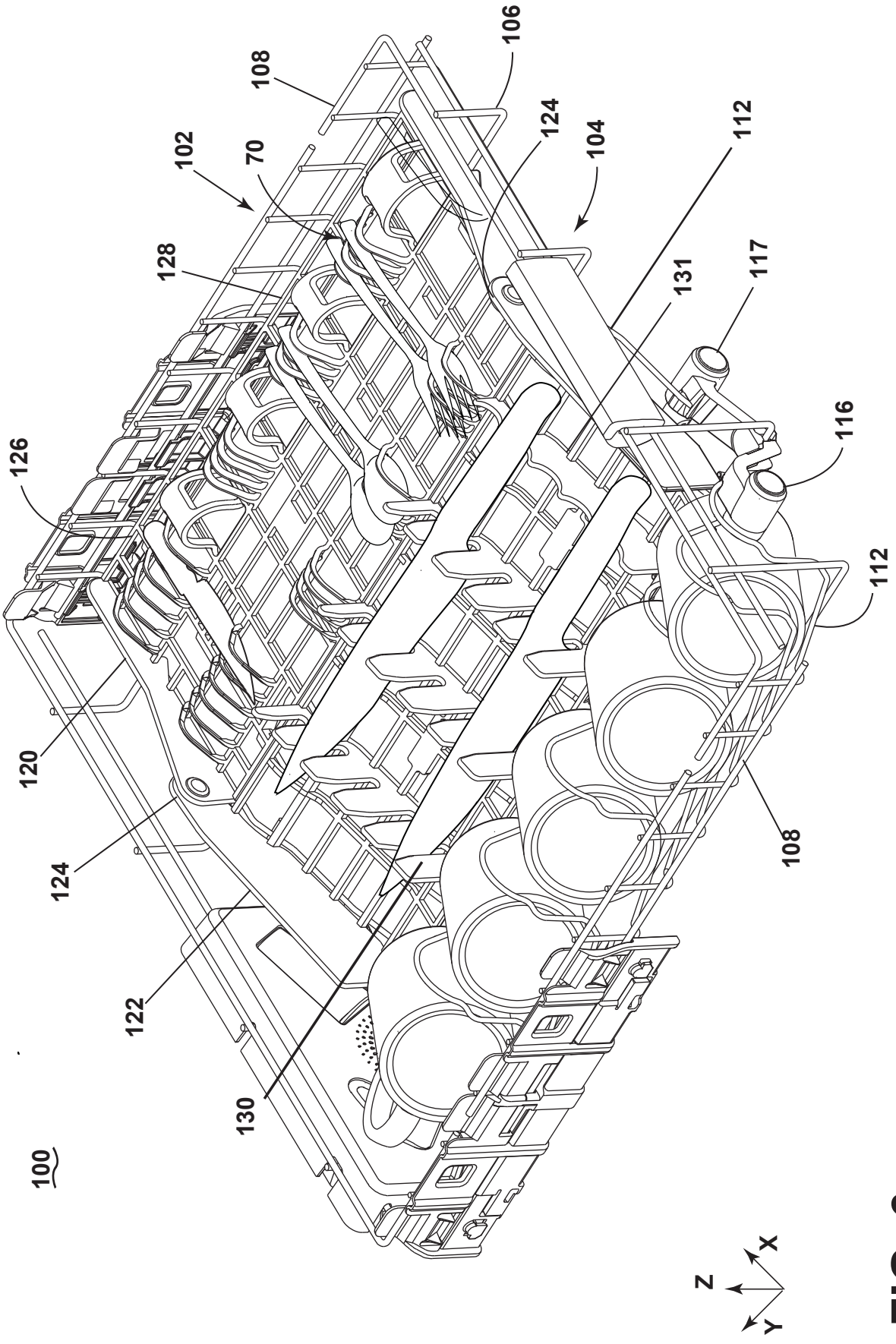

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FIG. 6

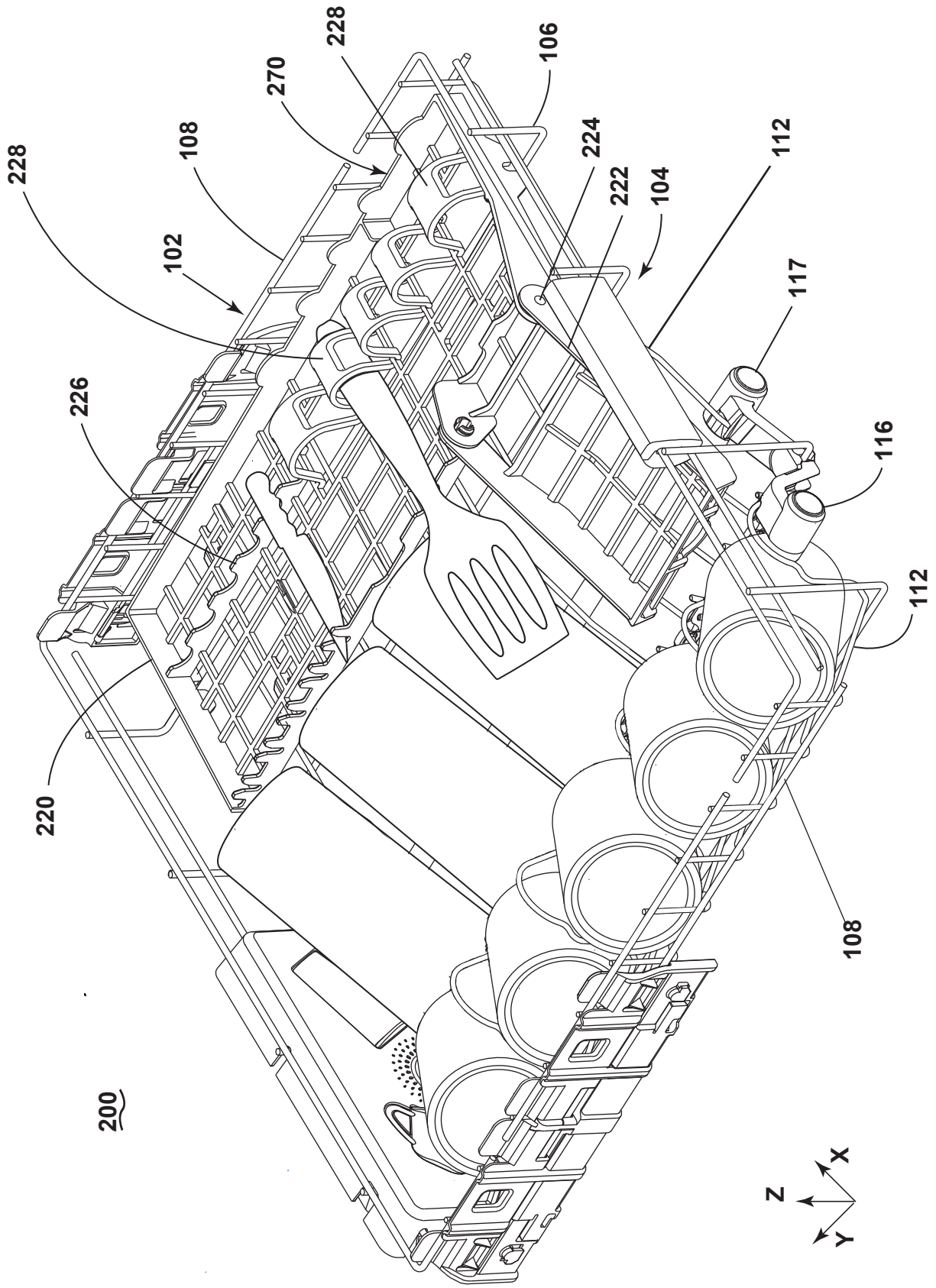

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FIG. 7

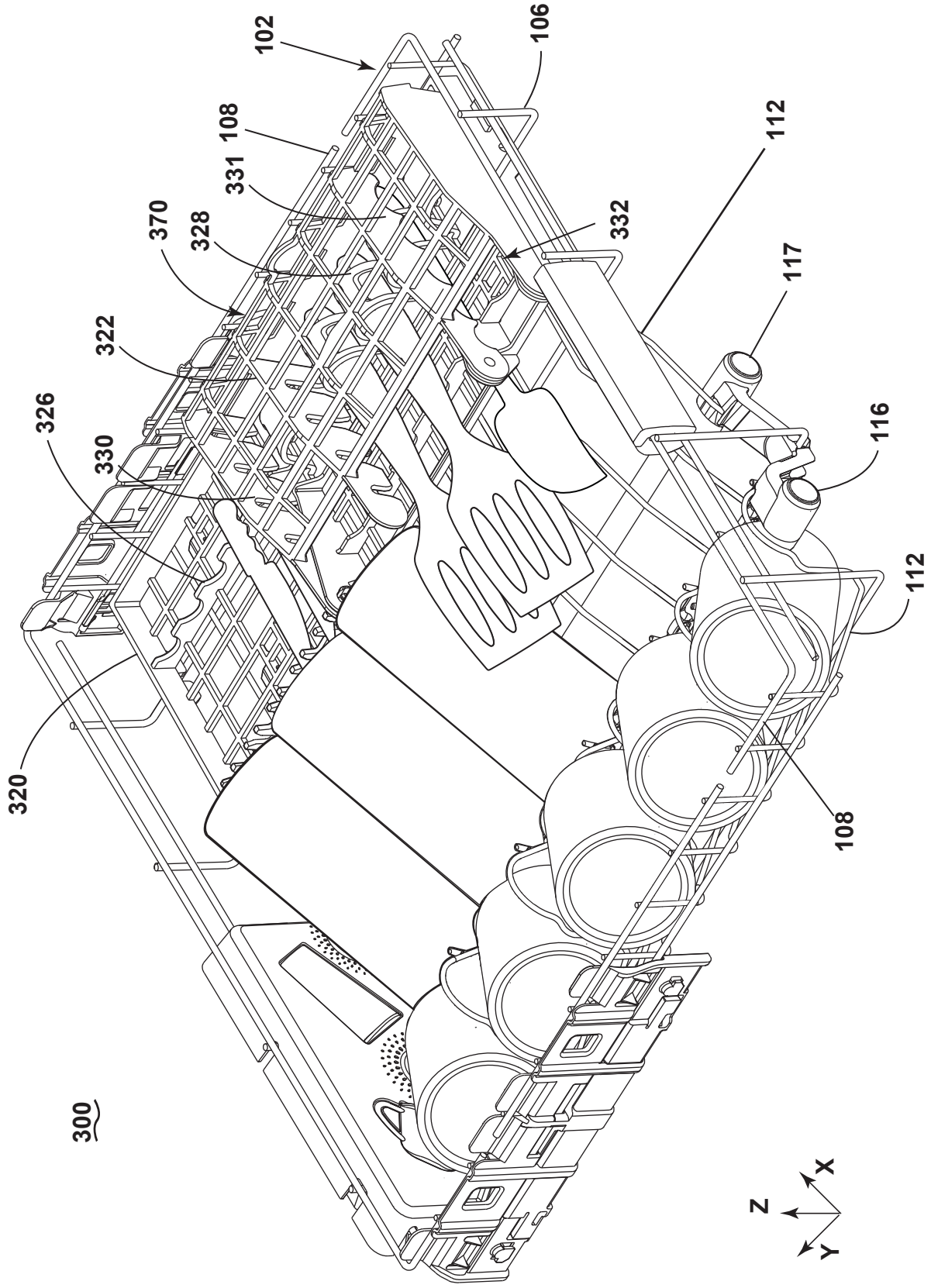

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FIG. 8

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	WHIRLPOOL CORPORATION
For:	DISHWASHER WITH A DISH RACK
Docket No.	SUB-13230-US-CON

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

The references listed on the attached Form PTO-SB08 are submitted herewith pursuant to 37 C.F.R. §§ 1.97-1.99 in accordance with Applicants' duty of disclosure as set forth at 37 C.F.R. § 1.56. Copies of the listed references are enclosed herewith.

Because this application is a continuation of U.S. Patent Application No. 17/830,947, filed on June 2, 2022, now allowed, which is a continuation of U.S. Patent Application No. 16/833,984, filed March 30, 2020, now U.S. Patent No. 11,375,874, issued July 5, 2022, copies of the listed references are not enclosed herewith. The list is submitted so that the information is printed on the patent.

The submission of the accompanying information is not intended to imply that more pertinent prior disclosures may not exist, nor is it an admission by Applicant that any one or more of the documents submitted herewith form a part of the scope and content of the prior art.

This Information Disclosure Statement is submitted with the filing of the above-referenced application.

Respectfully submitted,

WHIRLPOOL CORPORATION

Date: December 11, 2023

By: /John F. Colligan/

John F. Colligan, Reg. No. 48,240
McGARRY BAIR PC
45 Ottawa Ave. SW, Suite 700
Grand Rapids, Michigan 49503
(616) 742-3500

Petitioner Samsung Ex-1004, 0010

UNITED STATES
PATENT AND TRADEMARK OFFICE

P.O. Box 1450
Alexandria, VA 22313 - 1450
www.uspto.gov

ELECTRONIC PAYMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
18/535,327	12/11/2023 03:20:32 PM Z ET	SUB-13230-US-CON

Title of Invention

DISHWASHER WITH A DISH RACK

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	8683	FILED BY	Marisa Stoisonburg
PATENT CENTER #	63564402	AUTHORIZED BY	John Colligan
CUSTOMER #	130348	FILING DATE	-
CORRESPONDENCE ADDRESS	-	FIRST NAMED INVENTOR	Mark S. Feddema

Payment Information

PAYMENT METHOD	PAYMENT TRANSACTION ID	PAYMENT AUTHORIZED BY
DA / 502003	E2023BAF21416204	Marisa Stoisonburg

PRE-AUTHORIZED ACCOUNT	PRE-AUTHORIZED CATEGORY
502003	37 CFR 1.16 (National application filing, search, and examination fees); 37 CFR 1.17 (Patent application and reexamination processing fees); 37 CFR 1.19 (Document supply fees); 37 CFR 1.20 (Post Issuance fees); 37 CFR 1.21 (Miscellaneous fees and charges)

FEE CODE	DESCRIPTION	ITEM PRICE($)	QUANTITY	ITEM TOTAL($)
1111	UTILITY PATENT APPL. SEARCH FEE	700.00	1	700.00
1011	BASIC FILING FEE - UTILITY (PAPER FILING ALSO REQUIRES NON-ELECTRONIC FILING FEE UNDER 1.16(T))	320.00	1	320.00
1311	PATENT APPL. EXAMINATION FEE	800.00	1	800.00
			TOTAL	$1,820.00

AMOUNT:

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 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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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	SUB-13230-US-CON
	Application Number	
Title of Invention	DISHWASHER WITH A DISH RACK	

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.)

Inventor Information:

Inventor 1 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Mark	S.	Feddema	

Residence Information (Select One) ◉ US Residency ○ Non US Residency ○ Active US Military Service

City	Kalamazoo	State/Province	MI	Country of Residence	US

Mailing Address of Inventor:

Address 1	2000 NORTH M-63		
Address 2			
City	Benton Harbor	State/Province	MI
Postal Code	94022	Country	US

Inventor 2 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	William	J.	Snell	

Residence Information (Select One) ◉ US Residency ○ Non US Residency ○ Active US Military Service

City	Elkhart	State/Province	IN	Country of Residence	US

Mailing Address of Inventor:

Address 1	2000 NORTH M-63		
Address 2			
City	Benton Harbor	State/Province	MI
Postal Code	49022	Country	US

Inventor 3 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Sachie		Kakehi	

Residence Information (Select One) ◉ US Residency ○ Non US Residency ○ Active US Military Service

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	SUB-13230-US-CON
	Application Number	
Title of Invention	DISHWASHER WITH A DISH RACK	

City	St. Joseph	State/Province	MI	Country of Residence	US

Mailing Address of Inventor:

Address 1	2000 NORTH M-63		
Address 2			
City	Benton Harbor	State/Province	MI
Postal Code	49002	Country	

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	130348		
Email Address	patents@mcgarrybair.com	Add Email	Remove Email

Application Information:

Title of the Invention	DISHWASHER WITH A DISH RACK		
Attorney Docket Number	SUB-13230-US-CON	Small Entity Status Claimed	☐
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	9	Suggested Figure for Publication (if any)	

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.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	SUB-13230-US-CON
	Application Number	
Title of Invention	DISHWASHER WITH A DISH RACK	

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	130348		

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)
	Continuation of	17830947	2022-06-02
Prior Application Status	Patented		Remove

Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
17830947	Continuation of	16833984	2020-03-30	11375874	2022-07-05

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

Foreign Priority Information:

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)[i] 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).

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	SUB-13230-US-CON
	Application Number	
Title of Invention	DISHWASHER WITH A DISH RACK	

Remove

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

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

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.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	SUB-13230-US-CON
	Application Number	
Title of Invention	DISHWASHER WITH A DISH RACK	

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.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	SUB-13230-US-CON
	Application Number	
Title of Invention	DISHWASHER WITH A DISH RACK	

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 Remove

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.

Clear

◉ 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. ☒

Organization Name	WHIRLPOOL CORPORATION		
Mailing Address Information For Applicant:			
Address 1	2000 NORTH M-63		
Address 2			
City	BENTON HARBOR	**State/Province**	MI
Country	US	Postal Code	49022
Phone Number		Fax Number	
Email Address			

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

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.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	SUB-13230-US-CON
	Application Number	
Title of Invention	DISHWASHER WITH A DISH RACK	

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.

Remove

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**	
Country		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. Add

Signature:

Remove

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.

See 37 CFR 1.4(d) for the manner of making signatures and certifications.

Signature	/John F. Colligan/			Date (YYYY-MM-DD)	2023-12-11
First Name	John F.	Last Name	Colligan	Registration Number	48240

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

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	SUB-13230-US-CON
	Application Number	
Title of Invention	DISHWASHER WITH A DISH RACK	

This collection of information is required by 37 CFR 1.76. 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 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet 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, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1 The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3 A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

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Application Number	TO BE DETERMINED
Filing Date	
First Named Inventor	MARK S. FEDDEMA
Title	DISHWASHER WITH A DISH RACK
Art Unit	
Examiner Name	
Attorney Docket Number	SUB-13230-US-CON

SIGNATURE of Applicant or Patent Practitioner

Signature	/John F. Colligan/	Date (Optional)	December 11, 2023
Name	John F. Colligan	Registration Number	48,240
Title (if Applicant is a juristic entity)	Authorized Attorney		
Applicant Name (if Applicant is a juristic entity)	Whirlpool Corporation		

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. If more than one applicant, use multiple forms.

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POWER OF ATTORNEY BY APPLICANT

I hereby revoke all previous powers of attorney given in the application identified in either the attached transmittal letter or the boxes below.

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I am the Applicant (if the Applicant is a juristic entity, list the Applicant name in the box):

Whirlpool Corporation

☐ Inventor or Joint Inventor (title not required below)

☐ Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)

☑ Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)

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SIGNATURE of Applicant for Patent

The undersigned (whose title is supplied below) is authorized to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

Signature	/Nathan J. Davis/	Date (Optional)	May 19, 2023
Name	Nathan Davis		
Title	Legal Director - Whirlpool Corporation		

NOTE: Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. If more than one applicant, use multiple forms.

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DISHWASHER WITH A DISH RACK

CROSS-REFERNCE TO RELATED APPLICATIONS

[0001] This application is a continuation of U.S. Patent Application No. 17/830,947, filed on June 2, 2022, now allowed, which is a continuation of U.S. Patent Application No. 16/833,984, filed March 30, 2020, now U.S. Patent No. 11,375,874, issued July 5, 2022, both of which are incorporated herein by reference in their entirety.

TECHNICAL FIELD

[0002] This disclosure generally relates to a dishwasher, and more specifically to dishwasher including a utensil caddy mounted to a dish rack.

BACKGROUND

[0003] Household dishwashers typically include one or more dish racks for holding various types of dishes in the dishwasher tub. Traditionally, a dishwasher includes an upper dish rack that holds glassware and small dishes, and a lower dish rack that holds larger dishes, such as plates. The upper and lower dish racks usually consume most of the space inside the dishwasher tub. Some dishwashers can also include a third dish rack, often referred to as a third level rack, of a much shorter height the upper and lower dish racks, with the height being such as to only accommodate silverware or other low profile utensils.

[0004] A utensil caddy is often used to specifically hold silverware. Utensil caddies are normally removably carried by the lower dish rack or on the inner surface of the door closing the dishwasher. These utensil caddies are oriented such that they hold the utensils in an upright or vertical orientation during washing.

[0005] Some dishwashes can have both a utensil caddy and a third level rack. The third level rack can normally accommodate long handle items, such as spatulas, severing spoons, stirring spoons, which, if put into the utensil caddy, would extend far enough vertically to interfere with the rotation of the sprayer below the upper rack.

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SUMMARY

[0006] In one aspect, the present disclosure relates to an automatic dishwasher configured to implement an automatic treating cycle of operation. The dishwasher has a tub defining a dish treating chamber and a dish rack located within the dish treating chamber and comprising a bottom wall having a first portion defined by a substantially planar portion extending across a first portion of bottom wall and second portion defined by a depression portion extending across a second portion of bottom wall.

[0007] In another aspect, the present disclosure relates to an automatic dishwasher configured to implement an automatic treating cycle of operation. The dishwasher has a tub defining a dish treating chamber and a dish rack located within a top portion of the dish treating chamber, the dish rack having a first portion with a first vertical height and defining a utensil seat, and the dish rack having a second portion with a second vertical height and defining a cup seat, the second vertical height being greater than the first vertical height.

[0008] In another aspect, the present disclosure relates to an automatic dishwasher configured to implement an automatic treating cycle of operation. The dishwasher has a tub defining a dish treating chamber and a dish rack located within the dish treating chamber and comprising a bottom wall defining a first substantially planar portion extending across a portion of bottom wall and at least one of a second and third planar portion angled with respect to the first planar portion and defining a depression relative first planar portion.

BRIEF DESCRIPTION OF THE DRAWINGS

[0009] In the drawings:

[0010] FIG. 1 is a schematic, cross-sectional view of a dishwasher with a dish rack according to an aspect of the present disclosure.

[0011] FIG. 2 is a schematic diagram of a control system for the dishwasher of FIG. 1.

[0012] FIG. 3 is a side view of a dish rack assembly including the dish rack of FIG. 1 with a utensil caddy according aspects of the disclosure.

[0013] FIG. 4 is a perspective view of the utensil caddy of FIG. 3 in a first position according to aspects of the disclosure.

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[0014] FIG. 5A is a perspective view of the utensil caddy of FIG. 3 in a second position according to aspects of the disclosure.

[0015] FIG. 5B is a perspective view of the utensil caddy in the second position of FIG. 5a according to aspects of the disclosure.

[0016] FIG. 6 is a perspective view of the utensil caddy in the second position of FIG. 5 including utensils according to aspects of the disclosure

[0017] FIG. 7 is a perspective view of the dish rack including an exemplary utensil caddy of FIG. 3 which extends across a quarter of the dish rack assembly according to aspects of the disclosure.

[0018] FIG. 8 is a perspective view of the dish rack including an exemplary utensil caddy of FIG. 3 which extends across half of the dish rack assembly according to aspects of the disclosure.

DESCRIPTION OF EMBODIMENTS OF THE INVENTION

[0019] Aspects of the present disclosure relate to a utensil caddy including on a dish rack of dishwasher, specifically an automatic dishwasher. The utensil caddy can be configured to include, at least, a first side wall including a first set of utensil holders and a second side wall including a second set of utensil holders. The second side wall can be further configured to be moveable relative to the utensil caddy between a first position and a second position.

[0020] FIG. 1 illustrates a schematic, cross-sectional view of an exemplary dishwasher 10, specifically an automatic dishwasher, according to an embodiment of the present disclosure. The dishwasher 10 shares many features of a conventional automatic dishwasher, which will not be described in detail herein except as necessary for a complete understanding of the disclosure. While the present disclosure is described in terms of a conventional dishwashing unit, it can also be implemented in other types of dishwashing units, such, but not limited to, as in-sink dishwashers, multi-tub dishwashers, or drawer-type dishwashers. A chassis 12 can define an interior of the dishwasher 10 and can include a frame, with or without panels mounted to the frame. For built-in dishwashers, outer panels are typically not needed. For dishwashers that are not built into existing cabinetry, the chassis 12 can include the panels mounted to the frame to form a cabinet for the dishwasher 10. An open-faced tub 14 can be provided within the interior

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of and mounted to the chassis 12 and can at least partially define a treating chamber 16 or a dish treating chamber for washing or otherwise treating dishes. The open face of the tub 14 defines an access opening for the treating chamber 16.

[0021] A closure element, such as a door assembly 18, can be movably mounted to the dishwasher 10 for movement between opened and closed positions. The door assembly 18 can be configured selectively open and close the treating chamber access opening defined by the open face of the tub 14. Thus, the door assembly 18 provides accessibility to the treating chamber 16 for the loading and unloading of dishes or other washable items. It should be appreciated that the door assembly 18 can be secured to the lower front edge of the chassis 12 or to the lower front edge of the tub 14 via a hinge assembly (not shown) configured to pivot the door assembly 18. When the door assembly 18 is closed, user access to the treating chamber 16 can be prevented, whereas user access to the treating chamber 16 can be permitted when the door assembly 18 is open. Alternatively, the closure element can be slidable relative to the chassis 12, such as in a drawer-type dishwasher, wherein the access opening for the treating chamber 16 is formed by an open-top tub. Other configurations of the closure element relative to the chassis 12 and the tub 14 are also within the scope of the disclosure.

[0022] Dish holders, illustrated in the form of an upper dish rack 22, a lower dish rack 24, and a third level rack 20, can be located within the treating chamber 16 and receive dishes for treatment, such as washing. The third level, upper, and lower dish racks 20, 22, 24 can be vertically oriented with respect to one another. That is, third level, upper, and lower dish racks 20, 22, 24 can be spaced from one another in a vertical direction denoted by a Z-axis. The third level, upper, and lower dish racks 20, 22, 24 are typically mounted for slidable movement in and out of the treating chamber 16 for ease of loading and unloading. Other dish holders can be provided, such as a silverware basket, separate from or combined with third level, upper, and lower dish racks 20, 22, 24. As used in this description, the term “dish(es)” is intended to be generic to any item, single or plural, that may be treated in the dishwasher 10, including, without limitation, dishes, plates, pots, bowls, pans, glassware, and silverware. While the dishwasher 10 is illustrated herein as having three dish racks 20, 22, 24, it will be understood that any suitable number and configuration of dish racks is also within the scope of the disclosure.

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[0023] A utensil caddy 70 can be included with the third level rack 20. Specifically, the utensil caddy 70 can be provided on a lateral side of third level dish rack 20. As used herein, the term lateral can denote any direction corresponding to the X-axis. The utensil caddy 70 can be configured to hold a set of utensils so they can be treated within the treating chamber 16. As used herein, the term utensil can refer to any implement, article or container suitable for treatment within the treating chamber 16. For example, the set of utensils can include, but is not limited to, a spoon, a fork, a spork, a knife, a spatula, a baby-bottle nipple, a measuring spoon, a ladle, a tong, or the like. It will be appreciated that there can be any number of one or more utensil caddy's 70 within the treating chamber 16 and included with any of the third level, upper, and lower dish racks 20, 22, 24.

[0024] A spray system can be provided for spraying liquid in the treating chamber 16 and may be provided in the form of, for example, an upper spray assembly 26, a middle spray assembly 28, and a lower spray assembly 30. The upper spray assembly 26, the middle spray assembly 28, and the lower spray assembly 30 are located, respectively, above the third level dish rack 20, beneath the upper dish rack 22, and beneath the lower dish rack 24 and are illustrated as rotating spray arms by example but are not limited to such positions and sprayer type. The spray system can further include a rack spray assembly 32 coupled to the third level dish rack 20; the rack spray assembly 32 will be discussed in further detail below. Furthermore, the spray system can include additional and/or alternative spray assemblies. For example, a distribution header or spray manifold can be located at the rear of the tub 14 at any vertical position. An exemplary spray manifold is set forth in detail in U.S. Patent No. 7,594,513, issued September 29, 2009, and titled "Multiple Wash Zone Dishwasher," which is incorporated herein by reference in its entirety.

[0025] A recirculation system can be provided for recirculating liquid from the treating chamber 16 to the spray system. The recirculation system can include a sump 34 and a pump assembly 36. The sump 34 collects the liquid sprayed in the treating chamber 16 and can be formed by a sloped or recess portion of a bottom wall of the tub 14. The pump assembly 36 can include both a drain pump 38 and a recirculation pump 40. The drain pump 38 can draw liquid from the sump 34 and pump the liquid out of the dishwasher 10 to a household drain line (not

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shown). The recirculation pump 40 can draw liquid from the sump 34, and the liquid can be simultaneously or selectively pumped through a supply conduit or tube 42 to each of the upper, middle, lower, and rack spray assemblies 26, 28, 30, 32 for selective spraying. The liquid supply tube 42 extends along a wall of the tub 14 and fluidly connect the pump assembly 36 to the upper, middle, lower, and rack spray assemblies 26, 28, 30, 32. While not shown, a liquid supply system can include a water supply conduit coupled with a household water supply for supplying water to the treating chamber 16.

[0026] While the pump assembly 36 is illustrated herein as having separate drain and recirculation pumps 38, 40, in an alternative embodiment, the pump assembly 36 can include a single pump configured to selectively supply wash liquid to either the spray system or the drain line, such as by configuring the pump to rotate in opposite directions, or by providing a suitable valve system.

[0027] A heating system including a heater 44 can be located, for example, within the sump 34 for heating the liquid contained in the sump 34. The heater 44 can also heat air contained in the treating chamber 16. Alternatively, a separate heating element (not shown) can be provided for heating the air circulated through the treating chamber 16. A filtering system (not shown) can be fluidly coupled with the recirculation flow path for filtering the recirculated liquid.

[0028] A control system including a controller 46 can also be included in the dishwasher 10, which can be operably coupled with various components of the dishwasher 10 to implement a cycle of operation. The controller 46 can be located within the door assembly 18 as illustrated, or it can alternatively be located somewhere within the chassis 12. The controller 46 can also be operably coupled with a control panel or user interface 48 for receiving user-selected inputs and communicating information to the user. The user interface 48 can include operational controls such as dials, lights, switches, and displays enabling a user to input commands, such as a cycle of operation, to the controller 46 and receive information.

[0029] FIG. 2 is a schematic illustration of the controller 46 of FIG. 1. The controller 46 can be coupled with the heater 44 for heating the wash liquid during a cycle of operation, the drain pump 38 for draining liquid from the treating chamber 16, and the recirculation pump 40 for recirculating the wash liquid during the cycle of operation. The controller 46 can be provided

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with a memory 50 and a central processing unit (CPU) 52. The memory 50 can be used for storing control software that can be executed by the CPU 52 in completing an automatic cycle of operation using the dishwasher 10 and any additional software. For example, the memory 50 can store one or more pre-programmed cycles of operation that can be selected by a user and completed by the dishwasher 10. A cycle of operation for the dishwasher 10 can include one or more of the following steps: a wash step, a rinse step, and a drying step. The wash step can further include a pre-wash step and a main wash step. The rinse step can also include multiple steps such as one or more additional rinsing steps performed in addition to a first rinsing. The amounts of water and/or rinse aid used during each of the multiple rinse steps can be varied. The drying step can have a non-heated drying step (so called "air only"), a heated drying step or a combination thereof. These multiple steps can also be performed by the dishwasher 10 in any desired combination.

[0030] The controller 46 can also receive input from one or more sensors 54. Non-limiting examples of sensors that can be communicably coupled with the controller 46 include a temperature sensor and turbidity sensor to determine the soil load associated with a selected grouping of dishes, such as the dishes associated with a particular area of the treating chamber 16.

[0031] The dishwasher 10 can include all of the above exemplary systems, a selection of the above exemplary systems, and/or other systems not listed above as desired. Further, some of the systems can be combined with other systems and/or can share components with other systems. Examples of other systems that the dishwasher can further include are a dispensing system that supplies one or more treating agents or chemistries to the treating chamber 16 and an air supply system that can provide air, which can be heated or not heated, to the treating chamber 16, such as for drying and/or cooling the dishes. An exemplary air supply system is set forth in U.S. Patent Application No. 12/959,673, filed December 3, 2010 and published as U.S. Patent Application Publication No. 2012/0138106 on June 7, 2012, both of which are incorporated herein by reference in their entireties.

[0032] FIG. 3 illustrates a side view of a dish rack assembly 100 including the utensil caddy 70 of FIG. 1 and a dish rack 102. It will be appreciated that the dish rack assembly 100 can

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include any dish rack 102 as described herein. For example, the dish rack 102 can be any of the upper or lower dish racks 22, 24, or the third level rack 20.

[0033] The dish rack 102 has a wire frame construction forming a bottom wall 104 from which extends a peripheral wall 108 defining the sides of the dishrack. The bottom wall 104 and peripheral wall 108 define an interior where utensils and the like can be placed for washing.

[0034] While the bottom wall 104 can have any shape, including planar, the bottom wall 104 is illustrated as having a planar portion 106 and a depression defined by a first and second angled wall 110, 112. The depression, as illustrated, forms a first set of cup seats 114 and a second set of cup seats 115, which hold cups as illustrated.

[0035] The bottom wall 104 can define multiple planes. For example, the planar portion 106 can define a first plane transverse to the X-axis, while the first angled wall 110 can define a second plane and the second angled wall 112 can define a third plane. The second and the third planes can both be angled with respect to the X-axis such that they intersect with the first plane. Specifically, the second plane can intersect the first plan at the point where the planar portion 106 and the first angled wall 110 meet.

[0036] A spray assembly is carried by the dish rack 102 and includes first and second sprayers 116, 117, with the first sprayer 116 located between the first and second set of cup seats 114, 115 to emit a spray into the open top of the cups, and the second sprayer 117 located to emit a spray into the planar portion 106.

[0037] The utensil caddy 70 can be received within a region of the dish rack 102 adjacent to a portion of the bottom wall 104, specifically the planar portion 106. It is contemplated that the utensil caddy 70 can be removably mounted to a portion of the dish rack 102, specifically the planar portion 106. As such, the utensil caddy 70 can be moved to other portions of the dish rack 102 or to another dish rack 102 altogether. Alternatively, at least a portion of the utensil caddy 70 can be integrally formed with the planar portion 106 and hence the dish rack 102. It is further contemplated that the utensil caddy 70 can be laid on its side or otherwise be defend as a horizontal utensil caddy such that utensils can be received within the utensil caddy 70 in a horizontal fashion transverse to the X-axis. Traditional utensil caddies, on the other hand, are

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vertically mounted such that they can be defined as a vertical utensil caddy. As such, utensils can be received within the vertical utensil caddy in a vertical fashion transverse to the Z-axis.

[0038] FIG. 4 is a perspective view of the dish rack assembly 100 of FIG. 3 including the utensil caddy 70 in a first position. As used herein, the first position can be defined as a closed configuration of the utensil caddy 70 where at least a portion of the utensil caddy 70 abuts a portion of the bottom wall 104 and does not abut the first angled wall 110. As illustrated, the first and second set of cup seats 114, 115, the first and second sprayers 116, 117, and the utensil caddy 70 can extend along the entirety of the dish rack 102 along the Z-axis.

[0039] The utensil caddy 70 can include a periphery defining an interior with an open top 132. The open top 132 can be defined as a portion of the utensil caddy 70 in which utensils can be passed through. The open top 132 can lie at a junction point between the first plane of the planar portion 106 and the second plane of the first angled wall 110.

[0040] FIG. 5A is a perspective view of the dish rack assembly 100 of FIG. 3 including the utensil caddy 70 in a second position. The second position can be defined as an open configuration of the utensil caddy 70 where at least a portion of the utensil caddy 70 is carried by, received on, or abuts a portion of the bottom wall 104, specifically the first angled portion 112 as illustrated. It will be appreciated that the utensil caddy 70 can be advantageously shaped so that a portion of the utensil caddy 70 can transition from the closed or first position to the opened or second position and conform with the first angled wall 110.

[0041] FIG. 5B is a perspective view of the utensil caddy 70 in the second position of FIG. 5A without the dish rack 102. The utensil caddy 70 can include a first side wall 120, a second side wall 122, and a set of hinges 124.

[0042] The first side wall 120 can rest on, be directly coupled to, or form a portion of the bottom wall 104 of the dish rack 102, specifically, the planar portion 106. The first side wall 120 can include a first set of utensil holders illustrated as a set of utensil seats 126 or loops 128. The utensil holders can be configured to retain or hold a set of utensils such as, but not limited to, spoons, forks, sporks, knives, ladles, spatulas, or the like. Specifically, the set of utensil seats 126 can be configured to hold smaller utensils (e.g., spoons, forks, sporks, etc.) while the loops 128 can be configured to hold larger utensils (e.g., spatulas, ladles, whisks, etc.). Although illustrated

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as four separate loops 128 and four sets of utensil seats 126, it will be appreciated that there can be any number of loops 128 or utensil seats 126 provided on the first side wall 120. It will be further appreciated, that one or more of the sets of utensils seats 126 can be provided between adjacent loops 128 as illustrated.

[0043] The second side wall 122 can be configured to rotate along the Y-axis about the set of hinges 124 and with respect to the first side wall 120. As such, the second side wall 122 can be moveable between the first position where at least a portion of the second side wall 122 abuts the first side wall 120, and the second position where at least a portion of the second side wall 122 rests against or abuts the bottom wall 104, specifically against the first angled portion 112. As illustrated, the second side wall 122 can overlie the entire first set of cup seats 114 and not overlie the second set of cup seats 115 when in the second position.

[0044] The second side wall 122 can further include a second set of utensil holders illustrated as a pin 130 and a seat 131. The pin 130 can be formed as a triangular projection extending from a surface while the seat 131 can be formed as a curved projection of the second side wall 122. A space or slot can be included between adjacent pins 130. As such, the slot can be configured to accept the blade of a knife while the seat 131 accept the handle of the knife, as illustrated. Additionally, or alternatively, the utensil holders of the second side wall 122 can be configured to hold the any suitable utensils such as, but not limited to, a spatula, a ladle, or the like.

[0045] The first side wall 120 and the second side wall 122 can be coupled together through the set of hinges 124, specifically two hinges 124 provided on either distal end of the utensil caddy 70 along the Y-Axis. The set of hinges 124 can act as a method of coupling or a point of connection between first side wall 120 and the second side wall 122 and also provide for rotational movement about the Y-Axis for the second side wall 122 with respect to the first side wall 120. As such, the second side wall 122 can pivot from the first position to the second position.

[0046] FIG. 6 is a perspective view of the dish rack assembly 100 of FIG. 3 in the first position and including various sets of utensils received within the utensil caddy 70 in the first position. As illustrated, a set of cups is received within the first set of cup seats 114, and a set of mugs is received within the second set of cup seats 115. Further, a set of utensils are received

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within the utensil caddy 70, specifically, a set of knives, forks, and spoons are received within the set of utensil seats 126 and a set of larger knives are received within the second utensil holders, specifically the pins 130 and the seats 131. It will be appreciated, however, that other such as sporks, measuring cups, or the like can be received within the utensil seats 126 and larger utensils such as spatulas, ladles, or the like can be received within the loops 128. It will be further appreciated that although illustrated as cups and mugs either the first or the second set of cup seats 114, 115 can receive other objects to be treated within the treating chamber 16 such as, but not limited to, baby bottles, plates, bowls, pans, or the like.

[0047] A diffuser section can be included within a portion of the utensil caddy 70, specifically a portion of the second side wall 122. The diffuser section can be defined as a portion of the utensil caddy 70 which directly contacts a stream of water from one or more of the first and second sprayers 116, 117. The stream of water emitted from the first and second sprayers 116, 117 can, in some instances, be defined as a straight-line stream of water. This straight-line stream of water can be used to effectively clean targeted portions of various utensils, cups, mugs, or plates within the treating chamber 16. It is contemplated, however, that placing a portion of the utensil caddy 70, specifically the diffuser section on the second side wall 122, in the path of the stream of water can diffuse the stream of water outward to form a fan pattern covering a larger area than the straight-line stream can be more effective at cleaning various utensils. For example, if it is desired to clean a spatula or other utensils with a large surface area, at least a portion of the stream of water from the first and second sprayers 116, 117 that is directed toward the spatula can impact the diffuser region of the utensil caddy 70. Once the stream of water hits the diffuser section, the stream of water can fan-out or form a cone-shaped spray area which can cover a larger surface area than the straight-line stream of water. This, in turn, can be more effective in cleaning utensils on the utensil caddy 70 which have a large surface area than through the use of non-diffused, straight-line stream of water.

[0048] In operation, the first and second sprayers 116, 117 or any other sprayer within the treating chamber 16 (e.g., upper, lower, or middle spray assemblies 26, 28, 30) can be configured to treat a set of utensils within a spray zone created by the sprayers. As used herein, the term spray zone can be defined as a region or section within the treating chamber which

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receives a direct or indirect flow of treating fluid. As such, utensils, cups, plates, or the like, placed within the spray zone will be washed or treated. The utensil caddy 70 can be placed in either the first or second position depending on the utensils which need to be treated. For example, if it is desired to clean a set of mugs and a set of cups, the utensil caddy 70 can be positioned in the first position such that cups and mugs can be placed within the first and second sets of cup seats 114, 115 as illustrated in FIG. 6. On the other hand, if it is desired to clean a set of utensils, the utensil caddy 70 can be positioned in the second position and a set of utensils can be placed within the respective utensil holders or seats, as illustrated in FIG. 6. It is further contemplated that when the utensil caddy 70 is positioned in the second position that only the first set of cup seats 114 are covered by the second side wall 122. As such, cups or mugs can still be received within the second set of cup seats 115.

[0049] FIG. 7 is a perspective view of a dish rack assembly 200. The dish rack assembly 200 is similar to the dish rack assembly 100; therefore, like parts will be identified by like numerals in the 200 series, with it being understood that the description of the like parts of the dish rack assembly 100 applies to the dish rack assembly 200 unless otherwise noted.

[0050] The dish rack assembly 200 includes a utensil caddy 270 which includes a second side wall 222 similar to the second side wall 122 except the overall length along the Y-axis of the second side wall 222 is smaller than the overall length of a first side wall 220 along the Y-axis. Specifically, the second side wall 222 is configured to have an overall length that is a quarter of the overall length of the first side wall 220. As such, when the utensil caddy 270 is in the second position as illustrated, an uncovered portion or an opening is formed within the first set of cup seats 114. This, in turn, ensures that at least a portion of the first set of cup seats 114 are free or open regardless of whether the utensil caddy 270 is in the first position or the second position.

[0051] The second side wall 222 can be configured to hold smaller, more delicate utensils than the second side wall 122. For example, the second side wall 222 can be configured to hold baby bottle nipples, caps, burrs, or the like. Additionally, or alternatively, the second side wall 222 can include a utensil holder similar to a utensil loop 228 or a utensil seat 226 to hold a set of utensils.

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[0052] FIG. 9 is a perspective view of a dish rack assembly 300. The dish rack assembly 300 is similar to the dish rack assembly 100, 200; therefore, like parts will be identified by like numerals in the 300 series, with it being understood that the description of the like parts of the dish rack assembly 100, 200 applies to the dish rack assembly 300 unless otherwise noted.

[0053] The dish rack assembly 300 includes a utensil caddy 370 which includes a second side wall 322 similar to the second side wall 122, 222 except that the second side wall 322 includes an overall length along the Y-axis that is half the overall length of a first side wall 320 along the Y-axis. This is similar to the second side wall 222 in that a portion of the first set of cup seats 114 are free or open regardless of whether the utensil caddy 370 is in the first position or the second position. However, the second side wall 322 includes the overall length of half the overall length of the first side wall 320. This, in turn, allows for larger utensils, such as large knives, to be mounted on the second side wall 322 when the utensil caddy 370 is in the second position while still allowing for at least a portion of the first set of cup seats 114 to be open regardless of the position of the utensil caddy 370.

[0054] A set of loops 328 can be provided on the first side wall 320 such that a set of larger utensils, illustrated as three spatulas, can be secured within the utensil caddy 370. It is contemplated, that a set of larger utensils can be secured by the set of loops 328 regardless of whether the utensil caddy 370 is in the first position or the second position. As illustrated, the utensil caddy 370 is in the first position such that a portion of the larger utensils extend beyond the utensil caddy along the X-axis.

[0055] Benefits of the present disclosure include a dish rack assembly which is more versatile when compared to traditional dish rack assemblies. For example, traditional dish rack assemblies can include a vertical utensil caddy in a fixed position on the dish rack and a set of cup seats. Utensils can be secured within the utensil caddy while cups and mugs can be provided within the cup seats. The set of cup seats, however, are not configured to receive a set of utensils, so in cases where it is desired to treat a large amount of utensils there may not be adequate space to secure the utensils. The utensil caddy as disclosed herein, however, can be further as a horizontal utensil caddy in that utensils can be horizontally placed within the utensil caddy through the open top when the utensil caddy is in the first position and be laid horizontally across

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either the first or second side walls when the utensil caddy is in the second position. This allows for a more versatile dish rack assembly as the utensil caddy can be in either the first position or the second position depending on the utensils which are desired to be treated. For example, if a large amount of cups or mugs are desired to be treated, the utensil caddy can be positioned in the first position such that all the cup seats are opened. If, on the other hand, it is desired to treat a large amount of utensils, the utensil caddy can be positioned in the second position and allow for a larger amount of utensils to be secured by the first and second side walls.

[0056] Further benefits of this disclosure include the dish rack assembly, specifically the utensil caddy, with an improved washing efficiency of utensils when compared to traditional vertical utensil caddies. For example, in traditional vertical utensil caddies receive or secure the utensils in a vertical fashion. This, in turn, can place portions of the utensils out of the spray zone such that they are not as effectively cleaned. The utensil caddy as described herein, however, ensures that all of the utensils are horizontally secured and that all portions of the utensils which need to be treated are within the spray zone. Further, the utensil caddy can include a diffuser section which can diffuse the streams of water from the sprayers and effectively cover a larger surface area for the treating fluid or water to reach. As such, the washing efficiency of the utensils placed or secured within the utensil caddy can be improved when compared to the traditional vertical utensil caddies.

[0057] It will also be understood that various changes and/or modifications can be made without departing from the spirit of the present disclosure. By way of non-limiting example, although the present disclosure is described for use with a wire dish rack, it will be recognized that the rack height adjustment assembly can be employed with various rack constructions, including molded racks, such as racks molded of plastic.

[0058] To the extent not already described, the different features and structures of the various embodiments may be used in combination with each other as desired. That one feature may not be illustrated in all of the embodiments is not meant to be construed that it cannot be, but is done for brevity of description. Thus, the various features of the different embodiments may be mixed and matched as desired to form new embodiments, whether or not the new embodiments are

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expressly described. All combinations or permutations of features described herein are covered by this disclosure.

[0059] While the invention has been specifically described in connection with certain specific embodiments thereof, it is to be understood that this is by way of illustration and not of limitation. Reasonable variation and modification are possible within the scope of the forgoing disclosure and drawings without departing from the spirit of the invention which is defined in the appended claims.

[0060] It is intended that the following concepts can define at least a portion of the scope of the disclosure and that the apparatus and/or method(s) within the scope of these concepts and their equivalents be covered thereby. This disclosure should be understood to include all novel and non-obvious combinations of elements described herein, and the concepts may be presented in this or a later application to any novel and non-obvious combination of these elements. Any aspect of any embodiment can be combined with any aspect of any other embodiments. Moreover, the foregoing embodiments are illustrative, and no single feature or element is essential to all possible combinations that may be included in this or a later application. Further aspects of the invention are provided by the subject matter of the following clauses:

[0061] An automatic dishwasher configured to implement an automatic treating cycle of operation, comprising a tub defining a dish treating chamber and a dish rack located within the dish treating chamber and comprising a bottom wall having a first portion defined by a substantially planar portion extending across a first portion of bottom wall and second portion defined by a depression portion extending across a second portion of bottom wall.

[0062] The automatic dishwasher of the preceding clause wherein the depression portion defines a cup seat.

[0063] The automatic dishwasher of any of the preceding clauses, wherein the first substantially planar portion defines a utensil seat.

[0064] The automatic dishwasher of any of the preceding clauses, wherein the dish rack is an upper dishrack and located within a top portion of the dish treating chamber.

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[0065] The automatic dishwasher of any of the preceding clauses, wherein the depression portion is defined by at least one of a second and third planar portion angled with respect to the first planar portion.

[0066] The automatic dishwasher of any of the preceding clauses, wherein the depression portion is defined by a second and a third planar portion angled with respect to the first planar portion.

[0067] The automatic dishwasher of any of the preceding clauses, wherein the second planar portion defines a first cup seat and the third planar defines a second cup seat.

[0068] The automatic dishwasher of any of the preceding clauses, wherein first portion has a first vertical height and the second portion has a second vertical height, the second vertical height being greater than the first vertical height.

[0069] An automatic dishwasher configured to implement an automatic treating cycle of operation, comprising a tub defining a dish treating chamber and a dish rack located within a top portion of the dish treating chamber, the dish rack having a first portion with a first vertical height and defining a utensil seat, and the dish rack having a second portion with a second vertical height and defining a cup seat, the second vertical height being greater than the first vertical height.

[0070] The automatic dishwasher of the preceding clause wherein the first portion is substantially planar.

[0071] The automatic dishwasher of any of the preceding clauses wherein the second portion defining the cup seat is a depression extending across a bottom wall of the dish rack.

[0072] The automatic dishwasher of any of the preceding clauses wherein the depression is defined by at least one of a second and third planar portion angled with respect to the first planar portion.

[0073] The automatic dishwasher of any of the preceding clauses wherein the depression is defined by a second and a third planar portion angled with respect to the first planar portion.

[0074] The automatic dishwasher of any of the preceding clauses, wherein the second planar portion defines a first cup seat and the third planar defines a second cup seat.

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[0075] An automatic dishwasher configured to implement an automatic treating cycle of operation, comprising a tub defining a dish treating chamber and a dish rack located within the dish treating chamber and comprising a bottom wall defining a first substantially planar portion extending across a portion of bottom wall and at least one of a second and third planar portion angled with respect to the first planar portion and defining a depression relative first planar portion.

[0076] The automatic dishwasher of the preceding clause wherein the at least one of the second and third planar portions defines a cup seat.

[0077] The automatic dishwasher of any of the preceding clauses wherein the first planar portion defines a utensil seat.

[0078] The automatic dishwasher of any of the preceding clauses wherein the depression is defined by a second and a third planar portion angled with respect to the first planar portion.

[0079] The automatic dishwasher of any of the preceding clauses wherein the second planar portion defines a first cup seat and the third planar defines a second cup seat.

[0080] The automatic dishwasher of any of the preceding clauses, wherein first substantially planar portion has a first vertical height and the depression has a second vertical height, the second vertical height being greater than the first vertical height.

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CLAIMS

What is claimed is:

1. An automatic dishwasher configured to implement an automatic treating cycle of operation, comprising:

a tub defining a dish treating chamber; and

a dish rack located within the dish treating chamber and comprising a bottom wall having a first portion defined by a substantially planar portion extending across a first portion of the bottom wall and a second portion defined by a depression portion extending across a second portion of the bottom wall.

2. The automatic dishwasher of claim 1, wherein the depression portion defines a cup seat.

3. The automatic dishwasher of claim 1, wherein the first substantially planar portion defines a utensil seat.

4. The automatic dishwasher of claim 1, wherein the dish rack is an upper dishrack and located within a top portion of the dish treating chamber.

5. The automatic dishwasher of claim 1, wherein the depression portion is defined by at least one of a second and third planar portion angled with respect to the first planar portion.

6. The automatic dishwasher of claim 1, wherein the depression portion is defined by a second and a third planar portion angled with respect to the first planar portion.

7. The automatic dishwasher of claim 6, wherein the second planar portion defines a first cup seat and the third planar portion defines a second cup seat.

8. The automatic dishwasher of claim 1, wherein the first portion has a first vertical height and the second portion has a second vertical height, the second vertical height being greater than the first vertical height.

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9. An automatic dishwasher configured to implement an automatic treating cycle of operation, comprising:

a tub defining a dish treating chamber; and

a dish rack located within a top portion of the dish treating chamber, the dish rack having a first portion with a first vertical height and defining a utensil seat, and the dish rack having a second portion with a second vertical height and defining a cup seat, the second vertical height being greater than the first vertical height.

10. The automatic dishwasher of claim 9, wherein the first portion is substantially planar.

11. The automatic dishwasher of claim 10, wherein the second portion defining the cup seat is a depression extending across a bottom wall of the dish rack.

12. The automatic dishwasher of claim 11, wherein the depression is defined by at least one of a second and third planar portion angled with respect to the first planar portion.

13. The automatic dishwasher of claim 11, wherein the depression is defined by a second and a third planar portion angled with respect to the first planar portion.

14. The automatic dishwasher of claim 13, wherein the second planar portion defines a first cup seat and the third planar portion defines a second cup seat.

15. An automatic dishwasher configured to implement an automatic treating cycle of operation, comprising:

a tub defining a dish treating chamber; and

a dish rack located within the dish treating chamber and comprising a bottom wall defining a first substantially planar portion extending across a portion of the bottom wall and at least one of a second and third planar portion angled with respect to the first planar portion and defining a depression relative to the first planar portion.

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16. The automatic dishwasher of claim 15, wherein the at least one of the second and third planar portions defines a cup seat.

17. The automatic dishwasher of claim 15, wherein the first planar portion defines a utensil seat.

18. The automatic dishwasher of claim 15, wherein the depression is defined by a second and a third planar portion angled with respect to the first planar portion.

19. The automatic dishwasher of claim 18, wherein the second planar portion defines a first cup seat and the third planar defines a second cup seat.

20. The automatic dishwasher of claim 15, wherein the first substantially planar portion has a first vertical height and the depression has a second vertical height, the second vertical height being greater than the first vertical height.

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DISHWASHER WITH A DISH RACK

ABSTRACT OF THE DISCLOSURE

An automatic dishwasher configured to implement an automatic treating cycle of operation. The automatic dishwasher having a tub and a dish rack located within the dish treating chamber. The dish rack comprising a bottom wall having a first portion defined by a substantially planar portion extending across a first portion of bottom wall and second portion defined by a depression portion extending across a second portion of bottom wall.

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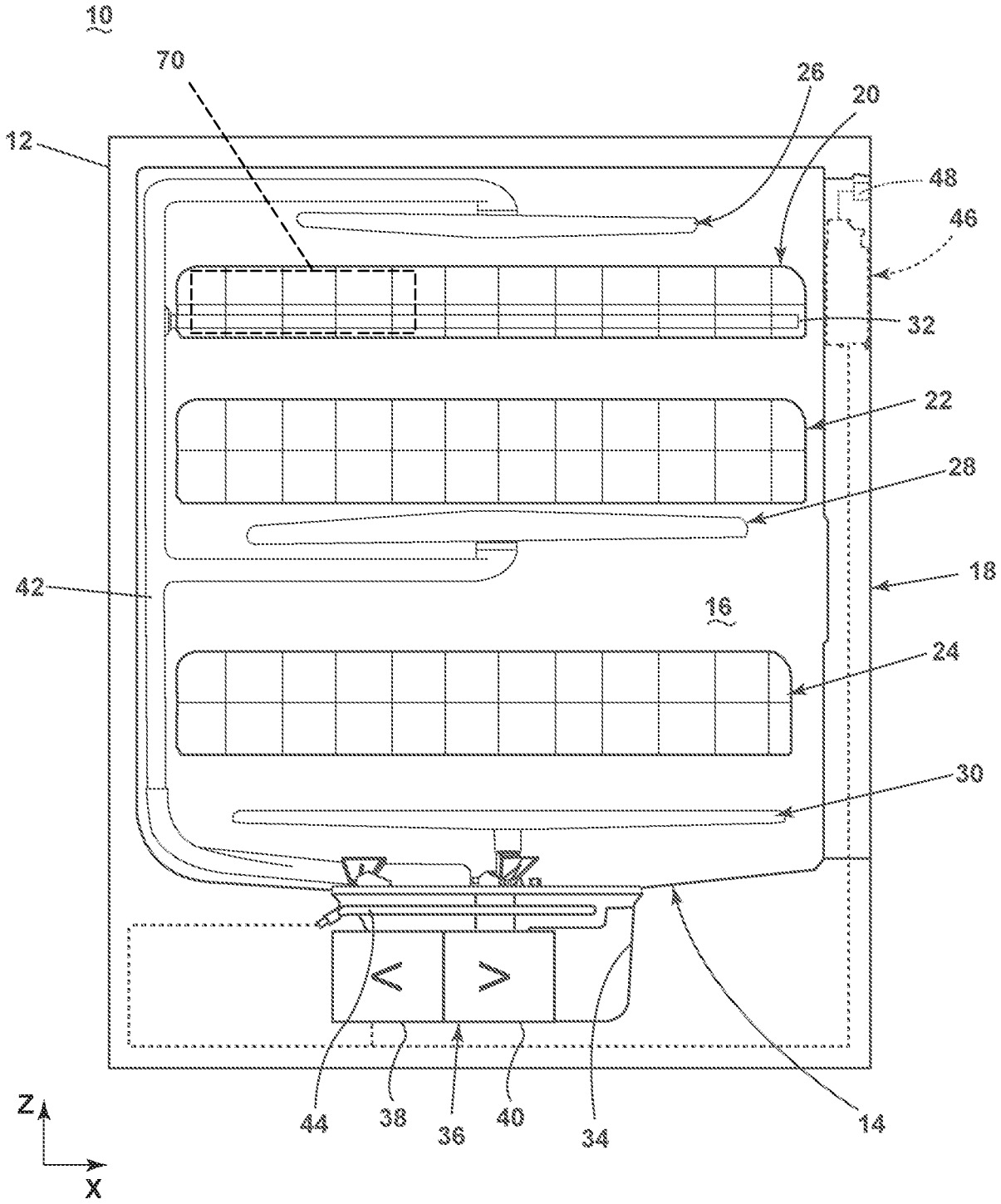


FIG. 1

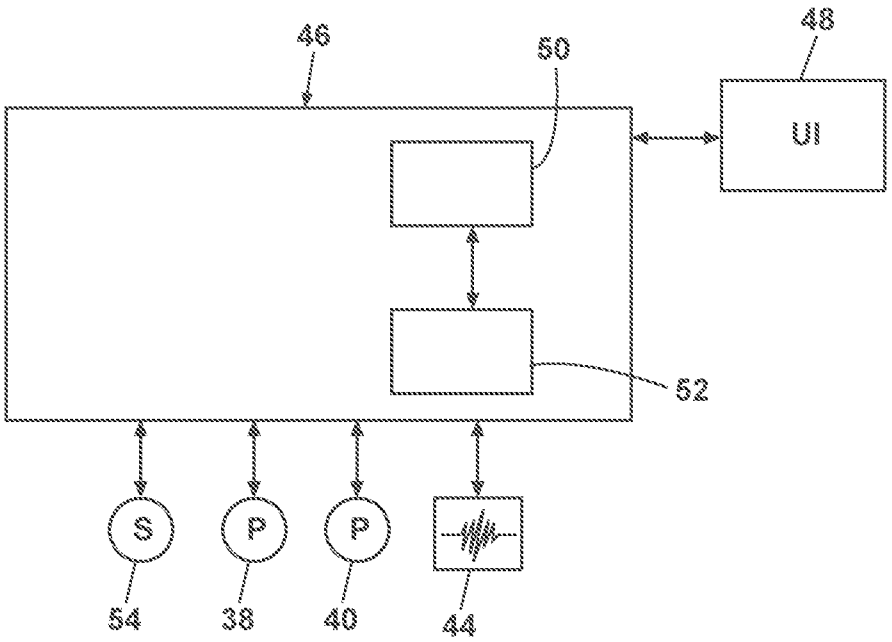


FIG. 2

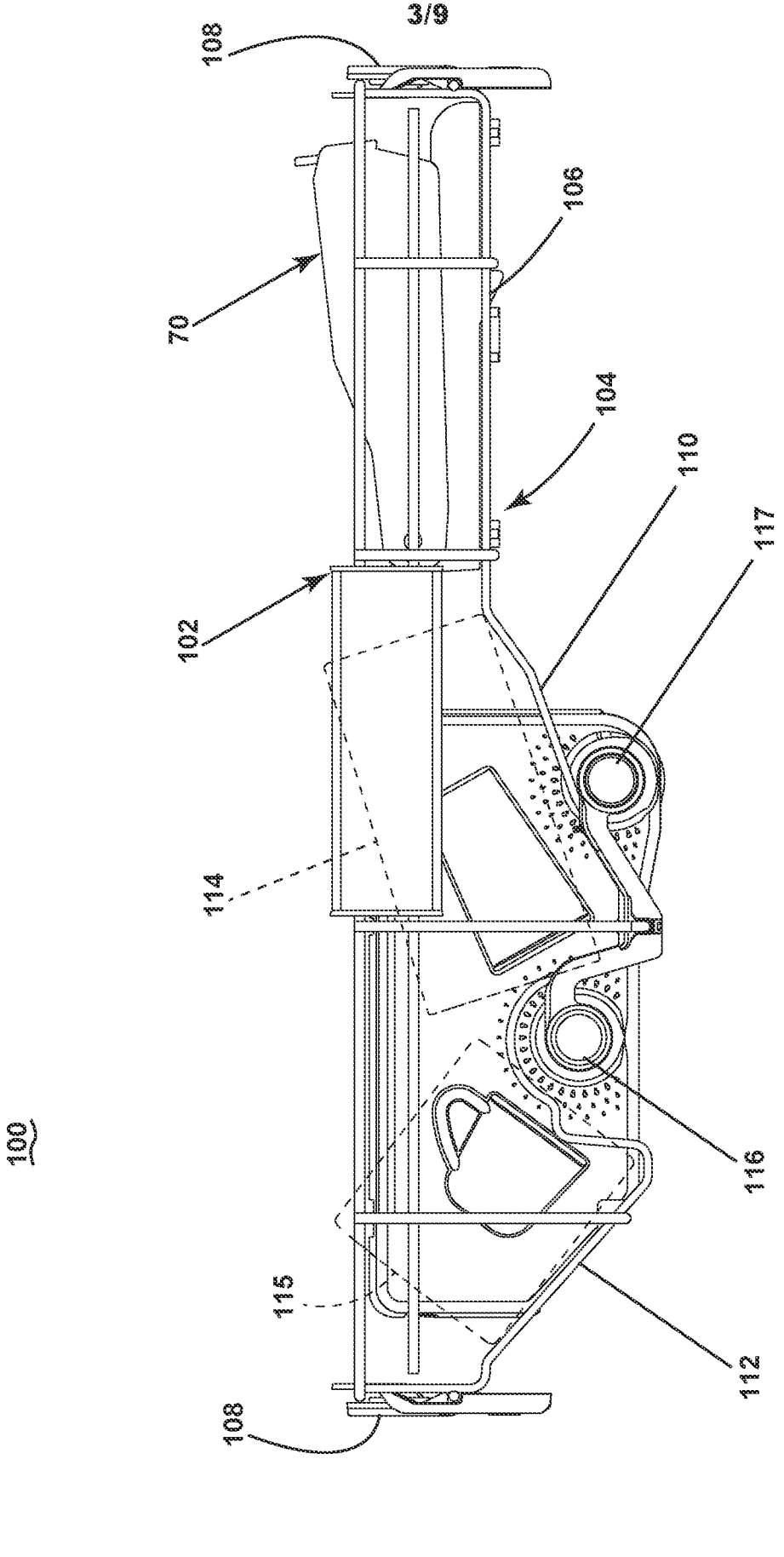


FIG. 3

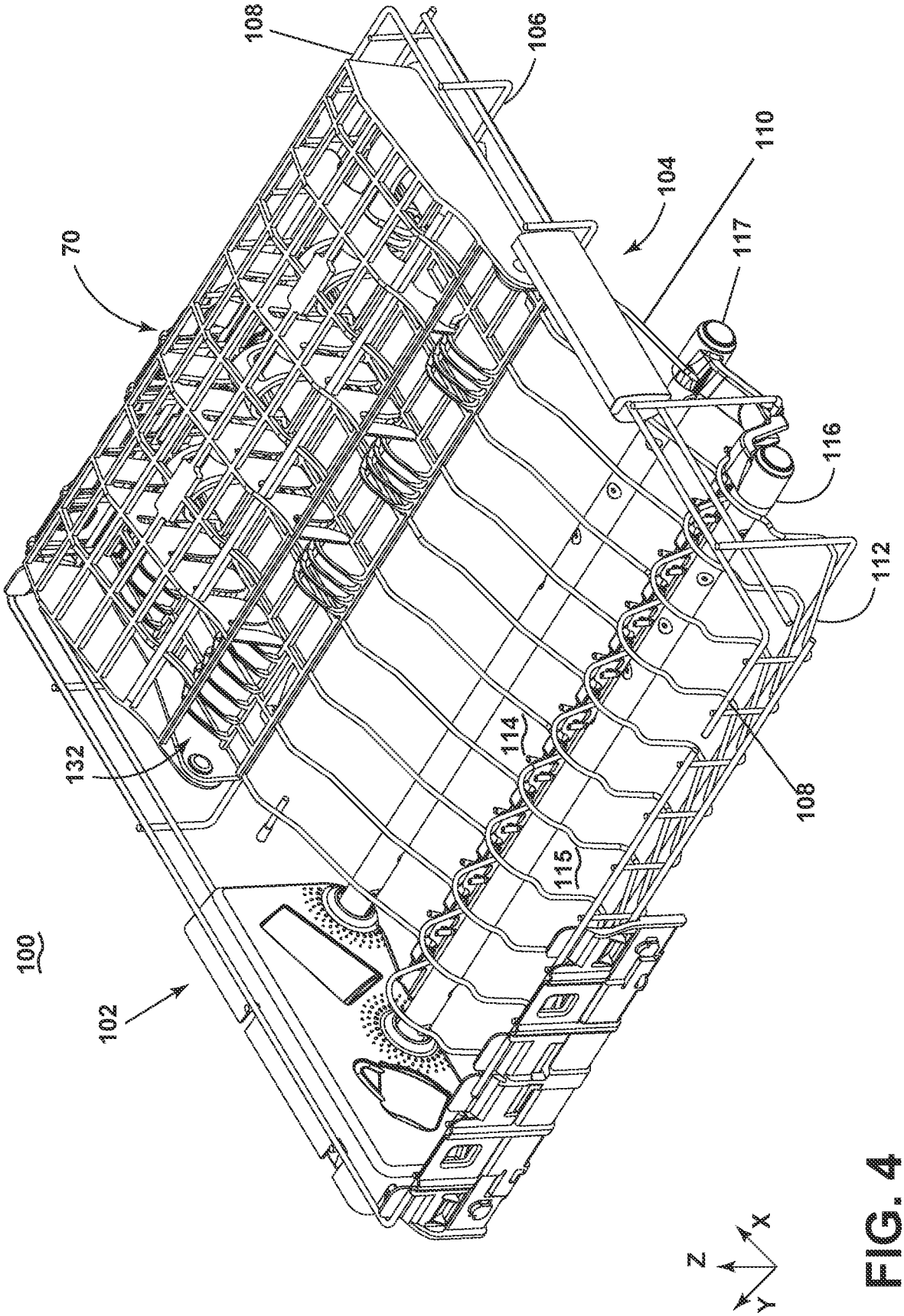


FIG. 4

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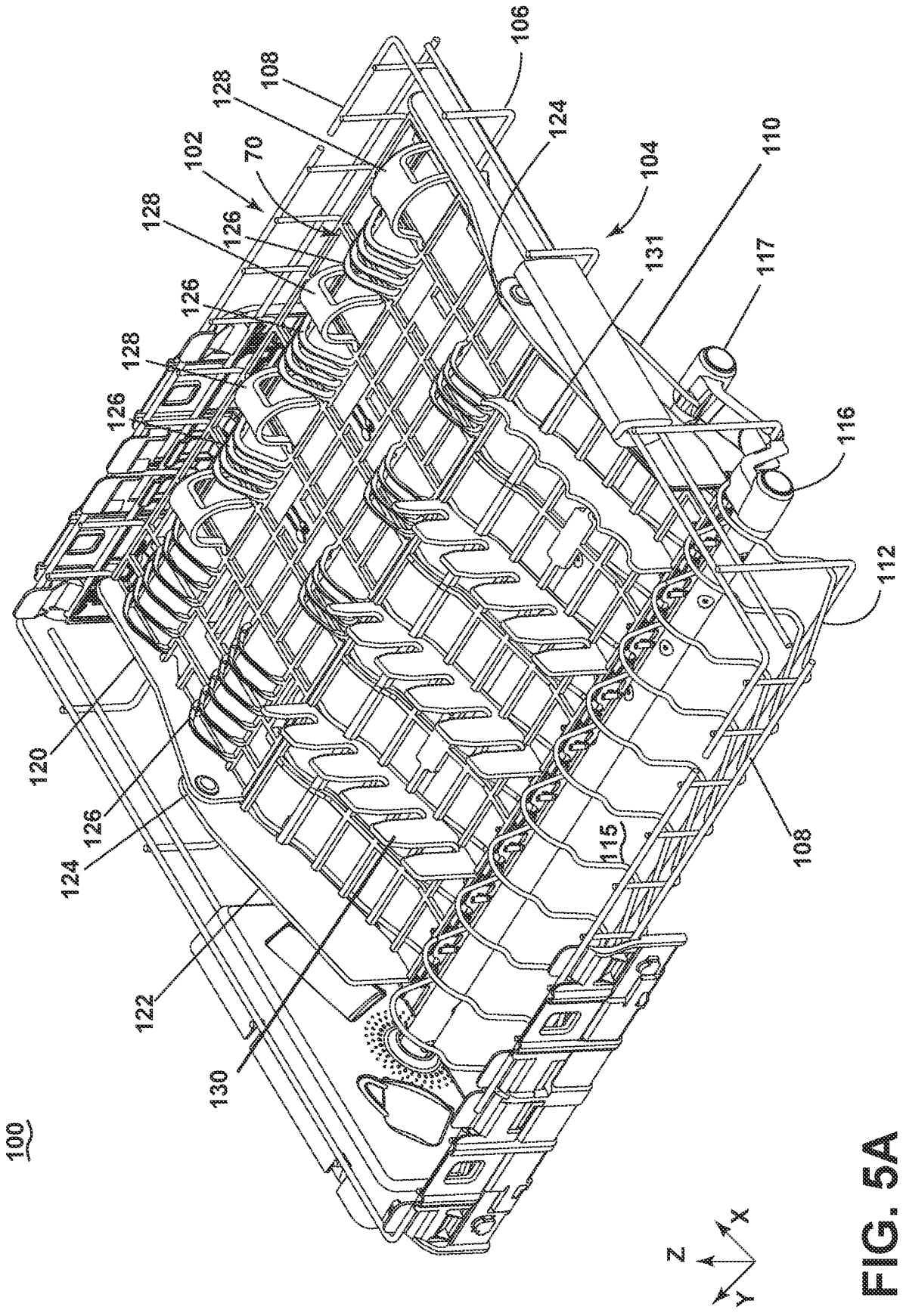


FIG. 5A

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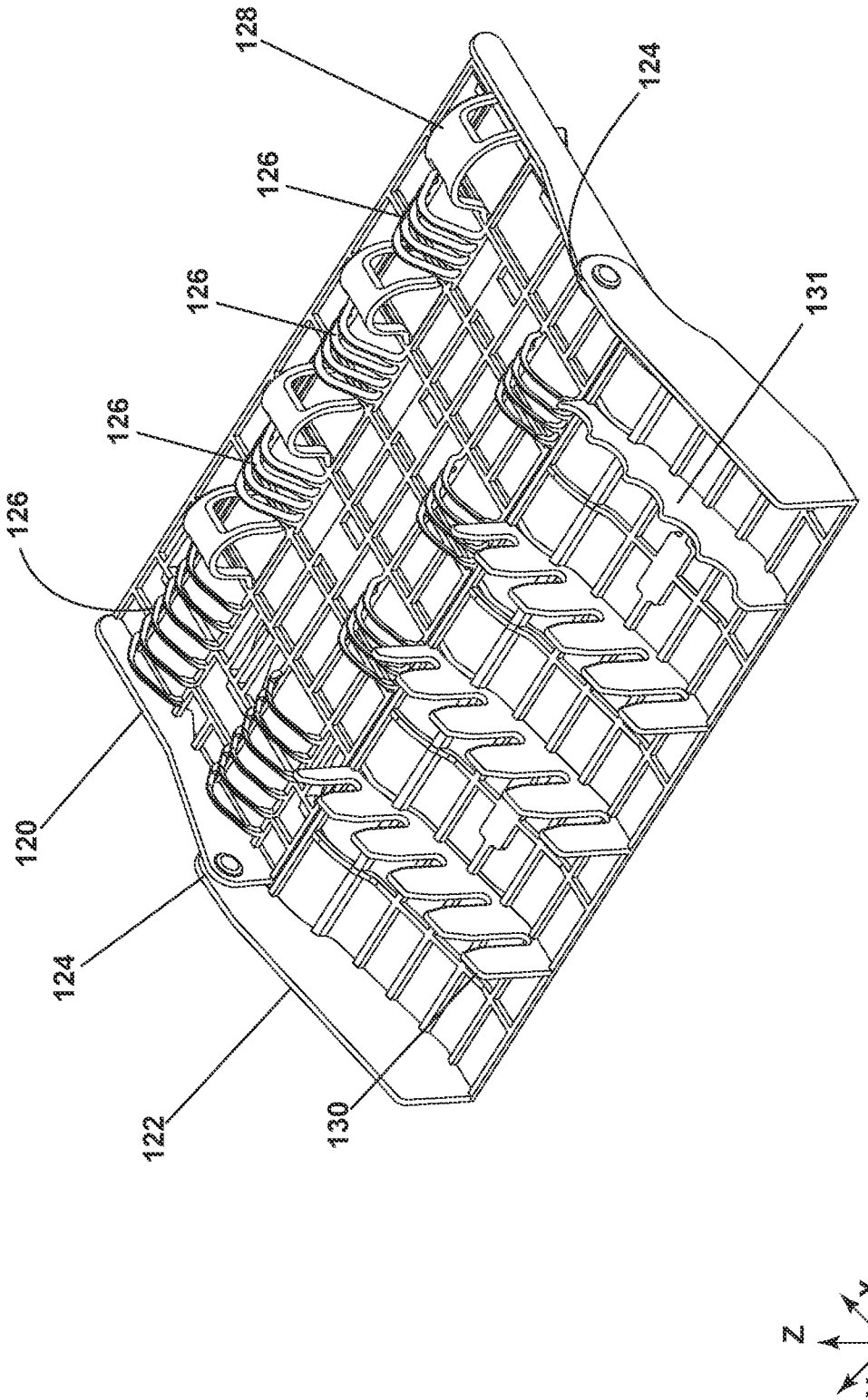


FIG. 5B

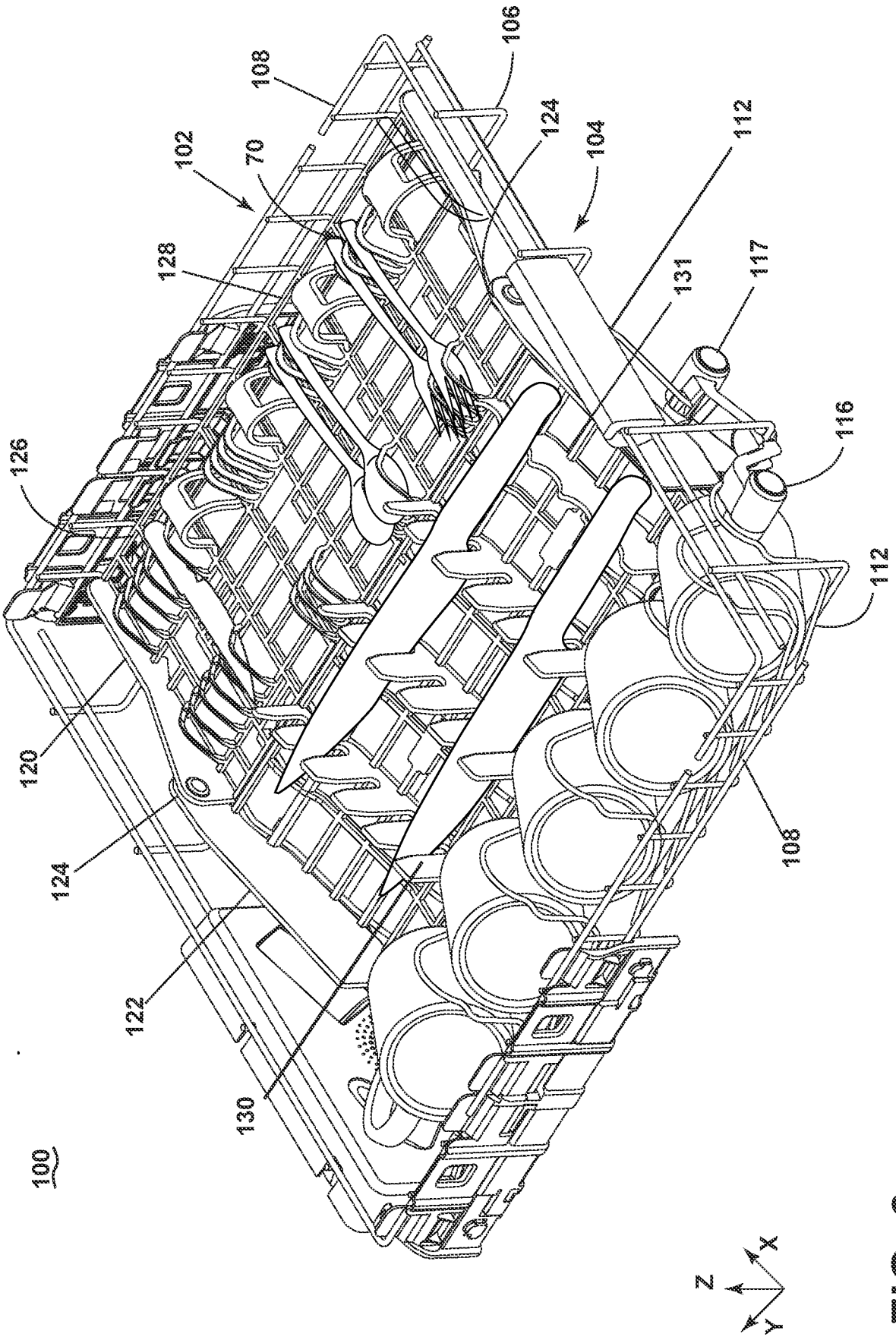


FIG. 6

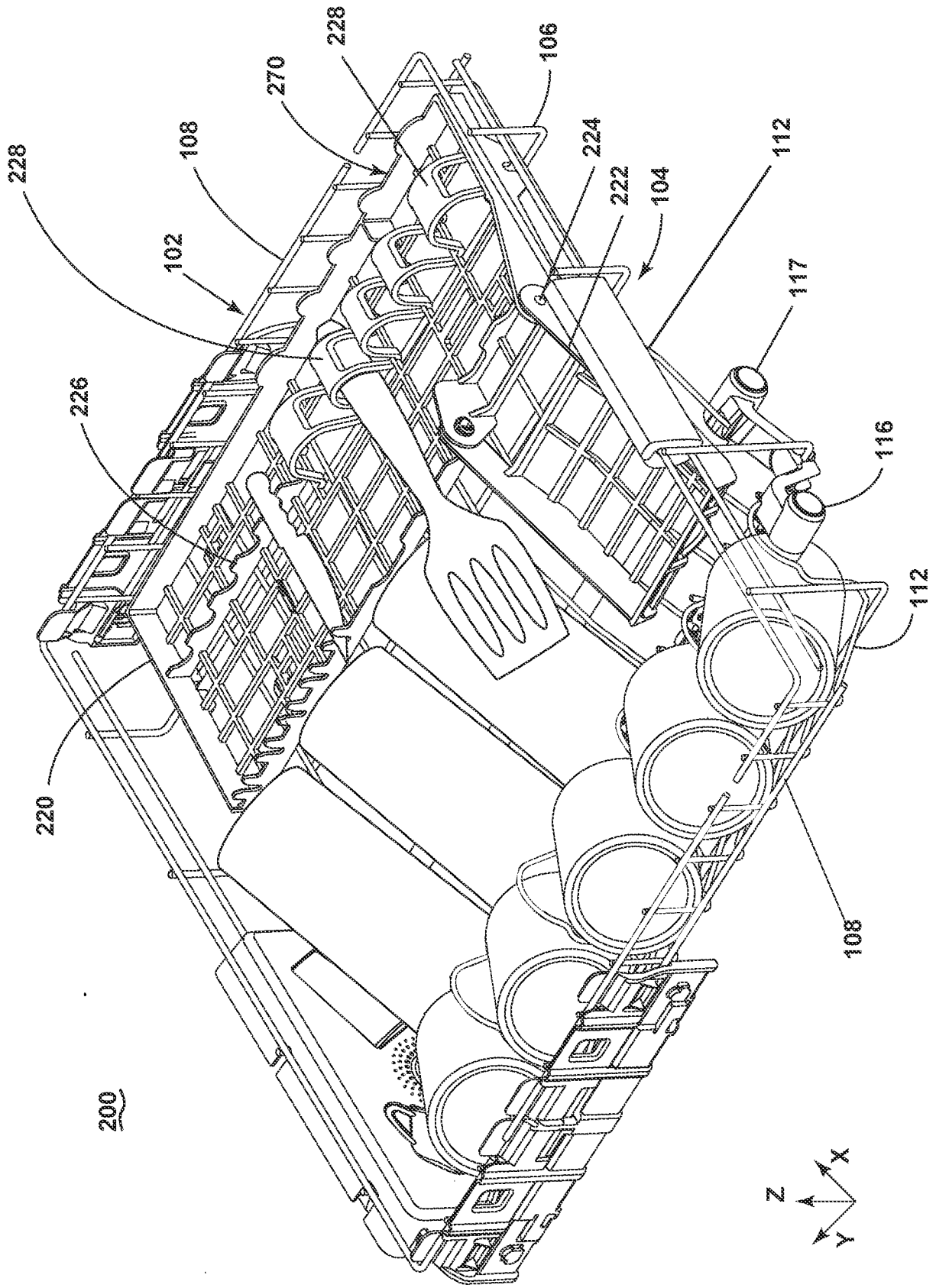

228
270
228
106
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104
102
117
226
116
112
220
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200
Z
X
Y

FIG. 7

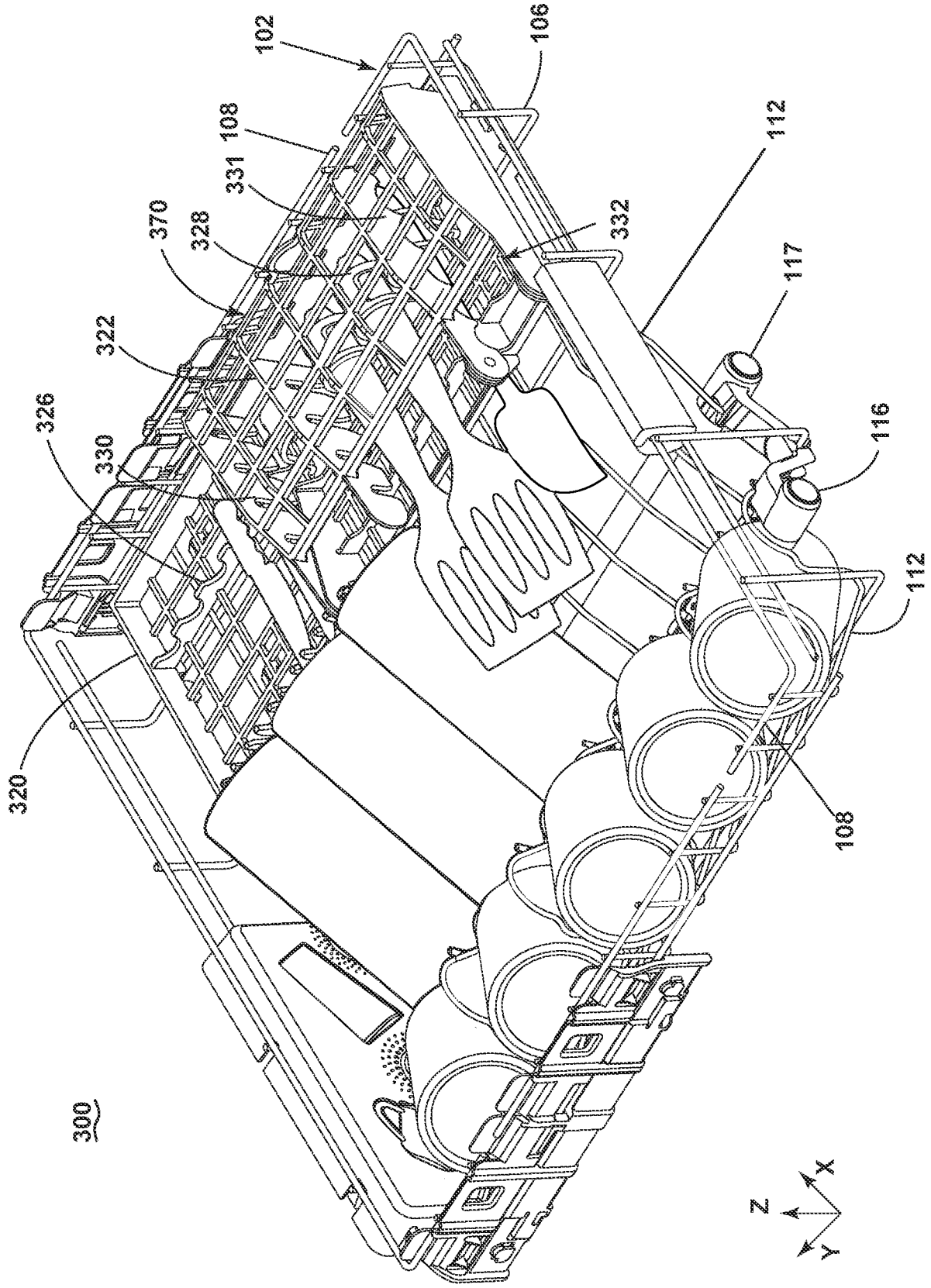

102
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112
117
116
112
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300
Z
X
Y

FIG. 8

COMBINED ASSIGNMENT AND DECLARATION FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET

☐ THIS DOCUMENT IS BEING SUBMITTED FOR DUAL PURPOSES

Title of Invention	DISHWASHER WITH A DISH RACK AND UTENSIL CADDY

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.

I hereby state that I reviewed and understand the contents of the above-identified specification, including the claims. I acknowledge the duty to disclose information material to patentability of this application in accordance with 37 C.F.R §1.56.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

WHEREAS, WHIRLPOOL CORPORATION (hereinafter referred to as "ASSIGNEE") having places of business at **2000 North M-63, Benton Harbor, Michigan 49022, U.S.A.** is desirous of acquiring the entire right, title and interest in and to said invention in the United States and throughout the world;

NOW, THEREFORE, in accord with my obligations by law and/or agreement, and/or for good and valuable consideration, the receipt and sufficiency of are hereby acknowledged, I (hereinafter referred to as "ASSIGNOR") hereby sell, assign and transfer unto said ASSIGNEE, the entire right, title and interest in and to said invention and application throughout the United States, including any and all United States Letters Patent granted on any division, continuation, continuation-in-part, reexamination and reissue of said application, and the entire right, title and interest in and to the said invention throughout the world, including the right to apply for patents and inventor certificates in respect thereof and to claim priority pursuant to rights accorded ASSIGNOR under terms of the Paris International Convention and all other available international conventions and treaties; and the entire right, title and interest in and to any and all patents, patents of addition, utility models, patents of importation, revalidation patents and inventor certificates which may be granted throughout the world in respect of said invention.

ALSO, ASSIGNOR hereby agrees to execute any documents that legally may be required in connection with the filing, prosecution and maintenance of said application or any other patent application(s) or inventor certificate(s) in the United States and in foreign countries for said invention, including additional documents that may be required to affirm the rights of ASSIGNEE in and to said invention, all without further consideration. ASSIGNOR also agrees, without further consideration but at no expense to ASSIGNOR, to identify and communicate to ASSIGNEE at ASSIGNEE'S request documents and information concerning the invention that are within ASSIGNOR'S possession or control and to provide further assurances and testimony on behalf of ASSIGNEE that lawfully may be required of ASSIGNOR in respect of the prosecution, maintenance and defense of any patent application or patent encompassed within the terms of this instrument. ASSIGNOR'S obligations under this instrument shall extend to ASSIGNOR'S heirs, executors, administrators and other legal representatives.

ASSIGNOR hereby authorizes and requests the Commissioner of Patents and Trademarks to issue any and all United States Letters Patent referred to above to ASSIGNEE, as the ASSIGNEE of the entire right, title and interest in and to the same, for ASSIGNEE'S sole use and behoof; and for the use and behoof of ASSIGNEE'S legal representatives and successors, to the full end of the term for which such Letters Patent may be granted, as fully and entirely as the same would have been held by ASSIGNOR had this agreement and sale not been made.

ASSIGNOR authorizes any member or representative of **WHIRLPOOL CORPORATION** to insert or complete any information in this document needed to effect its recordal in the U.S. Patent and Trademark Office.

LEGAL NAME OF INVENTOR

Inventor: **Mark S. Feddema** Signature: _____

Date: 3/26/2020

COMBINED ASSIGNMENT AND DECLARATION FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET

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

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NOW, THEREFORE, in accord with my obligations by law and/or agreement, and/or for good and valuable consideration, the receipt and sufficiency of are hereby acknowledged, I (hereinafter referred to as "ASSIGNOR") hereby sell, assign and transfer unto said ASSIGNEE, the entire right, title and interest in and to said invention and application throughout the United States, including any and all United States Letters Patent granted on any division, continuation, continuation-in-part, reexamination and reissue of said application; and the entire right, title and interest in and to the said invention throughout the world, including the right to apply for patents and inventor certificates in respect thereof and to claim priority pursuant to rights accorded ASSIGNOR under terms of the Paris International Convention and all other available international conventions and treaties; and the entire right, title and interest in and to any and all patents, patents of addition, utility models, patents of importation, revalidation patents and inventor certificates which may be granted throughout the world in respect of said invention.

ALSO, ASSIGNOR hereby agrees to execute any documents that legally may be required in connection with the filing, prosecution and maintenance of said application or any other patent application(s) or inventor certificate(s) in the United States and in foreign countries for said invention, including additional documents that may be required to affirm the rights of ASSIGNEE in and to said invention, all without further consideration. ASSIGNOR also agrees, without further consideration but at no expense to ASSIGNOR, to identify and communicate to ASSIGNEE at ASSIGNEE'S request documents and information concerning the invention that are within ASSIGNOR'S possession or control and to provide further assurances and testimony on behalf of ASSIGNEE that lawfully may be required of ASSIGNOR in respect of the prosecution, maintenance and defense of any patent application or patent encompassed within the terms of this instrument. ASSIGNOR'S obligations under this instrument shall extend to ASSIGNOR'S heirs, executors, administrators and other legal representatives.

ASSIGNOR hereby authorizes and requests the Commissioner of Patents and Trademarks to issue any and all United States Letters Patent referred to above to ASSIGNEE, as the ASSIGNEE of the entire right, title and interest in and to the same, for ASSIGNEE'S sole use and behoof; and for the use and behoof of ASSIGNEE'S legal representatives and successors, to the full end of the term for which such Letters Patent may be granted, as fully and entirely as the same would have been held by ASSIGNOR had this agreement and sale not been made.

ASSIGNOR authorizes any member or representative of **WHIRLPOOL CORPORATION** to insert or complete any information in this document needed to effect its recordal in the U.S. Patent and Trademark Office.

LEGAL NAME OF INVENTOR

Inventor: **William J. Snell** Signature: William J Snell

Date: 3/25/2020

COMBINED ASSIGNMENT AND DECLARATION FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET

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I hereby state that I reviewed and understand the contents of the above-identified specification, including the claims. I acknowledge the duty to disclose information material to patentability of this application in accordance with 37 C.F.R §1.56.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

WHEREAS, WHIRLPOOL CORPORATION (hereinafter referred to as "ASSIGNEE") having places of business at **2000 North M-63, Benton Harbor, Michigan 49022, U.S.A.** is desirous of acquiring the entire right, title and interest in and to said invention in the United States and throughout the world;

NOW, THEREFORE, in accord with my obligations by law and/or agreement, and/or for good and valuable consideration, the receipt and sufficiency of are hereby acknowledged, I (hereinafter referred to as "ASSIGNOR") hereby sell, assign and transfer unto said ASSIGNEE, the entire right, title and interest in and to said invention and application throughout the United States, including any and all United States Letters Patent granted on any division, continuation, continuation-in-part, reexamination and reissue of said application; and the entire right, title and interest in and to the said invention throughout the world, including the right to apply for patents and inventor certificates in respect thereof and to claim priority pursuant to rights accorded ASSIGNOR under terms of the Paris International Convention and all other available international conventions and treaties; and the entire right, title and interest in and to any and all patents, patents of addition, utility models, patents of importation, revalidation patents and inventor certificates which may be granted throughout the world in respect of said invention.

ALSO, ASSIGNOR hereby agrees to execute any documents that legally may be required in connection with the filing, prosecution and maintenance of said application or any other patent application(s) or inventor certificate(s) in the United States and in foreign countries for said invention, including additional documents that may be required to affirm the rights of ASSIGNEE in and to said invention, all without further consideration. ASSIGNOR also agrees, without further consideration but at no expense to ASSIGNOR, to identify and communicate to ASSIGNEE at ASSIGNEE'S request documents and information concerning the invention that are within ASSIGNOR'S possession or control and to provide further assurances and testimony on behalf of ASSIGNEE that lawfully may be required of ASSIGNOR in respect of the prosecution, maintenance and defense of any patent application or patent encompassed within the terms of this instrument. ASSIGNOR'S obligations under this instrument shall extend to ASSIGNOR'S heirs, executors, administrators and other legal representatives.

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ASSIGNOR authorizes any member or representative of WHIRLPOOL CORPORATION to insert or complete any information in this document needed to effect its recordal in the U.S. Patent and Trademark Office.

LEGAL NAME OF INVENTOR

Inventor: **Sachie Kakehi** Signature: Sachie Kakehi

Date: Mar 30, 2020

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APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
18/535,327	**12/11/2023 03:20:32 PM Z ET**	**SUB-13230-US-CON**

Title of Invention

DISHWASHER WITH A DISH RACK

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	8683	FILED BY	Marisa Stolsonburg
PATENT CENTER #	63564402	FILING DATE	-
CUSTOMER #	130348	FIRST NAMED INVENTOR	Mark S. Feddema
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	John Colligan

Documents

TOTAL DOCUMENTS: 10

DOCUMENT		PAGES	DESCRIPTION	SIZE (KB)
G1789163.pdf		9	Application Data Sheet	1227 KB
G1789165-APP.TEXT.docx		21	Application body structured text document	43 KB
G1793841.pdf		21	-	132 KB
G1793841-SPEC.pdf	(1-17)	17	Specification	124 KB
G1793841-CLM.pdf	(18-20)	3	Claims	76 KB
G1793841-ABST.pdf	(21-21)	1	Abstract	73 KB
G1789166.pdf		9	Drawings-other than black and	1301 KB

		white line drawings	
G1789167.pdf	3	Oath or Declaration filed	2957 KB
G1792274.pdf	2	Power of Attorney	164 KB
G1793868.pdf	1	Transmittal Letter	68 KB
G1789161.pdf	6	Information Disclosure Statement (IDS) Form (SB08)	1011 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
G1789163.pdf	118E158269805ECDFAC5DBF86439FA7FE4E5B8675B0B1809AF5E000CCED8E01CBB8C3BB7CDB0FB9CD0B30FBB99ED4FE51B3ED171E3F88666BD616F0A4051C084
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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 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.

DISHWASHER WITH A DISH RACK

CROSS-REFERNCE TO RELATED APPLICATIONS

[0001] This application is a continuation of U.S. Patent Application No. 17/830,947, filed on June 2, 2022, now allowed, which is a continuation of U.S. Patent Application No. 16/833,984, filed March 30, 2020, now U.S. Patent No. 11,375,874, issued July 5, 2022, both of which are incorporated herein by reference in their entirety.

TECHNICAL FIELD

[0002] This disclosure generally relates to a dishwasher, and more specifically to dishwasher including a utensil caddy mounted to a dish rack.

BACKGROUND

[0003] Household dishwashers typically include one or more dish racks for holding various types of dishes in the dishwasher tub. Traditionally, a dishwasher includes an upper dish rack that holds glassware and small dishes, and a lower dish rack that holds larger dishes, such as plates. The upper and lower dish racks usually consume most of the space inside the dishwasher tub. Some dishwashers can also include a third dish rack, often referred to as a third level rack, of a much shorter height the upper and lower dish racks, with the height being such as to only accommodate silverware or other low profile utensils.

[0004] A utensil caddy is often used to specifically hold silverware. Utensil caddies are normally removably carried by the lower dish rack or on the inner surface of the door closing the dishwasher. These utensil caddies are oriented such that they hold the utensils in an upright or vertical orientation during washing.

[0005] Some dishwashes can have both a utensil caddy and a third level rack. The third level rack can normally accommodate long handle items, such as spatulas, severing spoons, stirring spoons, which, if put into the utensil caddy, would extend far enough vertically to interfere with the rotation of the sprayer below the upper rack.

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SUMMARY

[0006] In one aspect, the present disclosure relates to an automatic dishwasher configured to implement an automatic treating cycle of operation. The dishwasher has a tub defining a dish treating chamber and a dish rack located within the dish treating chamber and comprising a bottom wall having a first portion defined by a substantially planar portion extending across a first portion of bottom wall and second portion defined by a depression portion extending across a second portion of bottom wall.

[0007] In another aspect, the present disclosure relates to an automatic dishwasher configured to implement an automatic treating cycle of operation. The dishwasher has a tub defining a dish treating chamber and a dish rack located within a top portion of the dish treating chamber, the dish rack having a first portion with a first vertical height and defining a utensil seat, and the dish rack having a second portion with a second vertical height and defining a cup seat, the second vertical height being greater than the first vertical height.

[0008] In another aspect, the present disclosure relates to an automatic dishwasher configured to implement an automatic treating cycle of operation. The dishwasher has a tub defining a dish treating chamber and a dish rack located within the dish treating chamber and comprising a bottom wall defining a first substantially planar portion extending across a portion of bottom wall and at least one of a second and third planar portion angled with respect to the first planar portion and defining a depression relative first planar portion.

BRIEF DESCRIPTION OF THE DRAWINGS

[0009] In the drawings:

[0010] FIG. 1 is a schematic, cross-sectional view of a dishwasher with a dish rack according to an aspect of the present disclosure.

[0011] FIG. 2 is a schematic diagram of a control system for the dishwasher of FIG. 1.

[0012] FIG. 3 is a side view of a dish rack assembly including the dish rack of FIG. 1 with a utensil caddy according aspects of the disclosure.

[0013] FIG. 4 is a perspective view of the utensil caddy of FIG. 3 in a first position according to aspects of the disclosure.

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[0014] FIG. 5A is a perspective view of the utensil caddy of FIG. 3 in a second position according to aspects of the disclosure.

[0015] FIG. 5B is a perspective view of the utensil caddy in the second position of FIG. 5a according to aspects of the disclosure.

[0016] FIG. 6 is a perspective view of the utensil caddy in the second position of FIG. 5 including utensils according to aspects of the disclosure

[0017] FIG. 7 is a perspective view of the dish rack including an exemplary utensil caddy of FIG. 3 which extends across a quarter of the dish rack assembly according to aspects of the disclosure.

[0018] FIG. 8 is a perspective view of the dish rack including an exemplary utensil caddy of FIG. 3 which extends across half of the dish rack assembly according to aspects of the disclosure.

DESCRIPTION OF EMBODIMENTS OF THE INVENTION

[0019] Aspects of the present disclosure relate to a utensil caddy including on a dish rack of dishwasher, specifically an automatic dishwasher. The utensil caddy can be configured to include, at least, a first side wall including a first set of utensil holders and a second side wall including a second set of utensil holders. The second side wall can be further configured to be moveable relative to the utensil caddy between a first position and a second position.

[0020] FIG. 1 illustrates a schematic, cross-sectional view of an exemplary dishwasher 10, specifically an automatic dishwasher, according to an embodiment of the present disclosure. The dishwasher 10 shares many features of a conventional automatic dishwasher, which will not be described in detail herein except as necessary for a complete understanding of the disclosure. While the present disclosure is described in terms of a conventional dishwashing unit, it can also be implemented in other types of dishwashing units, such, but not limited to, as in-sink dishwashers, multi-tub dishwashers, or drawer-type dishwashers. A chassis 12 can define an interior of the dishwasher 10 and can include a frame, with or without panels mounted to the frame. For built-in dishwashers, outer panels are typically not needed. For dishwashers that are not built into existing cabinetry, the chassis 12 can include the panels mounted to the frame to form a cabinet for the dishwasher 10. An open-faced tub 14 can be provided within the interior

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of and mounted to the chassis 12 and can at least partially define a treating chamber 16 or a dish treating chamber for washing or otherwise treating dishes. The open face of the tub 14 defines an access opening for the treating chamber 16.

[0021] A closure element, such as a door assembly 18, can be movably mounted to the dishwasher 10 for movement between opened and closed positions. The door assembly 18 can be configured selectively open and close the treating chamber access opening defined by the open face of the tub 14. Thus, the door assembly 18 provides accessibility to the treating chamber 16 for the loading and unloading of dishes or other washable items. It should be appreciated that the door assembly 18 can be secured to the lower front edge of the chassis 12 or to the lower front edge of the tub 14 via a hinge assembly (not shown) configured to pivot the door assembly 18. When the door assembly 18 is closed, user access to the treating chamber 16 can be prevented, whereas user access to the treating chamber 16 can be permitted when the door assembly 18 is open. Alternatively, the closure element can be slidable relative to the chassis 12, such as in a drawer-type dishwasher, wherein the access opening for the treating chamber 16 is formed by an open-top tub. Other configurations of the closure element relative to the chassis 12 and the tub 14 are also within the scope of the disclosure.

[0022] Dish holders, illustrated in the form of an upper dish rack 22, a lower dish rack 24, and a third level rack 20, can be located within the treating chamber 16 and receive dishes for treatment, such as washing. The third level, upper, and lower dish racks 20, 22, 24 can be vertically oriented with respect to one another. That is, third level, upper, and lower dish racks 20, 22, 24 can be spaced from one another in a vertical direction denoted by a Z-axis. The third level, upper, and lower dish racks 20, 22, 24 are typically mounted for slidable movement in and out of the treating chamber 16 for ease of loading and unloading. Other dish holders can be provided, such as a silverware basket, separate from or combined with third level, upper, and lower dish racks 20, 22, 24. As used in this description, the term "dish(es)" is intended to be generic to any item, single or plural, that may be treated in the dishwasher 10, including, without limitation, dishes, plates, pots, bowls, pans, glassware, and silverware. While the dishwasher 10 is illustrated herein as having three dish racks 20, 22, 24, it will be understood that any suitable number and configuration of dish racks is also within the scope of the disclosure.

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[0023] A utensil caddy 70 can be included with the third level rack 20. Specifically, the utensil caddy 70 can be provided on a lateral side of third level dish rack 20. As used herein, the term lateral can denote any direction corresponding to the X-axis. The utensil caddy 70 can be configured to hold a set of utensils so they can be treated within the treating chamber 16. As used herein, the term utensil can refer to any implement, article or container suitable for treatment within the treating chamber 16. For example, the set of utensils can include, but is not limited to, a spoon, a fork, a spork, a knife, a spatula, a baby-bottle nipple, a measuring spoon, a ladle, a tong, or the like. It will be appreciated that there can be any number of one or more utensil caddy's 70 within the treating chamber 16 and included with any of the third level, upper, and lower dish racks 20, 22, 24.

[0024] A spray system can be provided for spraying liquid in the treating chamber 16 and may be provided in the form of, for example, an upper spray assembly 26, a middle spray assembly 28, and a lower spray assembly 30. The upper spray assembly 26, the middle spray assembly 28, and the lower spray assembly 30 are located, respectively, above the third level dish rack 20, beneath the upper dish rack 22, and beneath the lower dish rack 24 and are illustrated as rotating spray arms by example but are not limited to such positions and sprayer type. The spray system can further include a rack spray assembly 32 coupled to the third level dish rack 20; the rack spray assembly 32 will be discussed in further detail below. Furthermore, the spray system can include additional and/or alternative spray assemblies. For example, a distribution header or spray manifold can be located at the rear of the tub 14 at any vertical position. An exemplary spray manifold is set forth in detail in U.S. Patent No. 7,594,513, issued September 29, 2009, and titled "Multiple Wash Zone Dishwasher," which is incorporated herein by reference in its entirety.

[0025] A recirculation system can be provided for recirculating liquid from the treating chamber 16 to the spray system. The recirculation system can include a sump 34 and a pump assembly 36. The sump 34 collects the liquid sprayed in the treating chamber 16 and can be formed by a sloped or recess portion of a bottom wall of the tub 14. The pump assembly 36 can include both a drain pump 38 and a recirculation pump 40. The drain pump 38 can draw liquid from the sump 34 and pump the liquid out of the dishwasher 10 to a household drain line (not

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shown). The recirculation pump 40 can draw liquid from the sump 34, and the liquid can be simultaneously or selectively pumped through a supply conduit or tube 42 to each of the upper, middle, lower, and rack spray assemblies 26, 28, 30, 32 for selective spraying. The liquid supply tube 42 extends along a wall of the tub 14 and fluidly connect the pump assembly 36 to the upper, middle, lower, and rack spray assemblies 26, 28, 30, 32. While not shown, a liquid supply system can include a water supply conduit coupled with a household water supply for supplying water to the treating chamber 16.

[0026] While the pump assembly 36 is illustrated herein as having separate drain and recirculation pumps 38, 40, in an alternative embodiment, the pump assembly 36 can include a single pump configured to selectively supply wash liquid to either the spray system or the drain line, such as by configuring the pump to rotate in opposite directions, or by providing a suitable valve system.

[0027] A heating system including a heater 44 can be located, for example, within the sump 34 for heating the liquid contained in the sump 34. The heater 44 can also heat air contained in the treating chamber 16. Alternatively, a separate heating element (not shown) can be provided for heating the air circulated through the treating chamber 16. A filtering system (not shown) can be fluidly coupled with the recirculation flow path for filtering the recirculated liquid.

[0028] A control system including a controller 46 can also be included in the dishwasher 10, which can be operably coupled with various components of the dishwasher 10 to implement a cycle of operation. The controller 46 can be located within the door assembly 18 as illustrated, or it can alternatively be located somewhere within the chassis 12. The controller 46 can also be operably coupled with a control panel or user interface 48 for receiving user-selected inputs and communicating information to the user. The user interface 48 can include operational controls such as dials, lights, switches, and displays enabling a user to input commands, such as a cycle of operation, to the controller 46 and receive information.

[0029] FIG. 2 is a schematic illustration of the controller 46 of FIG. 1. The controller 46 can be coupled with the heater 44 for heating the wash liquid during a cycle of operation, the drain pump 38 for draining liquid from the treating chamber 16, and the recirculation pump 40 for recirculating the wash liquid during the cycle of operation. The controller 46 can be provided

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with a memory 50 and a central processing unit (CPU) 52. The memory 50 can be used for storing control software that can be executed by the CPU 52 in completing an automatic cycle of operation using the dishwasher 10 and any additional software. For example, the memory 50 can store one or more pre-programmed cycles of operation that can be selected by a user and completed by the dishwasher 10. A cycle of operation for the dishwasher 10 can include one or more of the following steps: a wash step, a rinse step, and a drying step. The wash step can further include a pre-wash step and a main wash step. The rinse step can also include multiple steps such as one or more additional rinsing steps performed in addition to a first rinsing. The amounts of water and/or rinse aid used during each of the multiple rinse steps can be varied. The drying step can have a non-heated drying step (so called "air only"), a heated drying step or a combination thereof. These multiple steps can also be performed by the dishwasher 10 in any desired combination.

[0030] The controller 46 can also receive input from one or more sensors 54. Non-limiting examples of sensors that can be communicably coupled with the controller 46 include a temperature sensor and turbidity sensor to determine the soil load associated with a selected grouping of dishes, such as the dishes associated with a particular area of the treating chamber 16.

[0031] The dishwasher 10 can include all of the above exemplary systems, a selection of the above exemplary systems, and/or other systems not listed above as desired. Further, some of the systems can be combined with other systems and/or can share components with other systems. Examples of other systems that the dishwasher can further include are a dispensing system that supplies one or more treating agents or chemistries to the treating chamber 16 and an air supply system that can provide air, which can be heated or not heated, to the treating chamber 16, such as for drying and/or cooling the dishes. An exemplary air supply system is set forth in U.S. Patent Application No. 12/959,673, filed December 3, 2010 and published as U.S. Patent Application Publication No. 2012/0138106 on June 7, 2012, both of which are incorporated herein by reference in their entireties.

[0032] FIG. 3 illustrates a side view of a dish rack assembly 100 including the utensil caddy 70 of FIG. 1 and a dish rack 102. It will be appreciated that the dish rack assembly 100 can

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include any dish rack 102 as described herein. For example, the dish rack 102 can be any of the upper or lower dish racks 22, 24, or the third level rack 20.

[0033] The dish rack 102 has a wire frame construction forming a bottom wall 104 from which extends a peripheral wall 108 defining the sides of the dishrack. The bottom wall 104 and peripheral wall 108 define an interior where utensils and the like can be placed for washing.

[0034] While the bottom wall 104 can have any shape, including planar, the bottom wall 104 is illustrated as having a planar portion 106 and a depression defined by a first and second angled wall 110, 112. The depression, as illustrated, forms a first set of cup seats 114 and a second set of cup seats 115, which hold cups as illustrated.

[0035] The bottom wall 104 can define multiple planes. For example, the planar portion 106 can define a first plane transverse to the X-axis, while the first angled wall 110 can define a second plane and the second angled wall 112 can define a third plane. The second and the third planes can both be angled with respect to the X-axis such that they intersect with the first plane. Specifically, the second plane can intersect the first plan at the point where the planar portion 106 and the first angled wall 110 meet.

[0036] A spray assembly is carried by the dish rack 102 and includes first and second sprayers 116, 117, with the first sprayer 116 located between the first and second set of cup seats 114, 115 to emit a spray into the open top of the cups, and the second sprayer 117 located to emit a spray into the planar portion 106.

[0037] The utensil caddy 70 can be received within a region of the dish rack 102 adjacent to a portion of the bottom wall 104, specifically the planar portion 106. It is contemplated that the utensil caddy 70 can be removably mounted to a portion of the dish rack 102, specifically the planar portion 106. As such, the utensil caddy 70 can be moved to other portions of the dish rack 102 or to another dish rack 102 altogether. Alternatively, at least a portion of the utensil caddy 70 can be integrally formed with the planar portion 106 and hence the dish rack 102. It is further contemplated that the utensil caddy 70 can be laid on its side or otherwise be defend as a horizontal utensil caddy such that utensils can be received within the utensil caddy 70 in a horizontal fashion transverse to the X-axis. Traditional utensil caddies, on the other hand, are

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vertically mounted such that they can be defined as a vertical utensil caddy. As such, utensils can be received within the vertical utensil caddy in a vertical fashion transverse to the Z-axis.

[0038] FIG. 4 is a perspective view of the dish rack assembly 100 of FIG. 3 including the utensil caddy 70 in a first position. As used herein, the first position can be defined as a closed configuration of the utensil caddy 70 where at least a portion of the utensil caddy 70 abuts a portion of the bottom wall 104 and does not abut the first angled wall 110. As illustrated, the first and second set of cup seats 114, 115, the first and second sprayers 116, 117, and the utensil caddy 70 can extend along the entirety of the dish rack 102 along the Z-axis.

[0039] The utensil caddy 70 can include a periphery defining an interior with an open top 132. The open top 132 can be defined as a portion of the utensil caddy 70 in which utensils can be passed through. The open top 132 can lie at a junction point between the first plane of the planar portion 106 and the second plane of the first angled wall 110.

[0040] FIG. 5A is a perspective view of the dish rack assembly 100 of FIG. 3 including the utensil caddy 70 in a second position. The second position can be defined as an open configuration of the utensil caddy 70 where at least a portion of the utensil caddy 70 is carried by, received on, or abuts a portion of the bottom wall 104, specifically the first angled portion 112 as illustrated. It will be appreciated that the utensil caddy 70 can be advantageously shaped so that a portion of the utensil caddy 70 can transition from the closed or first position to the opened or second position and conform with the first angled wall 110.

[0041] FIG. 5B is a perspective view of the utensil caddy 70 in the second position of FIG. 5A without the dish rack 102. The utensil caddy 70 can include a first side wall 120, a second side wall 122, and a set of hinges 124.

[0042] The first side wall 120 can rest on, be directly coupled to, or form a portion of the bottom wall 104 of the dish rack 102, specifically, the planar portion 106. The first side wall 120 can include a first set of utensil holders illustrated as a set of utensil seats 126 or loops 128. The utensil holders can be configured to retain or hold a set of utensils such as, but not limited to, spoons, forks, sporks, knives, ladles, spatulas, or the like. Specifically, the set of utensil seats 126 can be configured to hold smaller utensils (e.g., spoons, forks, sporks, etc.) while the loops 128 can be configured to hold larger utensils (e.g., spatulas, ladles, whisks, etc.). Although illustrated

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as four separate loops 128 and four sets of utensil seats 126, it will be appreciated that there can be any number of loops 128 or utensil seats 126 provided on the first side wall 120. It will be further appreciated, that one or more of the sets of utensils seats 126 can be provided between adjacent loops 128 as illustrated.

[0043] The second side wall 122 can be configured to rotate along the Y-axis about the set of hinges 124 and with respect to the first side wall 120. As such, the second side wall 122 can be moveable between the first position where at least a portion of the second side wall 122 abuts the first side wall 120, and the second position where at least a portion of the second side wall 122 rests against or abuts the bottom wall 104, specifically against the first angled portion 112. As illustrated, the second side wall 122 can overlie the entire first set of cup seats 114 and not overlie the second set of cup seats 115 when in the second position.

[0044] The second side wall 122 can further include a second set of utensil holders illustrated as a pin 130 and a seat 131. The pin 130 can be formed as a triangular projection extending from a surface while the seat 131 can be formed as a curved projection of the second side wall 122. A space or slot can be included between adjacent pins 130. As such, the slot can be configured to accept the blade of a knife while the seat 131 accept the handle of the knife, as illustrated. Additionally, or alternatively, the utensil holders of the second side wall 122 can be configured to hold the any suitable utensils such as, but not limited to, a spatula, a ladle, or the like.

[0045] The first side wall 120 and the second side wall 122 can be coupled together through the set of hinges 124, specifically two hinges 124 provided on either distal end of the utensil caddy 70 along the Y-Axis. The set of hinges 124 can act as a method of coupling or a point of connection between first side wall 120 and the second side wall 122 and also provide for rotational movement about the Y-Axis for the second side wall 122 with respect to the first side wall 120. As such, the second side wall 122 can pivot from the first position to the second position.

[0046] FIG. 6 is a perspective view of the dish rack assembly 100 of FIG. 3 in the first position and including various sets of utensils received within the utensil caddy 70 in the first position. As illustrated, a set of cups is received within the first set of cup seats 114, and a set of mugs is received within the second set of cup seats 115. Further, a set of utensils are received

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within the utensil caddy 70, specifically, a set of knives, forks, and spoons are received within the set of utensil seats 126 and a set of larger knives are received within the second utensil holders, specifically the pins 130 and the seats 131. It will be appreciated, however, that other such as sporks, measuring cups, or the like can be received within the utensil seats 126 and larger utensils such as spatulas, ladles, or the like can be received within the loops 128. It will be further appreciated that although illustrated as cups and mugs either the first or the second set of cup seats 114, 115 can receive other objects to be treated within the treating chamber 16 such as, but not limited to, baby bottles, plates, bowls, pans, or the like.

[0047] A diffuser section can be included within a portion of the utensil caddy 70, specifically a portion of the second side wall 122. The diffuser section can be defined as a portion of the utensil caddy 70 which directly contacts a stream of water from one or more of the first and second sprayers 116, 117. The stream of water emitted from the first and second sprayers 116, 117 can, in some instances, be defined as a straight-line stream of water. This straight-line stream of water can be used to effectively clean targeted portions of various utensils, cups, mugs, or plates within the treating chamber 16. It is contemplated, however, that placing a portion of the utensil caddy 70, specifically the diffuser section on the second side wall 122, in the path of the stream of water can diffuse the stream of water outward to form a fan pattern covering a larger area than the straight-line stream can be more effective at cleaning various utensils. For example, if it is desired to clean a spatula or other utensils with a large surface area, at least a portion of the stream of water from the first and second sprayers 116, 117 that is directed toward the spatula can impact the diffuser region of the utensil caddy 70. Once the stream of water hits the diffuser section, the stream of water can fan-out or form a cone-shaped spray area which can cover a larger surface area than the straight-line stream of water. This, in turn, can be more effective in cleaning utensils on the utensil caddy 70 which have a large surface area than through the use of non-diffused, straight-line stream of water.

[0048] In operation, the first and second sprayers 116, 117 or any other sprayer within the treating chamber 16 (e.g., upper, lower, or middle spray assemblies 26, 28, 30) can be configured to treat a set of utensils within a spray zone created by the sprayers. As used herein, the term spray zone can be defined as a region or section within the treating chamber which

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receives a direct or indirect flow of treating fluid. As such, utensils, cups, plates, or the like, placed within the spray zone will be washed or treated. The utensil caddy 70 can be placed in either the first or second position depending on the utensils which need to be treated. For example, if it is desired to clean a set of mugs and a set of cups, the utensil caddy 70 can be positioned in the first position such that cups and mugs can be placed within the first and second sets of cup seats 114, 115 as illustrated in FIG. 6. On the other hand, if it is desired to clean a set of utensils, the utensil caddy 70 can be positioned in the second position and a set of utensils can be placed within the respective utensil holders or seats, as illustrated in FIG. 6. It is further contemplated that when the utensil caddy 70 is positioned in the second position that only the first set of cup seats 114 are covered by the second side wall 122. As such, cups or mugs can still be received within the second set of cup seats 115.

[0049] FIG. 7 is a perspective view of a dish rack assembly 200. The dish rack assembly 200 is similar to the dish rack assembly 100; therefore, like parts will be identified by like numerals in the 200 series, with it being understood that the description of the like parts of the dish rack assembly 100 applies to the dish rack assembly 200 unless otherwise noted.

[0050] The dish rack assembly 200 includes a utensil caddy 270 which includes a second side wall 222 similar to the second side wall 122 except the overall length along the Y-axis of the second side wall 222 is smaller than the overall length of a first side wall 220 along the Y-axis. Specifically, the second side wall 222 is configured to have an overall length that is a quarter of the overall length of the first side wall 220. As such, when the utensil caddy 270 is in the second position as illustrated, an uncovered portion or an opening is formed within the first set of cup seats 114. This, in turn, ensures that at least a portion of the first set of cup seats 114 are free or open regardless of whether the utensil caddy 270 is in the first position or the second position.

[0051] The second side wall 222 can be configured to hold smaller, more delicate utensils than the second side wall 122. For example, the second side wall 222 can be configured to hold baby bottle nipples, caps, burrs, or the like. Additionally, or alternatively, the second side wall 222 can include a utensil holder similar to a utensil loop 228 or a utensil seat 226 to hold a set of utensils.

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[0052] FIG. 9 is a perspective view of a dish rack assembly 300. The dish rack assembly 300 is similar to the dish rack assembly 100, 200; therefore, like parts will be identified by like numerals in the 300 series, with it being understood that the description of the like parts of the dish rack assembly 100, 200 applies to the dish rack assembly 300 unless otherwise noted.

[0053] The dish rack assembly 300 includes a utensil caddy 370 which includes a second side wall 322 similar to the second side wall 122, 222 except that the second side wall 322 includes an overall length along the Y-axis that is half the overall length of a first side wall 320 along the Y-axis. This is similar to the second side wall 222 in that a portion of the first set of cup seats 114 are free or open regardless of whether the utensil caddy 370 is in the first position or the second position. However, the second side wall 322 includes the overall length of half the overall length of the first side wall 320. This, in turn, allows for larger utensils, such as large knives, to be mounted on the second side wall 322 when the utensil caddy 370 is in the second position while still allowing for at least a portion of the first set of cup seats 114 to be open regardless of the position of the utensil caddy 370.

[0054] A set of loops 328 can be provided on the first side wall 320 such that a set of larger utensils, illustrated as three spatulas, can be secured within the utensil caddy 370. It is contemplated, that a set of larger utensils can be secured by the set of loops 328 regardless of whether the utensil caddy 370 is in the first position or the second position. As illustrated, the utensil caddy 370 is in the first position such that a portion of the larger utensils extend beyond the utensil caddy along the X-axis.

[0055] Benefits of the present disclosure include a dish rack assembly which is more versatile when compared to traditional dish rack assemblies. For example, traditional dish rack assemblies can include a vertical utensil caddy in a fixed position on the dish rack and a set of cup seats. Utensils can be secured within the utensil caddy while cups and mugs can be provided within the cup seats. The set of cup seats, however, are not configured to receive a set of utensils, so in cases where it is desired to treat a large amount of utensils there may not be adequate space to secure the utensils. The utensil caddy as disclosed herein, however, can be further as a horizontal utensil caddy in that utensils can be horizontally placed within the utensil caddy through the open top when the utensil caddy is in the first position and be laid horizontally across

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either the first or second side walls when the utensil caddy is in the second position. This allows for a more versatile dish rack assembly as the utensil caddy can be in either the first position or the second position depending on the utensils which are desired to be treated. For example, if a large amount of cups or mugs are desired to be treated, the utensil caddy can be positioned in the first position such that all the cup seats are opened. If, on the other hand, it is desired to treat a large amount of utensils, the utensil caddy can be positioned in the second position and allow for a larger amount of utensils to be secured by the first and second side walls.

[0056] Further benefits of this disclosure include the dish rack assembly, specifically the utensil caddy, with an improved washing efficiency of utensils when compared to traditional vertical utensil caddies. For example, in traditional vertical utensil caddies receive or secure the utensils in a vertical fashion. This, in turn, can place portions of the utensils out of the spray zone such that they are not as effectively cleaned. The utensil caddy as described herein, however, ensures that all of the utensils are horizontally secured and that all portions of the utensils which need to be treated are within the spray zone. Further, the utensil caddy can include a diffuser section which can diffuse the streams of water from the sprayers and effectively cover a larger surface area for the treating fluid or water to reach. As such, the washing efficiency of the utensils placed or secured within the utensil caddy can be improved when compared to the traditional vertical utensil caddies.

[0057] It will also be understood that various changes and/or modifications can be made without departing from the spirit of the present disclosure. By way of non-limiting example, although the present disclosure is described for use with a wire dish rack, it will be recognized that the rack height adjustment assembly can be employed with various rack constructions, including molded racks, such as racks molded of plastic.

[0058] To the extent not already described, the different features and structures of the various embodiments may be used in combination with each other as desired. That one feature may not be illustrated in all of the embodiments is not meant to be construed that it cannot be, but is done for brevity of description. Thus, the various features of the different embodiments may be mixed and matched as desired to form new embodiments, whether or not the new embodiments are

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expressly described. All combinations or permutations of features described herein are covered by this disclosure.

[0059] While the invention has been specifically described in connection with certain specific embodiments thereof, it is to be understood that this is by way of illustration and not of limitation. Reasonable variation and modification are possible within the scope of the forgoing disclosure and drawings without departing from the spirit of the invention which is defined in the appended claims.

[0060] It is intended that the following concepts can define at least a portion of the scope of the disclosure and that the apparatus and/or method(s) within the scope of these concepts and their equivalents be covered thereby. This disclosure should be understood to include all novel and non-obvious combinations of elements described herein, and the concepts may be presented in this or a later application to any novel and non-obvious combination of these elements. Any aspect of any embodiment can be combined with any aspect of any other embodiments. Moreover, the foregoing embodiments are illustrative, and no single feature or element is essential to all possible combinations that may be included in this or a later application. Further aspects of the invention are provided by the subject matter of the following clauses:

[0061] An automatic dishwasher configured to implement an automatic treating cycle of operation, comprising a tub defining a dish treating chamber and a dish rack located within the dish treating chamber and comprising a bottom wall having a first portion defined by a substantially planar portion extending across a first portion of bottom wall and second portion defined by a depression portion extending across a second portion of bottom wall.

[0062] The automatic dishwasher of the preceding clause wherein the depression portion defines a cup seat.

[0063] The automatic dishwasher of any of the preceding clauses, wherein the first substantially planar portion defines a utensil seat.

[0064] The automatic dishwasher of any of the preceding clauses, wherein the dish rack is an upper dishrack and located within a top portion of the dish treating chamber.

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[0065] The automatic dishwasher of any of the preceding clauses, wherein the depression portion is defined by at least one of a second and third planar portion angled with respect to the first planar portion.

[0066] The automatic dishwasher of any of the preceding clauses, wherein the depression portion is defined by a second and a third planar portion angled with respect to the first planar portion.

[0067] The automatic dishwasher of any of the preceding clauses, wherein the second planar portion defines a first cup seat and the third planar defines a second cup seat.

[0068] The automatic dishwasher of any of the preceding clauses, wherein first portion has a first vertical height and the second portion has a second vertical height, the second vertical height being greater than the first vertical height.

[0069] An automatic dishwasher configured to implement an automatic treating cycle of operation, comprising a tub defining a dish treating chamber and a dish rack located within a top portion of the dish treating chamber, the dish rack having a first portion with a first vertical height and defining a utensil seat, and the dish rack having a second portion with a second vertical height and defining a cup seat, the second vertical height being greater than the first vertical height.

[0070] The automatic dishwasher of the preceding clause wherein the first portion is substantially planar.

[0071] The automatic dishwasher of any of the preceding clauses wherein the second portion defining the cup seat is a depression extending across a bottom wall of the dish rack.

[0072] The automatic dishwasher of any of the preceding clauses wherein the depression is defined by at least one of a second and third planar portion angled with respect to the first planar portion.

[0073] The automatic dishwasher of any of the preceding clauses wherein the depression is defined by a second and a third planar portion angled with respect to the first planar portion.

[0074] The automatic dishwasher of any of the preceding clauses, wherein the second planar portion defines a first cup seat and the third planar defines a second cup seat.

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[0075] An automatic dishwasher configured to implement an automatic treating cycle of operation, comprising a tub defining a dish treating chamber and a dish rack located within the dish treating chamber and comprising a bottom wall defining a first substantially planar portion extending across a portion of bottom wall and at least one of a second and third planar portion angled with respect to the first planar portion and defining a depression relative first planar portion.

[0076] The automatic dishwasher of the preceding clause wherein the at least one of the second and third planar portions defines a cup seat.

[0077] The automatic dishwasher of any of the preceding clauses wherein the first planar portion defines a utensil seat.

[0078] The automatic dishwasher of any of the preceding clauses wherein the depression is defined by a second and a third planar portion angled with respect to the first planar portion.

[0079] The automatic dishwasher of any of the preceding clauses wherein the second planar portion defines a first cup seat and the third planar defines a second cup seat.

[0080] The automatic dishwasher of any of the preceding clauses, wherein first substantially planar portion has a first vertical height and the depression has a second vertical height, the second vertical height being greater than the first vertical height.

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CLAIMS

What is claimed is:

1. An automatic dishwasher configured to implement an automatic treating cycle of operation, comprising:

a tub defining a dish treating chamber; and

a dish rack located within the dish treating chamber and comprising a bottom wall having a first portion defined by a substantially planar portion extending across a first portion of the bottom wall and a second portion defined by a depression portion extending across a second portion of the bottom wall.

2. The automatic dishwasher of claim 1, wherein the depression portion defines a cup seat.

3. The automatic dishwasher of claim 1, wherein the first substantially planar portion defines a utensil seat.

4. The automatic dishwasher of claim 1, wherein the dish rack is an upper dishrack and located within a top portion of the dish treating chamber.

5. The automatic dishwasher of claim 1, wherein the depression portion is defined by at least one of a second and third planar portion angled with respect to the first planar portion.

6. The automatic dishwasher of claim 1, wherein the depression portion is defined by a second and a third planar portion angled with respect to the first planar portion.

7. The automatic dishwasher of claim 6, wherein the second planar portion defines a first cup seat and the third planar portion defines a second cup seat.

8. The automatic dishwasher of claim 1, wherein the first portion has a first vertical height and the second portion has a second vertical height, the second vertical height being greater than the first vertical height.

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9. An automatic dishwasher configured to implement an automatic treating cycle of operation, comprising:

a tub defining a dish treating chamber; and

a dish rack located within a top portion of the dish treating chamber, the dish rack having a first portion with a first vertical height and defining a utensil seat, and the dish rack having a second portion with a second vertical height and defining a cup seat, the second vertical height being greater than the first vertical height.

10. The automatic dishwasher of claim 9, wherein the first portion is substantially planar.

11. The automatic dishwasher of claim 10, wherein the second portion defining the cup seat is a depression extending across a bottom wall of the dish rack.

12. The automatic dishwasher of claim 11, wherein the depression is defined by at least one of a second and third planar portion angled with respect to the first planar portion.

13. The automatic dishwasher of claim 11, wherein the depression is defined by a second and a third planar portion angled with respect to the first planar portion.

14. The automatic dishwasher of claim 13, wherein the second planar portion defines a first cup seat and the third planar portion defines a second cup seat.

15. An automatic dishwasher configured to implement an automatic treating cycle of operation, comprising:

a tub defining a dish treating chamber; and

a dish rack located within the dish treating chamber and comprising a bottom wall defining a first substantially planar portion extending across a portion of the bottom wall and at least one of a second and third planar portion angled with respect to the first planar portion and defining a depression relative to the first planar portion.

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16. The automatic dishwasher of claim 15, wherein the at least one of the second and third planar portions defines a cup seat.

17. The automatic dishwasher of claim 15, wherein the first planar portion defines a utensil seat.

18. The automatic dishwasher of claim 15, wherein the depression is defined by a second and a third planar portion angled with respect to the first planar portion.

19. The automatic dishwasher of claim 18, wherein the second planar portion defines a first cup seat and the third planar defines a second cup seat.

20. The automatic dishwasher of claim 15, wherein the first substantially planar portion has a first vertical height and the depression has a second vertical height, the second vertical height being greater than the first vertical height.

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DISHWASHER WITH A DISH RACK

ABSTRACT OF THE DISCLOSURE

An automatic dishwasher configured to implement an automatic treating cycle of operation. The automatic dishwasher having a tub and a dish rack located within the dish treating chamber. The dish rack comprising a bottom wall having a first portion defined by a substantially planar portion extending across a first portion of bottom wall and second portion defined by a depression portion extending across a second portion of bottom wall.

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PTO/SB/08a (02-18)
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(Not for submission under 37 CFR 1.99)

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First Named Inventor	Mark S. Feddema
Art Unit	
Examiner Name	
Attorney Docket Number	SUB-13230-US-CON

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	2	2527178		1950-10-24	Elsaesser	
	3	8168006	B2	2012-05-01	Bengston et al.	
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	2	20150245762	A1	2015-09-03	Tuller	

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	Attorney Docket Number	SUB-13230-US-CON

	3	20060237051	A1	2006-10-26	Bengston et al.	
	4	20190298146	A1	2019-10-03	Gutkowski	
	5	20180242816	A1	2018-08-30	Cao et al.	
	6	20090320883	A1	2009-12-31	Herbert FALK	
	7	20110203616	A1	2011-08-25	Dietrich Berner et al.	

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	1	102014208843	DE	A1	2015-11-12	BSH Hausgerate GmbH		☐
	2	102013213612	DE	A1	2015-01-15	BHS Bosch und Siemens Hausgerate GmbH		☐
	3	112018070373	BR	A2	2019-01-29	Electrolux Home Products Inc.		☐
	4	109475265	CN	A	2016-04-08	Electrolux Home Products Inc.		☐

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	First Named Inventor	Mark S. Feddema
	Art Unit	
	Examiner Name	
	Attorney Docket Number	SUB-13230-US-CON

	5	3439527	EP	A1	2019-02-13	Electrolux Home Products Inc.		☐
	6	2017176286	WO	A1	2017-10-12	Electrolux Home Products Inc.		☐
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	8	102017200272	DE	A1	2018-07-12	BSH Hausgeraete GmbH		☐
	9	205697665	CN	U	2016-11-23	Midea Group		☐
	10	105496336	CN	A	2016-04-20	Foshan Shunde Midea Washing Appliances Mfg Co LTD		☐
	11	109259690	CN	A	2019-01-25	Zhuhai Gree Corp		☐
	12	2643809	FR	A1	1990-09-07	Esswein SA		☐
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	15	101612027	CN	A	2009-12-30	MEIKO MASCHB GMBH & CO. KG		☒

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	First Named Inventor	Mark S. Feddema
	Art Unit	
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	Attorney Docket Number	SUB-13230-US-CON

	16	101966069	CN	A	2011-02-09	BSH Bosch Siemens Household Appliances Co., Ltd.		☐
	17	102215985	CN	A	2011-10-12	PARIMARK FEG CO., LTD.		☒
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	First Named Inventor	Mark S. Feddema
	Art Unit	
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	Attorney Docket Number	SUB-13230-US-CON

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☐ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

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A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/John F. Colligan/	Date (YYYY-MM-DD)	2023-12-11
Name/Print	John F. Colligan	Registration Number	48240

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Petitioner Samsung Ex-1004, 0086

SCORE Placeholder Sheet for IFW Content

Application Number: 18535327 Document Date: 12/11/2023

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Form Revision Date: March 1, 2019

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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
18/535,327	12/11/2023		1820	SUB-13230-US-CON	20	3

CONFIRMATION NO. 8683

FILING RECEIPT

130348
Whirlpool Corporation / McGarry Bair PC
2000 North M63
Benton Harbor, MI 49022

OC00000006615067 3

Date Mailed: 12/21/2023

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)

Mark S. Feddema, Kalamazoo, MI;
William J. Snell, Elkhart, IN;
Sachie Kakehi, St. Joseph, MI;

Applicant(s)

WHIRLPOOL CORPORATION, BENTON HARBOR, MI;

Power of Attorney: The patent practitioners associated with Customer Number 130348

Domestic Priority data as claimed by applicant

This application is a CON of 17/830,947 06/02/2022 PAT 11,864,712
which is a CON of 16/833,984 03/30/2020 PAT 11,375,874

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

Petitioner Samsung Ex-1004, 0088

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: 12/20/2023
The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 18/535,327**
Projected Publication Date: 03/28/2024
Non-Publication Request: No
Early Publication Request: No
Title

DISHWASHER WITH A DISH RACK

Preliminary Class

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

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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.

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Petitioner Samsung Ex-1004, 0089

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Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

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PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 18/535,327

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY FEE($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	320
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	700
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	800
TOTAL CLAIMS (37 CFR 1.16(i))	20 minus 20 =	* 0			OR	x =	0
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3 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			TOTAL	1820

APPLICATION AS AMENDED - PART II

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
AMENDMENT A	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))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE($)	ADDITIONAL FEE($)	OR	RATE($)	ADDITIONAL FEE($)
AMENDMENT B	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))									
	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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Kathi Vidal

Kathi Vidal
Under Secretary of Commerce for Intellectual Property and
Director of the United States Patent and Trademark Office

Derrick Brent
Deputy Under Secretary of Commerce for Intellectual Property and
Deputy Director of the United States Patent and Trademark Office

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
18/535,327	12/11/2023	Mark S. Feddema	SUB-13230-US-CON

CONFIRMATION NO. 8683

130348
Whirlpool Corporation / McGarry Bair PC
2000 North M63
Benton Harbor, MI 49022

PUBLICATION NOTICE

OC000000070378828

Date Mailed: 03/29/2024

Title:DISHWASHER WITH A DISH RACK

Publication No.US-2024-0099551-A1
Publication Date:03/28/2024

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.

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

Petitioner Samsung Ex-1004, 0093

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/535,327	12/11/2023	Mark S. Feddema	SUB-13230-US-CON	8683

130348 7590 07/05/2024

Whirlpool Corporation / McGarry Bair PC
2000 North M63
Benton Harbor, MI 49022

EXAMINER	
SHAHINIAN, LEVON J	

ART UNIT	PAPER NUMBER
1711	

NOTIFICATION DATE	DELIVERY MODE
07/05/2024	ELECTRONIC

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

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

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PatentDocketing@whirlpool.com
deborah_tomaszewski@whirlpool.com
patents@mcgarrybair.com

Petitioner Samsung Ex-1004, 0094

Office Action Summary	Application No. 18/535,327	Applicant(s) Feddema et al.	
	Examiner LEVON J SHAHINIAN	Art Unit 1711	AIA (FITF) Status Yes

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

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☑ Responsive to communication(s) filed on 11 December 2023.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL.** 2b) ☑ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5) ☑ Claim(s) 1-20 is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☑ Claim(s) 1-20 is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

9) ☐ Claim(s) _____ are subject to restriction and/or election requirement

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

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☑ The drawing(s) filed on 11 December 2023 is/are: a)☑ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☑ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date 11 December 2023.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

4) ☐ Other: _____.

DETAILED ACTION

The communication dated 12/11/2023 has been entered and fully considered.

Claims 1-20 are currently pending.

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.

2. In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis (i.e., changing from AIA to pre-AIA) for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a)(1) the claimed invention was patented, described in a printed publication, or in public use, on sale, or otherwise available to the public before the effective filing date of the claimed invention.

4. **Claims 1-20** are rejected under 35 U.S.C. 102(a)(1) as being anticipated by Bengston et al. U.S. Publication 2006/0237051 (henceforth referred to as Bengston).

5. As for **claim 1**, Bengston teaches an automatic dishwasher (paragraph [0019]; Fig. 1: part 2) configured to implement an automatic treating cycle of operation,

comprising: a tub (paragraph [0019]; Fig. 1: part 5) defining a dish treating chamber; and a dish rack (paragraph [0019]; Fig. 1: part 18) located within the dish treating chamber and comprising a bottom wall having a first portion defined by a substantially planar portion extending across a first portion of the bottom wall and a second portion defined by a depression portion extending across a second portion of the bottom wall (paragraph [0019]; Fig. 1).

6. As for **claim 2**, Bengston further teaches that the depression portion defines a cup seat (paragraph [0019]; Fig. 1).

7. As for **claim 3**, Bengston further teaches that the first substantially planar portion defines a utensil seat (paragraph [0019]; Fig. 1).

8. As for **claim 4**, Bengston further teaches that the dish rack is an upper dishrack and located within a top portion of the dish treating chamber (paragraph [0019]; Fig. 1).

9. As for **claim 5**, Bengston further teaches that the depression portion is defined by at least one of a second and third planar portion angled with respect to the first planar portion (paragraph [0019]; Fig. 1).

10. As for **claim 6**, Bengston further teaches that the depression portion is defined by a second and a third planar portion angled with respect to the first planar portion (paragraph [0019]; Fig. 1).

11. As for **claim 7**, Bengston further teaches that the second planar portion defines a first cup seat and the third planar portion defines a second cup seat (paragraph [0019]; Fig. 1).

12. As for **claim 8**, Bengston further teaches that the first portion has a first vertical height and the second portion has a second vertical height, the second vertical height being greater than the first vertical height (paragraph [0019]; Fig. 1).

13. As for **claim 9**, Bengston teaches an automatic dishwasher (paragraph [0019]; Fig. 1: part 2) configured to implement an automatic treating cycle of operation, comprising: a tub (paragraph [0019]; Fig. 1: part 5) defining a dish treating chamber; and a dish rack (paragraph [0019]; Fig. 1: part 18) located within a top portion of the dish treating chamber, the dish rack having a first portion with a first vertical height and defining a utensil seat, and the dish rack having a second portion with a second vertical height and defining a cup seat, the second vertical height being greater than the first vertical height (paragraph [0019]; Fig. 1).

14. As for **claim 10**, Bengston further teaches that the first portion is substantially planar (paragraph [0019]; Fig. 1).

15. As for **claim 11**, Bengston further teaches that the second portion defining the cup seat is a depression extending across a bottom wall of the dish rack (paragraph [0019]; Fig. 1).

16. As for **claim 12**, Bengston further teaches that the depression is defined by at least one of a second and third planar portion angled with respect to the first planar portion (paragraph [0019]; Fig. 1).

17. As for **claim 13**, Bengston further teaches that the depression is defined by a second and a third planar portion angled with respect to the first planar portion (paragraph [0019]; Fig. 1).

18. As for **claim 14**, Bengston further teaches that the second planar portion defines a first cup seat and the third planar portion defines a second cup seat (paragraph [0019]; Fig. 1).

19. As for **claim 15**, Bengston teaches an automatic dishwasher (paragraph [0019]; Fig. 1: part 2) configured to implement an automatic treating cycle of operation, comprising: a tub (paragraph [0019]; Fig. 1: part 5) defining a dish treating chamber; and a dish rack (paragraph [0019]; Fig. 1: part 18) located within the dish treating chamber and comprising a bottom wall defining a first substantially planar portion extending across a portion of the bottom wall and at least one of a second and third planar portion angled with respect to the first planar portion and defining a depression relative to the first planar portion (paragraph [0019]; Fig. 1).

20. As for **claim 16**, Bengston further teaches that the at least one of the second and third planar portions defines a cup seat (paragraph [0019]; Fig. 1).

21. As for **claim 17**, Bengston further teaches that the first planar portion defines a utensil seat (paragraph [0019]; Fig. 1).

22. As for **claim 18**, Bengston further teaches that the depression is defined by a second and a third planar portion angled with respect to the first planar portion (paragraph [0019]; Fig. 1).

23. As for **claim 19**, Bengston further teaches that the second planar portion defines a first cup seat and the third planar defines a second cup seat (paragraph [0019]; Fig. 1).

24. As for **claim 20**, Bengston further teaches that the first substantially planar portion has a first vertical height and the depression has a second vertical height, the

second vertical height being greater than the first vertical height (paragraph [0019]; Fig. 1).

Conclusion

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEVON J SHAHINIAN whose telephone number is (571)270-1384. The examiner can normally be reached M-F: 9:30am-6:00pm.

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, Michael Barr can be reached on (571)272-1414. 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.

/LEVON J SHAHINIAN/
Primary Examiner, Art Unit 1711

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	18/535,327	Feddema et al.
	Examiner	Art Unit
	LEVON J SHAHINIAN	1711

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS

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

CLAIM		DATE								
Final	Original	06/29/2024								
	1	✓								
	2	✓								
	3	✓								
	4	✓								
	5	✓								
	6	✓								
	7	✓								
	8	✓								
	9	✓								
	10	✓								
	11	✓								
	12	✓								
	13	✓								
	14	✓								
	15	✓								
	16	✓								
	17	✓								
	18	✓								
	19	✓								
	20	✓								

Petitioner Samsung Ex-1004, 0102

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	18/535,327	Feddema et al.
	Examiner	Art Unit
	LEVON J SHAHINIAN	1711

CPC - Searched*		
Symbol	Date	Examiner
A47L 15/22, 15/4217, 15/4221, 15/4246, 15/428, 15/46, 15/502, 15/503, and 15/505 keyword limited	06/29/2024	LJS

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner
134	56D, 57D, 58D, and 201 keyword limited	06/29/2024	LJS

* 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
SEARCH inventor search	06/29/2024	LJS
SEARCH text searches	06/29/2024	LJS
SEARCH CPC searches	06/29/2024	LJS

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner

/LEVON J SHAHINIAN/ Primary Examiner, Art Unit 1711	

Petitioner Samsung Ex-1004, 0103

Bibliographic Data

Application No: 18/535,327

Foreign Priority claimed: ○ Yes ◉ No

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

Verified and Acknowledged: /LEVON J SHAHINIAN/ /LJS/

Examiner's Signature Initials

Title: DISHWASHER WITH A DISH RACK

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
12/11/2023	134	1711	SUB-13230-US-CON
RULE			

APPLICANTS

WHIRLPOOL CORPORATION, BENTON HARBOR, MI, UNITED STATES

INVENTORS

Mark S. Feddema, Kalamazoo, MI, UNITED STATES

William J. Snell, Elkhart, IN, UNITED STATES

Sachie Kakehi, St. Joseph, MI, UNITED STATES

CONTINUING DATA

This application is a CON of 17830947 06/02/2022 PAT 11864712

17830947 is a CON of 16833984 03/30/2020 PAT 11375874

FOREIGN APPLICATIONS

IF REQUIRED, FOREIGN LICENSE GRANTED**

12/20/2023

STATE OR COUNTRY

UNITED STATES

ADDRESS

Whirlpool Corporation / McGarry Bair PC

2000 North M63

Benton Harbor, MI 49022

UNITED STATES

FILING FEE RECEIVED

$1,820

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (02-18)
Approved for use through 11/30/2020. OMB 0651-0031
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(Not for submission under 37 CFR 1.99)

Application Number	
Filing Date	
First Named Inventor	Mark S. Feddema
Art Unit	
Examiner Name	
Attorney Docket Number	SUB-13230-US-CON

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	9901240	B2	2018-02-27	Lee	
	2	2527178		1950-10-24	Elsaesser	
	3	8168006	B2	2012-05-01	Bengston et al.	
	4	10835098	B2	2020-11-17	Harald Disch et al.	

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U.S.PATENT APPLICATION PUBLICATIONS Remove

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20190290094	A1	2019-09-26	Whirlpool Corporation	
	2	20150245762	A1	2015-09-03	Tuller	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	
	Filing Date	
	First Named Inventor	Mark S. Feddema
	Art Unit	
	Examiner Name	
	Attorney Docket Number	SUB-13230-US-CON

	3	20060237051	A1	2006-10-26	Bengston et al.	
	4	20190298146	A1	2019-10-03	Gutkowski	
	5	20180242816	A1	2018-08-30	Cao et al.	
	6	20090320883	A1	2009-12-31	Herbert FALK	
	7	20110203616	A1	2011-08-25	Dietrich Berner et al.	

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FOREIGN PATENT DOCUMENTS Remove

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2]	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	102014208843	DE	A1	2015-11-12	BSH Hausgerate GmbH		☐
	2	102013213612	DE	A1	2015-01-15	BHS Bosch und Siemens Hausgerate GmbH		☐
	3	112018070373	BR	A2	2019-01-29	Electrolux Home Products Inc.		☐
	4	109475265	CN	A	2016-04-08	Electrolux Home Products Inc.		☐

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	
Filing Date	
First Named Inventor	Mark S. Feddema
Art Unit	
Examiner Name	
Attorney Docket Number	SUB-13230-US-CON

	5	3439527	EP	A1	2019-02-13	Electrolux Home Products Inc.		☐
	6	2017176286	WO	A1	2017-10-12	Electrolux Home Products Inc.		☐
	7	0963733	EP	A1	1999-12-15	Candy S.p.A.		☐
	8	102017200272	DE	A1	2018-07-12	BSH Hausgeraete GmbH		☐
	9	205697665	CN	U	2016-11-23	Midea Group		☐
	10	105496336	CN	A	2016-04-20	Foshan Shunde Midea Washing Appliances Mfg Co LTD		☐
	11	109259690	CN	A	2019-01-25	Zhuhai Gree Corp		☐
	12	2643809	FR	A1	1990-09-07	Esswein SA		☐
	13	2014094897	WO	A1	2014-06-26	Electrolux AB		☐
	14	105559725	CN	A	2016-05-11	Midea Group		☐
	15	101612027	CN	A	2009-12-30	MEIKO MASCHB GMBH & CO. KG		☒

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	Application Number	
	Filing Date	
	First Named Inventor	Mark S. Feddema
	Art Unit	
	Examiner Name	
	Attorney Docket Number	SUB-13230-US-CON

	16	101966069	CN	A	2011-02-09	BSH Bosch Siemens Household Appliances Co., Ltd.		☐
	17	102215985	CN	A	2011-10-12	PARIMARK FEG CO., LTD.		☒
	18	108135432	CN	A	2018-06-08	ILLINOIS TOOL WORKS		☒

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	Chinese Patent Office, Decision to Grant re Corresponding Application No. 202110328243.8, June 1, 2023, 5 pages.	☐

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EXAMINER SIGNATURE

Examiner Signature	/LEVON J SHAHINIAN/	Date Considered	06/29/2024

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[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	
	Filing Date	
	First Named Inventor	Mark S. Feddema
	Art Unit	
	Examiner Name	
	Attorney Docket Number	SUB-13230-US-CON

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

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☐ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☐ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/John F. Colligan/	Date (YYYY-MM-DD)	2023-12-11
Name/Print	John F. Colligan	Registration Number	48240

This collection of information is required by 37 CFR 1.97 and 1.98. 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 1 hour 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, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L1	200	((("FEDDEMA") near3 ("Mark")) OR (("SNELL") near3 ("William")) OR (("KAKEHI") near3 ("Sachie"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/06/29 06:35 PM
L2	9878	((("WHIRLPOOL") near3 ("CORPORATION"))).AS,AANM.	(US-PGPUB; USPAT)	OR	ON	ON	2024/06/29 06:35 PM
L3	11	("10835098"|"20060237051"|"20090320883"|"20110203616"|"20150245762"|"20180242816"|"20190290094"|"20190298146"|"2527178"|"8168006"|"9901240").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2024/06/29 06:36 PM
L4	34947	(A47L15/502 or A47L15/22 or A47L15/4217 or A47L15/4221 or A47L15/4246 or A47L15/428 or A47L15/46 or A47L15/503 or A47L15/505).cpc.	(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, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/06/29 06:37 PM
L5	4204	134/56D,57D,58D,201.ccls.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/06/29 06:43 PM
L6	25048	L4 L5	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/06/29 06:43 PM
L7	694	(L1 L2) AND L6	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/06/29 06:43 PM
L8	53	L7 AND ((dishwasher dishwashing warewasher warewashing) AND ((utensil cutlery) WITH	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/06/29 06:44 PM

		rack)).clm.					
L9	1357	L6 AND (dishwasher dishwashing warewasher warewashing) AND ((utensil cutlery) WITH rack)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/06/29 06:44 PM

PE2E SEARCH - Search History (Interference)

There are no Interference searches to show.

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  - www.uspto.gov/initiatives
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Best,

Vaishali Udupa
Commissioner for Patents
United States Patent and Trademark Office

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s):	WHIRLPOOL CORPORATION		
For:	DISHWASHER WITH A DISH RACK		
Serial No.:	18/535,327	Examiner:	Levon J. Shahinian
Filed:	December 11, 2023	Group Art Unit:	1711
Atty. Docket:	SUB-13230-US-CON	Confirmation No:	8683

CERTIFICATE OF MAILING/TRANSMISSION (37 CFR 1.8(a))

I hereby certify that this correspondence is, on the date shown below, being:

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/Marisa L. Stolsonburg/
Signature

Date: October 3, 2024

Marisa L. Stolsonburg
(type or print name of person certifying)

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

AMENDMENT AND RESPONSE TO OFFICE ACTION

In response to the Non-Final Office Action mailed July 5, 2024, kindly amend the above-identified application as follows:

Amendments to the Specification begin on page 2 of this paper.

Amendments to the Claims begin on page 3 of this paper.

Remarks begin on page 7 of this paper.

AMENDMENTS TO THE SPECIFICATION

Please amend paragraph [0001] of the Specification as filed with following amended paragraph:

[0001] This application is a continuation of U.S. Patent Application No. 17/830,947, filed on June 2, 2022, now U.S. Patent No. 11,864,712, issued January 9, 2024~~allowed~~, which is a continuation of U.S. Patent Application No. 16/833,984, filed March 30, 2020, now U.S. Patent No. 11,375,874, issued July 5, 2022, both of which are incorporated herein by reference in their entirety.

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) An automatic dishwasher configured to implement an automatic treating cycle of operation, comprising:

a tub defining a dish treating chamber; and

a dish rack located within the dish treating chamber and the dish rack comprising a bottom wall from which extends a peripheral wall defining side walls of the dish rack, the bottom wall having a first portion defined by a substantially horizontal planar portion extending across a first portion of the bottom wall and a second portion of the bottom wall defined by an angled second planar portion relative to the substantially horizontal planar first portion~~depression portion~~ extending across a second portion of the bottom wall; the second portion connected to and extending from the first portion and angled away from the first portion;

the first portion supporting a first set of utensil holders for supporting one or more utensils and the second portion supporting a plurality of spaced pins defining spaced slots for supporting one or more utensils.

2. (Canceled)

3. (Currently Amended) The automatic dishwasher of claim 1, wherein the first ~~substantially planar portion defines a utensil seat~~ set of utensil holders comprises loops.

4. (Original) The automatic dishwasher of claim 1, wherein the dish rack is an upper dishrack and located within a top portion of the dish treating chamber.

5. (Currently Amended) The automatic dishwasher of claim 1, ~~wherein the depression portion is defined by at least one of a second and~~ further comprising a third planar portion angled with respect to the substantially horizontal first planar portion.

6. (Currently Amended) The automatic dishwasher of claim 5~~1~~, wherein ~~the~~a depression portion is defined by the~~a~~ second and the~~a~~ third planar portions. ~~angled with respect to the first planar portion.~~

7. (Currently Amended) The automatic dishwasher of claim 6, wherein ~~the second planar portion defines a first cup seat and~~ the third planar portion defines a ~~second~~ cup seat.

8. (Currently Amended) The automatic dishwasher of claim 1, wherein the peripheral wall surrounding the first portion has a first vertical height and the second portion at an end opposite the connection to the first portion has a second vertical height, the second vertical height being greater than the first vertical height.

9-14. (Canceled)

15. (Currently Amended) An automatic dishwasher configured to implement an automatic treating cycle of operation, comprising:

a tub defining a dish treating chamber; and

a dish rack located within the dish treating chamber having a first end spaced from a second end and comprising a bottom wall from which extends a peripheral wall defining side walls of the dish rack, at the first end of the dish rack, the bottom wall has a first portion~~defining~~ defined by a first substantially horizontal planar portion extending across a first portion of the bottom wall and ~~at least one of~~ at the second end of the dishrack, a second ~~and third planar~~ portion is angled with respect to the first ~~planar~~ portion and defining a depression; ~~relative to the first planar portion.~~the depression extending lower than the first portion relative to the peripheral wall;

the first portion supporting a first set of utensil holders for supporting one or more utensils and the second portion defining a cup seat for supporting one of more cups in the depression.

16-20. (Canceled)

21. (New) The automatic dishwasher of claim 5, wherein the third portion at an end opposite a connection to the peripheral wall has a third vertical height, the third vertical height being greater than the first vertical height.

22. (New) The automatic dishwasher of claim 5, further comprising a sprayer positioned beneath the second portion for spraying liquid at the second portion.

23. (New) The automatic dishwasher of claim 22, further comprising a second sprayer positioned between the second portion and the third portion for spraying liquid at the second portion and the third portion.

24. (New) The automatic dishwasher of claim 1, wherein the first set of utensil holders and the plurality of spaced pins defining spaced slots are defined by a utensil caddy.

25. (New) The automatic dishwasher of claim 24, wherein the first set of utensil holders are positioned on a first side wall of the utensil caddy and the plurality of spaced pins are positioned on a second side wall of the utensil caddy.

26. (New) The automatic dishwasher of claim 25, wherein the second side wall is moveable relative to the first side wall.

27. (New) The automatic dishwasher of claim 15, further comprising a third portion of the bottom wall defined by an angled third planar portion relative to the substantially horizontal first portion and extending across a third portion of the bottom wall; the third portion connected to and extending from the first portion and angled away from the first portion.

28. (New) The automatic dishwasher of claim 27, wherein the second portion supports a plurality of spaced pins defining spaced slots for supporting one or more utensils.

29. (New) The automatic dishwasher of claim 27, further comprising a first sprayer positioned beneath the third portion for spraying liquid at the third portion and a second sprayer

positioned between the second portion and the third portion for spraying liquid at the second portion and the third portion.

30. (New) The automatic dishwasher of claim 28, wherein the first set of utensil holders and the plurality of spaced pins defining spaced slots are defined by a utensil caddy; the utensil caddy comprising a first side wall carrying the first set of utensil holders and a second side wall carrying the plurality of spaced pins.

31. (New) The automatic dishwasher of claim 30, wherein the second side wall is moveable relative to the first side wall.

REMARKS

Claims 1-20 are currently pending in the application. By the present amendment claims 1, 3, 5-8 and 15 have been amended, claims 2, 9-14 and 16-20 have been canceled, and claims 21-31 are new.

Applicant believes the amendments made herein add no new matter. Any amendments to the claims which have been made in this amendment, and which have not been specifically noted to overcome a rejection based on prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to be attached thereto.

Further consideration and examination of the application is respectfully requested in view of the amendments and the following remarks.

Rejections under 35 U.S.C. §102

Claims 1-20 stand rejected under 35 U.S.C. §102(a)(1) as allegedly anticipated by US20060237051 to Bengston et al. The rejection is respectfully traversed.

The claimed invention is not anticipated under § 102 unless each and every element of the claimed invention is found in the prior art. *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 231 USPQ 81, 90 (Fed. Cir. 1986). To anticipate, a single reference must teach each and every limitation of the claimed invention. *Eolas Technologies Inc. v. Microsoft Corp.*, 399 F.3d 1325, 1335; 73 U.S.P.Q.2D (BNA) 1782 (Fed. Cir. 2005). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The rejection fails to satisfy these standards.

It is believed claim 1 is patentable because claim 1 requires, among other things, a dish rack located within the dish treating chamber and the dish rack comprising a bottom wall from which extends a peripheral wall defining the sides of the dishrack, the bottom wall having a first portion defined by a substantially horizontal planar portion extending across a first portion of the bottom wall and a second portion of the bottom wall defined by an angled second planar portion relative to the substantially horizontal first portion extending across a second portion of the bottom wall; the second portion connected to and extending from the first portion and angled away from the first portion; the first portion supporting a first set of utensil holders for

supporting one or more utensils and the second portion supporting a plurality of spaced pins defining spaced slots for supporting one or more utensils.

Nothing in Bengston et al. ‘051, including element 18, teaches 1) by a substantially horizonal planar portion extending across a first portion of the bottom wall, 2) a second portion of the bottom wall defined by an angled second planar portion relative to the substantially horizontal first portion extending across a second portion of the bottom wall; the second portion connected to and extending from the first portion and angled away from the first portion and 3) the first portion supporting a first set of utensil holders for supporting one or more utensils and the second portion supporting a plurality of spaced pins defining spaced slots for supporting one or more utensils. At best element 18 in Bengston teaches a substantially horizonal planar portion extending across a first portion of the top wall of a dish rack. This is not the same as the claimed limitations. In addition, Bengston does not teach or suggest items 2) or 3) in the list above. The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.,* 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). In other words, there must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention. *Scripps Clinic & Research Found. v. Genentech Inc.*, 927 F.2d 1565, 1576 (Fed. Cir.1991 (emphasis added)). The rejection fails to satisfy these standards. As each and every element of claim 1 is not present in the disclosure of Bengston et al. ‘051, Bengston et al. ‘051 fails to anticipate claim 1. Applicant respectfully requests removal of the rejection and for the allowance of claim 1. Claims 3-8 and new claims 21-26 depend from independent claim 1 and include the same distinctive features of claim 1. Applicant respectfully requests removal of the rejection and for the allowance of these claims.

It is believed claim 15 is patentable because it requires, among other things, a dish rack located within the dish treating chamber having a first end spaced from a second end and comprising a bottom wall from which extends a peripheral wall defining the sides of the dishrack, at the first end of the dish rack, the bottom wall has a first portion defined by a first substantially horizontal planar portion extending across a first portion of the bottom wall and at the second end of the dishrack, a second portion is angled with respect to the first portion and defining a depression; the depression extending lower than the first portion relative to the

peripheral wall; the first portion supporting a first set of utensil holders for supporting one or more utensils and the second portion defining a cup seat for supporting one of more cups in the depression.

Nothing in Bengston et al. ‘051, including element 18, teaches 1) the bottom wall has a first portion defined by a first substantially horizontal planar portion extending across a first portion of the bottom wall, 2) a second portion is angled with respect to the first portion and defining a depression; the depression extending lower than the first portion relative to the peripheral wall, and 3) the first portion supporting a first set of utensil holders for supporting one or more utensils and the second portion defining a cup seat for supporting one of more cups in the depression. At best element 18 in Bengston teaches a substantially horizonal planar portion extending across a first portion of the top wall of a dish rack. This is not the same as the claimed limitations. In addition, Bengston does not teach or suggest items 2) or 3) in the list above. *Richardson v. Suzuki Motor Co.,* 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). In other words, there must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention. *Scripps Clinic & Research Found. v. Genentech Inc.*, 927 F.2d 1565, 1576 (Fed. Cir.1991 (emphasis added)). The rejection fails to satisfy these standards. Therefore, as each and every element of claim 15 is not present in the disclosure of Bengston et al. ‘051, Bengston et al. ‘051 fails to anticipate claim 15. Applicant respectfully requests removal of the rejection and for the allowance of claim 15. New claims 27-31 depend from independent claim 15 and include the same distinctive features of claim 15. Applicant respectfully requests removal of the rejection and for the allowance of claims 15 and 27-31.

Conclusion

In view of the reasons discussed above, it is submitted that all of the claims in the application are in condition for allowance. Early notification of allowability is respectfully requested.

If the Examiner believes that there are some issues remaining in this application that can be expedited by a telephone interview, the courtesy of a telephone call to the undersigned representative is respectfully requested.

Respectfully submitted,

WHIRLPOOL CORPORATION

Date: October 3, 2024 By: /John F. Colligan/

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UNITED STATES
PATENT AND TRADEMARK OFFICE

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Alexandria, VA 22313 - 1450
www.uspto.gov

ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
18/535,327	**10/03/2024 03:52:48 PM Z ET**	**SUB-13230-US-CON**

Title of Invention

DISHWASHER WITH A DISH RACK

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	8683	FILED BY	Marisa Stolsonburg
PATENT CENTER #	67428246	FILING DATE	12/11/2023
CUSTOMER #	130348	FIRST NAMED INVENTOR	Mark S. Feddema
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	John Colligan

Documents

TOTAL DOCUMENTS: 4

DOCUMENT		PAGES	DESCRIPTION	SIZE (KB)
G1866537.pdf		10	-	191 KB
G1866537-A....pdf	(1-1)	1	Amendment/Request for Reconsideration-After Non-Final Rejection	146 KB
G1866537-SPEC.pdf	(2-2)	1	Specification	96 KB
G1866537-CLM.pdf	(3-6)	4	Claims	86 KB
G1866537-REM.pdf	(7-10)	4	Applicant Arguments/Remarks Made in an Amendment	112 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)

G1866537.pdf	53C599C415F05923E5C7277D176C87DD5B891FF1446DC330E BE7953C41F42929D8601F71579CBA54AAF2DDC1F61AF1A091 9F457F14843E540EB347961F469D66
G1866537-A....pdf	FFF45F41ADC7E688ABED2843AF97D23DD82FE541006B2049 D11BEB53FE95C4956B887D8A598D2AB03F99B20FAC6BAEC6 058483B0CD0A495E14DDAAB9EBB489AF
G1866537-SPEC.pdf	81102246B5097062565EE673E9338C9225597420D308A435FE3 7B74DD09215CCEF6BDC48C26B4F8E49158575879DB838AF3 25D5C0F5E5293A14DA8D0D86440F3
G1866537-CLM.pdf	0EA67F0917048A6430B898B992026EE71D0AF5C047C3972295 8481D276B6C9194FEF25973163498675E07134D086A30B0CED E6DA9BFD53F99D6131C59A1194E9
G1866537-REM.pdf	931E9924590A2690156FAFC7D705A6D9C8F4E70A12B9F75C9 D44510CD95D71E3D0C64F104FBD256FDD154CD299A67D0FA 78666B7DDE088C33E8503D12DB70F09

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 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.

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s):	WHIRLPOOL CORPORATION		
For:	DISHWASHER WITH A DISH RACK		
Serial No.:	18/535,327	Examiner:	Levon J. Shahinian
Filed:	December 11, 2023	Group Art Unit:	1711
Atty. Docket:	SUB-13230-US-CON	Confirmation No:	8683

CERTIFICATE OF MAILING/TRANSMISSION (37 CFR 1.8(a))

I hereby certify that this correspondence is, on the date shown below, being:

☐ deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to the Commissioner for Patents, PO Box 1450, Alexandria, VA, 22313-1450.

☒ transmitted via EFS Web to the Patent and Trademark Office.

/Marisa L. Stolsonburg/
Signature

Date: October 3, 2024

Marisa L. Stolsonburg
(type or print name of person certifying)

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

AMENDMENT AND RESPONSE TO OFFICE ACTION

In response to the Non-Final Office Action mailed July 5, 2024, kindly amend the above-identified application as follows:

Amendments to the Specification begin on page 2 of this paper.

Amendments to the Claims begin on page 3 of this paper.

Remarks begin on page 7 of this paper.

AMENDMENTS TO THE SPECIFICATION

Please amend paragraph [0001] of the Specification as filed with following amended paragraph:

[0001] This application is a continuation of U.S. Patent Application No. 17/830,947, filed on June 2, 2022, now U.S. Patent No. 11,864,712, issued January 9, 2024~~allowed~~, which is a continuation of U.S. Patent Application No. 16/833,984, filed March 30, 2020, now U.S. Patent No. 11,375,874, issued July 5, 2022, both of which are incorporated herein by reference in their entirety.

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) An automatic dishwasher configured to implement an automatic treating cycle of operation, comprising:

a tub defining a dish treating chamber; and

a dish rack located within the dish treating chamber and the dish rack comprising a bottom wall from which extends a peripheral wall defining side walls of the dish rack, the bottom wall having a first portion defined by a substantially horizontal -planar portion extending across a first portion of the bottom wall and a second portion of the bottom wall defined by an angled second planar portion relative to the substantially horizontal planar first portion~~depression portion~~ extending across a second portion of the bottom wall; the second portion connected to and extending from the first portion and angled away from the first portion;

the first portion supporting a first set of utensil holders for supporting one or more utensils and the second portion supporting a plurality of spaced pins defining spaced slots for supporting one or more utensils.

2. (Canceled)

3. (Currently Amended) The automatic dishwasher of claim 1, wherein the first ~~substantially planar portion defines a utensil seat~~ set of utensil holders comprises loops.

4. (Original) The automatic dishwasher of claim 1, wherein the dish rack is an upper dishrack and located within a top portion of the dish treating chamber.

5. (Currently Amended) The automatic dishwasher of claim 1, ~~wherein the depression portion is defined by at least one of a second and~~ further comprising a third planar portion angled with respect to the substantially horizontal first planar portion.

6. (Currently Amended) The automatic dishwasher of claim 5~~1~~, wherein ~~the~~a depression portion is defined by the~~a~~ second and the~~a~~ third planar portions. ~~angled with respect to the first planar portion.~~

7. (Currently Amended) The automatic dishwasher of claim 6, wherein ~~the second planar portion defines a first cup seat and~~ the third planar portion defines a ~~second~~ cup seat.

8. (Currently Amended) The automatic dishwasher of claim 1, wherein the peripheral wall surrounding the first portion has a first vertical height and the second portion at an end opposite the connection to the first portion has a second vertical height, the second vertical height being greater than the first vertical height.

9-14. (Canceled)

15. (Currently Amended) An automatic dishwasher configured to implement an automatic treating cycle of operation, comprising:

a tub defining a dish treating chamber; and

a dish rack located within the dish treating chamber having a first end spaced from a second end and comprising a bottom wall from which extends a peripheral wall defining side walls of the dish rack, at the first end of the dish rack, the bottom wall has a first portion~~defining~~ defined by a first substantially horizontal planar portion extending across a first portion of the bottom wall and ~~at least one of~~ at the second end of the dishrack, a second ~~and third planar~~ portion is angled with respect to the first ~~planar~~ portion and defining a depression; ~~relative to the first planar portion.~~the depression extending lower than the first portion relative to the peripheral wall;

the first portion supporting a first set of utensil holders for supporting one or more utensils and the second portion defining a cup seat for supporting one of more cups in the depression.

16-20. (Canceled)

21. (New) The automatic dishwasher of claim 5, wherein the third portion at an end opposite a connection to the peripheral wall has a third vertical height, the third vertical height being greater than the first vertical height.

22. (New) The automatic dishwasher of claim 5, further comprising a sprayer positioned beneath the second portion for spraying liquid at the second portion.

23. (New) The automatic dishwasher of claim 22, further comprising a second sprayer positioned between the second portion and the third portion for spraying liquid at the second portion and the third portion.

24. (New) The automatic dishwasher of claim 1, wherein the first set of utensil holders and the plurality of spaced pins defining spaced slots are defined by a utensil caddy.

25. (New) The automatic dishwasher of claim 24, wherein the first set of utensil holders are positioned on a first side wall of the utensil caddy and the plurality of spaced pins are positioned on a second side wall of the utensil caddy.

26. (New) The automatic dishwasher of claim 25, wherein the second side wall is moveable relative to the first side wall.

27. (New) The automatic dishwasher of claim 15, further comprising a third portion of the bottom wall defined by an angled third planar portion relative to the substantially horizontal first portion and extending across a third portion of the bottom wall; the third portion connected to and extending from the first portion and angled away from the first portion.

28. (New) The automatic dishwasher of claim 27, wherein the second portion supports a plurality of spaced pins defining spaced slots for supporting one or more utensils.

29. (New) The automatic dishwasher of claim 27, further comprising a first sprayer positioned beneath the third portion for spraying liquid at the third portion and a second sprayer

positioned between the second portion and the third portion for spraying liquid at the second portion and the third portion.

30. (New) The automatic dishwasher of claim 28, wherein the first set of utensil holders and the plurality of spaced pins defining spaced slots are defined by a utensil caddy; the utensil caddy comprising a first side wall carrying the first set of utensil holders and a second side wall carrying the plurality of spaced pins.

31. (New) The automatic dishwasher of claim 30, wherein the second side wall is moveable relative to the first side wall.

REMARKS

Claims 1-20 are currently pending in the application. By the present amendment claims 1, 3, 5-8 and 15 have been amended, claims 2, 9-14 and 16-20 have been canceled, and claims 21-31 are new.

Applicant believes the amendments made herein add no new matter. Any amendments to the claims which have been made in this amendment, and which have not been specifically noted to overcome a rejection based on prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to be attached thereto.

Further consideration and examination of the application is respectfully requested in view of the amendments and the following remarks.

Rejections under 35 U.S.C. §102

Claims 1-20 stand rejected under 35 U.S.C. §102(a)(1) as allegedly anticipated by US20060237051 to Bengston et al. The rejection is respectfully traversed.

The claimed invention is not anticipated under § 102 unless each and every element of the claimed invention is found in the prior art. *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 231 USPQ 81, 90 (Fed. Cir. 1986). To anticipate, a single reference must teach each and every limitation of the claimed invention. *Eolas Technologies Inc. v. Microsoft Corp.*, 399 F.3d 1325, 1335; 73 U.S.P.Q.2D (BNA) 1782 (Fed. Cir. 2005). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The rejection fails to satisfy these standards.

It is believed claim 1 is patentable because claim 1 requires, among other things, a dish rack located within the dish treating chamber and the dish rack comprising a bottom wall from which extends a peripheral wall defining the sides of the dishrack, the bottom wall having a first portion defined by a substantially horizontal planar portion extending across a first portion of the bottom wall and a second portion of the bottom wall defined by an angled second planar portion relative to the substantially horizontal first portion extending across a second portion of the bottom wall; the second portion connected to and extending from the first portion and angled away from the first portion; the first portion supporting a first set of utensil holders for

supporting one or more utensils and the second portion supporting a plurality of spaced pins defining spaced slots for supporting one or more utensils.

Nothing in Bengston et al. '051, including element 18, teaches 1) by a substantially horizonal planar portion extending across a first portion of the bottom wall, 2) a second portion of the bottom wall defined by an angled second planar portion relative to the substantially horizontal first portion extending across a second portion of the bottom wall; the second portion connected to and extending from the first portion and angled away from the first portion and 3) the first portion supporting a first set of utensil holders for supporting one or more utensils and the second portion supporting a plurality of spaced pins defining spaced slots for supporting one or more utensils. At best element 18 in Bengston teaches a substantially horizonal planar portion extending across a first portion of the top wall of a dish rack. This is not the same as the claimed limitations. In addition, Bengston does not teach or suggest items 2) or 3) in the list above. The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). In other words, there must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention. *Scripps Clinic & Research Found. v. Genentech Inc.*, 927 F.2d 1565, 1576 (Fed. Cir.1991 (emphasis added)). The rejection fails to satisfy these standards. As each and every element of claim 1 is not present in the disclosure of Bengston et al. '051, Bengston et al. '051 fails to anticipate claim 1. Applicant respectfully requests removal of the rejection and for the allowance of claim 1. Claims 3-8 and new claims 21-26 depend from independent claim 1 and include the same distinctive features of claim 1. Applicant respectfully requests removal of the rejection and for the allowance of these claims.

It is believed claim 15 is patentable because it requires, among other things, a dish rack located within the dish treating chamber having a first end spaced from a second end and comprising a bottom wall from which extends a peripheral wall defining the sides of the dishrack, at the first end of the dish rack, the bottom wall has a first portion defined by a first substantially horizontal planar portion extending across a first portion of the bottom wall and at the second end of the dishrack, a second portion is angled with respect to the first portion and defining a depression; the depression extending lower than the first portion relative to the

peripheral wall; the first portion supporting a first set of utensil holders for supporting one or more utensils and the second portion defining a cup seat for supporting one of more cups in the depression.

Nothing in Bengston et al. '051, including element 18, teaches 1) the bottom wall has a first portion defined by a first substantially horizontal planar portion extending across a first portion of the bottom wall, 2) a second portion is angled with respect to the first portion and defining a depression; the depression extending lower than the first portion relative to the peripheral wall, and 3) the first portion supporting a first set of utensil holders for supporting one or more utensils and the second portion defining a cup seat for supporting one of more cups in the depression. At best element 18 in Bengston teaches a substantially horizonal planar portion extending across a first portion of the top wall of a dish rack. This is not the same as the claimed limitations. In addition, Bengston does not teach or suggest items 2) or 3) in the list above. *Richardson v. Suzuki Motor Co.,* 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). In other words, there must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention. *Scripps Clinic & Research Found. v. Genentech Inc.*, 927 F.2d 1565, 1576 (Fed. Cir.1991 (emphasis added)). The rejection fails to satisfy these standards. Therefore, as each and every element of claim 15 is not present in the disclosure of Bengston et al. '051, Bengston et al. '051 fails to anticipate claim 15. Applicant respectfully requests removal of the rejection and for the allowance of claim 15. New claims 27-31 depend from independent claim 15 and include the same distinctive features of claim 15. Applicant respectfully requests removal of the rejection and for the allowance of claims 15 and 27-31.

Conclusion

In view of the reasons discussed above, it is submitted that all of the claims in the application are in condition for allowance. Early notification of allowability is respectfully requested.

If the Examiner believes that there are some issues remaining in this application that can be expedited by a telephone interview, the courtesy of a telephone call to the undersigned representative is respectfully requested.

Respectfully submitted,

WHIRLPOOL CORPORATION

Date: October 3, 2024

By: /John F. Colligan/

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PTO/SB/06 (09-11)
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 18/535,327	Filing Date 12/11/2023	☐ To be Mailed

ENTITY: ☑ LARGE ☐ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A		N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A		N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*		x $100 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $480 =	
☐ 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).				
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))					
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
AMENDMENT	10/03/2024							
	Total (37 CFR 1.16(i))	* 19	Minus	** 20	= 0		x $100 =	0
	Independent (37 CFR 1.16(h))	* 2	Minus	*** 3	= 0		x $480 =	0
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	0

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
AMENDMENT								
	Total (37 CFR 1.16(i))	*	Minus	**	=		x $0 =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=		x $0 =	
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.	PARALEGAL
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".	/MANUEL SALDANA JR/
*** 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 number found in the appropriate box in column 1.	

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **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.

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

NOTICE OF ALLOWANCE AND FEE(S) DUE

130348 7590 10/28/2024

Whirlpool Corporation / McGarry Bair PC
2000 North M63
Benton Harbor, MI 49022

EXAMINER	
SHAHINIAN, LEVON J	
ART UNIT	PAPER NUMBER
1711	

DATE MAILED: 10/28/2024

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/535,327	12/11/2023	Mark S. Feddema	SUB-13230-US-CON	8683

TITLE OF INVENTION: DISHWASHER WITH A DISH RACK

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1200	$0.00	$0.00	$1200	01/28/2025

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.

Petitioner Samsung Ex-1004, 0137

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)

130348 7590 10/28/2024
Whirlpool Corporation / McGarry Bair PC
2000 North M63
Benton Harbor, MI 49022

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.
18/535,327	12/11/2023	Mark S. Feddema	SUB-13230-US-CON	8683

TITLE OF INVENTION: DISHWASHER WITH A DISH RACK

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1200	$0.00	$0.00	$1200	01/28/2025

EXAMINER	ART UNIT	CLASS-SUBCLASS
SHAHINIAN, LEVON J	1711	134-05700D

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

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.

❑ Applicant asserting small entity status. See 37 CFR 1.27

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.

❑ Applicant changing to regular undiscounted fee 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. _____

Petitioner Samsung Ex-1004, 0138

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
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www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/535,327	12/11/2023	Mark S. Feddema	SUB-13230-US-CON	8683

130348 7590 10/28/2024

Whirlpool Corporation / McGarry Bair PC
2000 North M63
Benton Harbor, MI 49022

EXAMINER	
SHAHINIAN, LEVON J	
ART UNIT	PAPER NUMBER
1711	

DATE MAILED: 10/28/2024

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.

Petitioner Samsung Ex-1004, 0139

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. 18/535,327	Applicant(s) Feddema et al.	
	Examiner LEVON J SHAHINIAN	Art Unit 1711	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 3 October 2024.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☑ The allowed claim(s) is/are 1,3-8,15 and 21-31 . 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 _____.

/LEVON J SHAHINIAN/
Primary Examiner, Art Unit 1711

DETAILED ACTION

The communication dated 10/3/2024 has been entered and fully considered.

Claims 2, 9-14, and 16-20 were canceled. Claims 1, 3-8, and 15 were amended. Claims 21-31 were added. Claims 1, 3-8, 15, and 21-31 are currently pending.

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.

Response to Arguments

2. Applicant's arguments, see pages 7-9, filed 10/3/2024, with respect to **claims 1-20** have been fully considered and are persuasive. The 35 U.S.C. § 102 rejections of claims 1-20 have been withdrawn.

Allowable Subject Matter

3. **Claims 1, 3-8, 15, and 21-31** are allowed.

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

5. As for **claim 1**, Bengston et al. U.S. Publication 2006/0237051, the closest prior art, differs from the instant claims in failing to teach the second portion connected to and extending from the first portion and angled away from the first portion; the first portion supporting a first set of utensil holders for supporting one or more utensils and the second portion supporting a plurality of spaced pins defining spaced slots for supporting one or more utensils. Furthermore, Examiner agrees that it would not have been

obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to modify the automatic dishwasher taught by Bengston as claimed.

6. **Claims 1, 3-8, and 21-26** are allowed as they are dependent upon allowed claim 1.

7. As for **claim 15**, Bengston et al. U.S. Publication 2006/0237051, the closest prior art, differs from the instant claims in failing to teach the depression extending lower than the first portion relative to the peripheral wall; the first portion supporting a first set of utensil holders for supporting one or more utensils and the second portion defining a cup seat for supporting one of more cups in the depression. Furthermore, Examiner agrees that it would not have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to modify the automatic dishwasher taught by Bengston as claimed.

8. **Claims 15 and 27-31** are allowed as they are dependent upon allowed claim 15.

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

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEVON J SHAHINIAN whose telephone number is (571)270-1384. The examiner can normally be reached M-F: 9:30am-6:00pm.

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, Michael Barr can be reached on (571)272-1414. 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.

/LEVON J SHAHINIAN/
Primary Examiner, Art Unit 1711

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	18/535,327	Feddema et al.
	Examiner	Art Unit
	LEVON J SHAHINIAN	1711

CPC - Searched*		
Symbol	**Date**	**Examiner**
A47L 15/22, 15/4217, 15/4221, 15/4246, 15/428, 15/46, 15/502, 15/503, and 15/505 keyword limited	06/29/2024	LJS
Above updated	10/19/2024	LJS

CPC Combination Sets - Searched*		
Symbol	**Date**	**Examiner**

US Classification - Searched*			
Class	**Subclass**	**Date**	**Examiner**
134	56D, 57D, 58D, and 201 keyword limited	06/29/2024	LJS
Above	Updated	10/19/2024	LJS

* 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**
SEARCH inventor search	06/29/2024	LJS
SEARCH text searches	06/29/2024	LJS
SEARCH CPC searches	06/29/2024	LJS
Above updated	10/19/2024	LJS

Interference Search			
US Class/CPC Symbol	**US Subclass/CPC Group**	**Date**	**Examiner**
Keyword	Search	10/19/2024	LJS

/LEVON J SHAHINIAN/ Primary Examiner, Art Unit 1711	

Petitioner Samsung Ex-1004, 0145

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	18/535,327	Feddema et al.
	Examiner	Art Unit
	LEVON J SHAHINIAN	1711

/LEVON J SHAHINIAN/ Primary Examiner, Art Unit 1711	

Petitioner Samsung Ex-1004, 0146

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	18/535,327	Feddema et al.
	Examiner	Art Unit
	LEVON J SHAHINIAN	1711

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS

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

CLAIM		DATE								
Final	Original	06/29/2024	10/19/2024							
	1	✓	=							
	2	✓	-							
	3	✓	=							
	4	✓	=							
	5	✓	=							
	6	✓	=							
	7	✓	=							
	8	✓	=							
	9	✓	-							
	10	✓	-							
	11	✓	-							
	12	✓	-							
	13	✓	-							
	14	✓	-							
	15	✓	=							
	16	✓	-							
	17	✓	-							
	18	✓	-							
	19	✓	-							
	20	✓	-							
	21		=							
	22		=							
	23		=							
	24		=							
	25		=							
	26		=							
	27		=							
	28		=							
	29		=							
	30		=							
	31		=							

Petitioner Samsung Ex-1004, 0147

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	18/535,327	Feddema et al.
	Examiner	**Art Unit**
	LEVON J SHAHINIAN	1711

CPC						
Symbol					**Type**	**Version**
A47L	/	15	/	502	F	2013-01-01
A47L	/	15	/	4221	I	2013-01-01
A47L	/	15	/	4246	I	2013-01-01
A47L	/	15	/	46	I	2013-01-01
A47L	/	15	/	428	I	2013-01-01
A47L	/	15	/	22	I	2013-01-01
A47L	/	15	/	4217	I	2013-01-01
A47L	/	15	/	503	I	2013-01-01
A47L	/	15	/	505	I	2013-01-01

CPC Combination Sets							
Symbol					**Type**	**Set**	**Ranking**	**Version**
	/		/					

Use images from artifact folder? (•) Yes ( ) No

NONE (Assistant Examiner)	(Date)	**Total Claims Allowed:** 19	
/LEVON J SHAHINIAN/ Primary Examiner, Art Unit 1711 (Primary Examiner)	19 October 2024 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 3

Petitioner Samsung Ex-1004, 0148

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	18/535,327	Feddema et al.
	Examiner	**Art Unit**
	LEVON J SHAHINIAN	1711

INTERNATIONAL CLASSIFICATION				
CLAIMED				
A47L	/	15	/	22
A47L	/	15	/	42
A47L	/	15	/	46
A47L	/	15	/	50

NON-CLAIMED				
	/		/	

US ORIGINAL CLASSIFICATION	
CLASS	**SUBCLASS**
134	57D

CROSS REFERENCES(S)						
CLASS	**SUBCLASS (ONE SUBCLASS PER BLOCK)**					
134	56D	58D	201			

Use images from artifact folder? ◉ Yes ○ No

NONE (Assistant Examiner)	(Date)	**Total Claims Allowed:** 19
/LEVON J SHAHINIAN/ Primary Examiner, Art Unit 1711 (Primary Examiner)	19 October 2024 (Date)	O.G. Print Claim(s): 1 O.G. Print Figure: 3

Petitioner Samsung Ex-1004, 0149

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	18/535,327	Feddema et al.
	Examiner	**Art Unit**
	LEVON J SHAHINIAN	1711

☐ 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
1	1	10	8	19	29										
2	3	11	24												
3	4	12	25												
4	5	13	26												
5	6	14	15												
6	7	15	27												
7	21	16	28												
8	22	17	30												
9	23	18	31												

Use images from artifact folder? ◉ Yes ○ No

NONE		**Total Claims Allowed:**
(Assistant Examiner)	(Date)	19
/LEVON J SHAHINIAN/ Primary Examiner, Art Unit 1711	19 October 2024	O.G. Print Claim(s): 1 / O.G. Print Figure: 3
(Primary Examiner)	(Date)	

Petitioner Samsung Ex-1004, 0150

PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L1	200	((("FEDDEMA") near3 ("Mark")) OR (("SNELL") near3 ("William")) OR (("KAKEHI") near3 ("Sachie"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/06/29 06:35 PM
L2	9878	((("WHIRLPOOL") near3 ("CORPORATION"))).AS,AANM.	(US-PGPUB; USPAT)	OR	ON	ON	2024/06/29 06:35 PM
L3	11	("10835098"|"20060237051"|"20090320883"|"20110203616"|"20150245762"|"20180242816"|"20190290094"|"20190298146"|"2527178"|"8168006"|"9901240").PN.	(US-PGPUB; USPAT)	OR	ON	ON	2024/06/29 06:36 PM
L4	34947	(A47L15/502 or A47L15/22 or A47L15/4217 or A47L15/4221 or A47L15/4246 or A47L15/428 or A47L15/46 or A47L15/503 or A47L15/505).cpc.	(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, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/06/29 06:37 PM
L5	4204	134/56D,57D,58D,201.ccls.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/06/29 06:43 PM
L6	25048	L4 L5	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/06/29 06:43 PM
L7	694	(L1 L2) AND L6	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/06/29 06:43 PM
L8	53	L7 AND ((dishwasher dishwashing warewasher warewashing) AND ((utensil cutlery) WITH	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/06/29 06:44 PM

Petitioner Samsung Ex-1004, 0151

		rack)).clm.					
L9	1357	L6 AND (dishwasher dishwashing warewasher warewashing) AND ((utensil cutlery) WITH rack)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/06/29 06:44 PM
L10	53	L7 AND ((dishwasher dishwashing warewasher warewashing) AND ((utensil cutlery) WITH rack)).clm.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/10/19 11:26 PM
L11	1381	L6 AND (dishwasher dishwashing warewasher warewashing) AND ((utensil cutlery) WITH rack)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/10/19 11:26 PM

PE2E SEARCH - Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
N1	160	((dishwasher dishwashing warewasher warewashing) AND ((utensil cutlery) WITH rack)).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2024/10/19 11:27 PM

UNITED STATES
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ELECTRONIC PAYMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
18/535,327	**01/27/2025 09:23:09 AM Z ET**	**SUB-13230-US-CON**

Title of Invention

DISHWASHER WITH A DISH RACK

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	8683	FILED BY	Marisa Stolsonburg
PATENT CENTER #	68920203	AUTHORIZED BY	John Colligan
CUSTOMER #	130348	FILING DATE	12/11/2023
CORRESPONDENCE ADDRESS	-	FIRST NAMED INVENTOR	Mark S. Feddema

Payment Information

PAYMENT METHOD	PAYMENT TRANSACTION ID	PAYMENT AUTHORIZED BY
DA / 502003	**E20251Q023446703**	**Marisa Stolsonburg**

PRE-AUTHORIZED ACCOUNT	PRE-AUTHORIZED CATEGORY
502003	**37 CFR 1.16 (National application filing, search, and examination fees); 37 CFR 1.17 (Patent application and reexamination processing fees); 37 CFR 1.19 (Document supply fees); 37 CFR 1.20 (Post Issuance fees); 37 CFR 1.21 (Miscellaneous fees and charges)**

FEE CODE	DESCRIPTION	ITEM PRICE($)	QUANTITY	ITEM TOTAL($)
1501	UTILITY ISSUE FEE	1200.00	1	1200.00
			TOTAL AMOUNT:	**$1,200.00**

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 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.

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)

130348 7590 10/28/2024
Whirlpool Corporation / McGarry Bair PC
2000 North M63
Benton Harbor, MI 49022

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.

Marisa L. Stolsonburg	(Typed or printed name)
/Marisa L. Stolsonburg/	(Signature)
January 27, 2025	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/535,327	12/11/2023	Mark S. Feddema	SUB-13230-US-CON	8683

TITLE OF INVENTION: DISHWASHER WITH A DISH RACK

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1200	$0.00	$0.00	$1200	01/28/2025

EXAMINER	ART UNIT	CLASS-SUBCLASS
SHAHINIAN, LEVON J	1711	134-05700D

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 McGarry Bair PC
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: Whirlpool Corporation

(B) RESIDENCE: (CITY and STATE OR COUNTRY): Benton Harbor, Michigan

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. 502003

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

☐ Applicant certifying micro entity status. See 37 CFR 1.29

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.

☐ Applicant asserting small entity status. See 37 CFR 1.27

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.

☐ Applicant changing to regular undiscounted fee 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 /John F. Colligan/ Date January 27, 2025

Typed or printed name John F. Colligan Registration No. 48,240

PTOL-85 Part B (11/23) Approved for use through 03/31/2026 OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Petitioner Samsung Ex-1004, 0155

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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
18/535,327	**01/27/2025 09:23:09 AM Z ET**	**SUB-13230-US-CON**

Title of Invention

DISHWASHER WITH A DISH RACK

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	8683	FILED BY	Marisa Stolsonburg
PATENT CENTER #	68920203	FILING DATE	12/11/2023
CUSTOMER #	130348	FIRST NAMED INVENTOR	Mark S. Feddema
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	John Colligan

Documents

TOTAL DOCUMENTS: 1

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
G1892889.pdf	1	Issue Fee Payment (PTO-85B)	1017 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
G1892889.pdf	7F81CF29E141E4B3DA4DA6EC6002F0D5C04C8165CBFE1703 2D4DCEC082DCB0A96ED663B46D48242DC9F4F3D8CAE5930 56781911B4F7D492765043425E4E35E7C

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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 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.

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (02-18)
Approved for use through 11/30/2020. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	
Filing Date	
First Named Inventor	Mark S. Feddema
Art Unit	
Examiner Name	
Attorney Docket Number	SUB-13230-US-CON

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	9901240	B2	2018-02-27	Lee	
	2	2527178		1950-10-24	Elsaesser	
	3	8168006	B2	2012-05-01	Bengston et al.	
	4	10835098	B2	2020-11-17	Harald Disch et al.	

If you wish to add additional U.S. Patent citation information please click the Add button. Add

U.S.PATENT APPLICATION PUBLICATIONS Remove

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
Change(s) applied to document, /J.E./ 11/1/2024	1	20190290094	A1	2019-09-26	~~Whirlpool Corporation~~ Balinski et al.	
	2	20150245762	A1	2015-09-03	Tuller	

EFS Web 2.1.18

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /L.J.S/

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/535,327	02/25/2025	12232681	SUB-13230-US-CON	8683

130348 7590 02/05/2025

Whirlpool Corporation / McGarry Bair PC
2000 North M63
Benton Harbor, MI 49022

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.

Petitioner Samsung Ex-1004, 0159

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

Mark S. Feddema, Kalamazoo, MI;
William J. Snell, Elkhart, IN;
Sachie Kakehi, St. Joseph, MI;

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

WHIRLPOOL CORPORATION, BENTON HARBOR, MI;

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 USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.

United States of America

To Promote the Progress of Science and Useful Arts

The Director

of the United States Patent and Trademark Office has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this United States

Patent

grants to the person(s) having title to this patent the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States of America or importing the invention into the United States of America, and if the invention is a process, of the right to exclude others from using, offering for sale or selling throughout the United States of America, products made by that process, for the term set forth in 35 U.S.C. 154(a)(2) or (c)(1), subject to the payment of maintenance fees as provided by 35 U.S.C. 41(b). See the Maintenance Fee Notice on the inside of the cover.

Acting Director of the United States Patent and Trademark Office

Maintenance Fee Notice

If the application for this patent was filed on or after December 12, 1980, maintenance fees are due three years and six months, seven years and six months, and eleven years and six months after the date of this grant, or within a grace period of six months thereafter upon payment of a surcharge as provided by law. The amount, number and timing of the maintenance fees required may be changed by law or regulation. Unless payment of the applicable maintenance fee is received in the United States Patent and Trademark Office on or before the date the fee is due or within a grace period of six months thereafter, the patent will expire as of the end of such grace period.

Patent Term Notice

If the application for this patent was filed on or after June 8, 1995, the term of this patent begins on the date on which this patent issues and ends twenty years from the filing date of the application or, if the application contains a specific reference to an earlier filed application or applications under 35 U.S.C. 120, 121, 365(c), or 386(c), twenty years from the filing date of the earliest such application ("the twenty-year term"), subject to the payment of maintenance fees as provided by 35 U.S.C. 41(b), and any extension as provided by 35 U.S.C. 154(b) or 156 or any disclaimer under 35 U.S.C. 253.

If this application was filed prior to June 8, 1995, the term of this patent begins on the date on which this patent issues and ends on the later of seventeen years from the date of the grant of this patent or the twenty-year term set forth above for patents resulting from applications filed on or after June 8, 1995, subject to the payment of maintenance fees as provided by 35 U.S.C. 41(b) and any extension as provided by 35 U.S.C. 156 or any disclaimer under 35 U.S.C. 253.

Form PTO-377C (Rev 09/17)

US012232681B2

(12) **United States Patent**
Feddema et al.

(10) **Patent No.: US 12,232,681 B2**
(45) **Date of Patent: Feb. 25, 2025**

(54) **DISHWASHER WITH A DISH RACK**

(71) Applicant: **WHIRLPOOL CORPORATION**, Benton Harbor, MI (US)

(72) Inventors: **Mark S. Feddema**, Kalamazoo, MI (US); **William J. Snell**, Elkhart, IN (US); **Sachie Kakehi**, St. Joseph, MI (US)

(73) Assignee: **Whirlpool Corporation**, Benton Harbor, MI (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **18/535,327**

(22) Filed: **Dec. 11, 2023**

(65) **Prior Publication Data**

US 2024/0099551 A1 Mar. 28, 2024

Related U.S. Application Data

(63) Continuation of application No. 17/830,947, filed on Jun. 2, 2022, now Pat. No. 11,864,712, which is a continuation of application No. 16/833,984, filed on Mar. 30, 2020, now Pat. No. 11,375,874.

(51) **Int. Cl.**

A47L 15/22	(2006.01)
A47L 15/42	(2006.01)
A47L 15/46	(2006.01)
A47L 15/50	(2006.01)

(52) **U.S. Cl.**

CPC ***A47L 15/502*** (2013.01); ***A47L 15/22*** (2013.01); ***A47L 15/4217*** (2013.01); ***A47L 15/4221*** (2013.01); ***A47L 15/4246*** (2013.01); ***A47L 15/428*** (2013.01); ***A47L 15/46*** (2013.01); ***A47L 15/503*** (2013.01); ***A47L 15/505*** (2013.01)

(58) **Field of Classification Search**

None

See application file for complete search history.

(56) **References Cited**

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(Continued)

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(Continued)

OTHER PUBLICATIONS

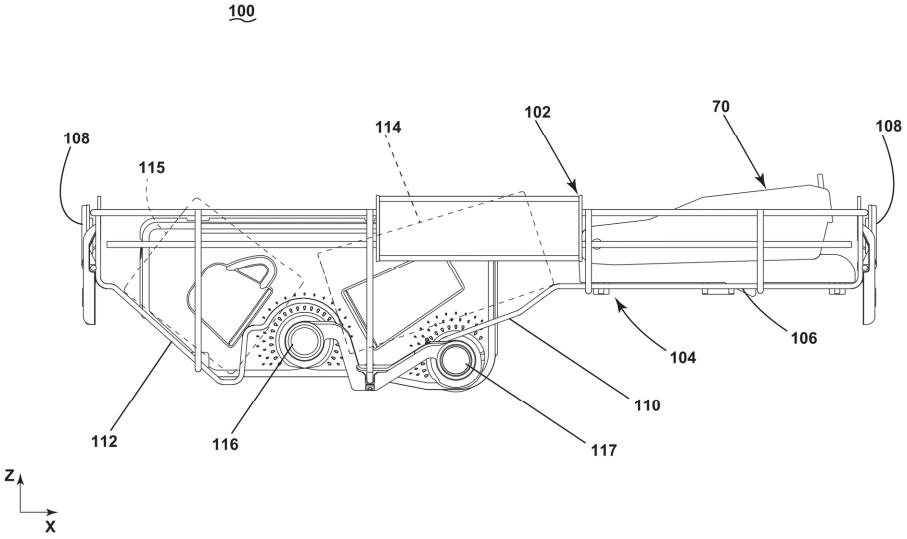
Chinese Patent Office, Decision to Grant re Corresponding Application No. 202110328243.8, Jun. 1, 2023, 5 pages.

Primary Examiner — Levon J Shahinian
(74) *Attorney, Agent, or Firm* — McGarry Bair PC

(57) **ABSTRACT**

An automatic dishwasher configured to implement an automatic treating cycle of operation. The automatic dishwasher having a tub and a dish rack located within the dish treating chamber. The dish rack comprising a bottom wall having a first portion defined by a substantially planar portion extending across a first portion of bottom wall and second portion defined by a depression portion extending across a second portion of bottom wall.

19 Claims, 9 Drawing Sheets



Petitioner Samsung Ex-1004, 0163

(56) **References Cited**

U.S. PATENT DOCUMENTS

2019/0290094	A1	9/2019	Balinski et al.
2019/0298146	A1	10/2019	Gutkowski

FOREIGN PATENT DOCUMENTS

CN	101966069	A	2/2011
CN	102215985	A	10/2011
CN	105496336	A	4/2016
CN	109475265	A	4/2016
CN	105559725	A	5/2016
CN	205697665	U	11/2016
CN	108135432	A	6/2018
CN	109259690	A	1/2019
DE	102013213612	A1	1/2015
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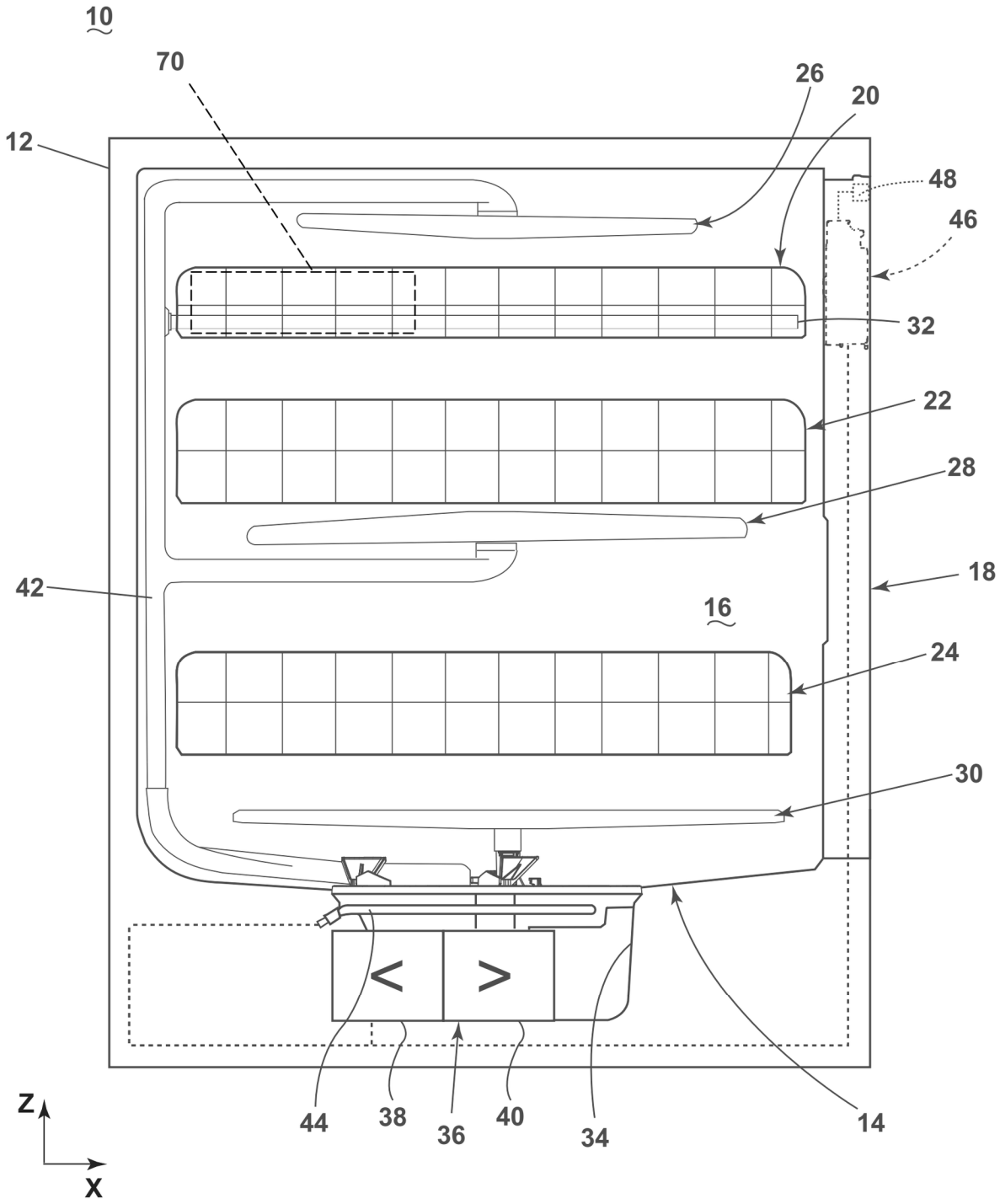


FIG. 1

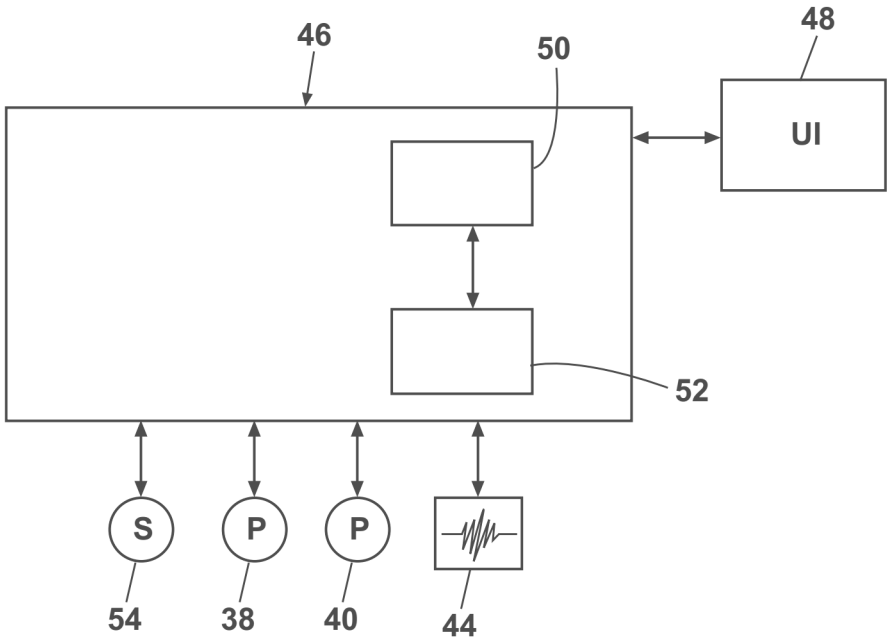


FIG. 2

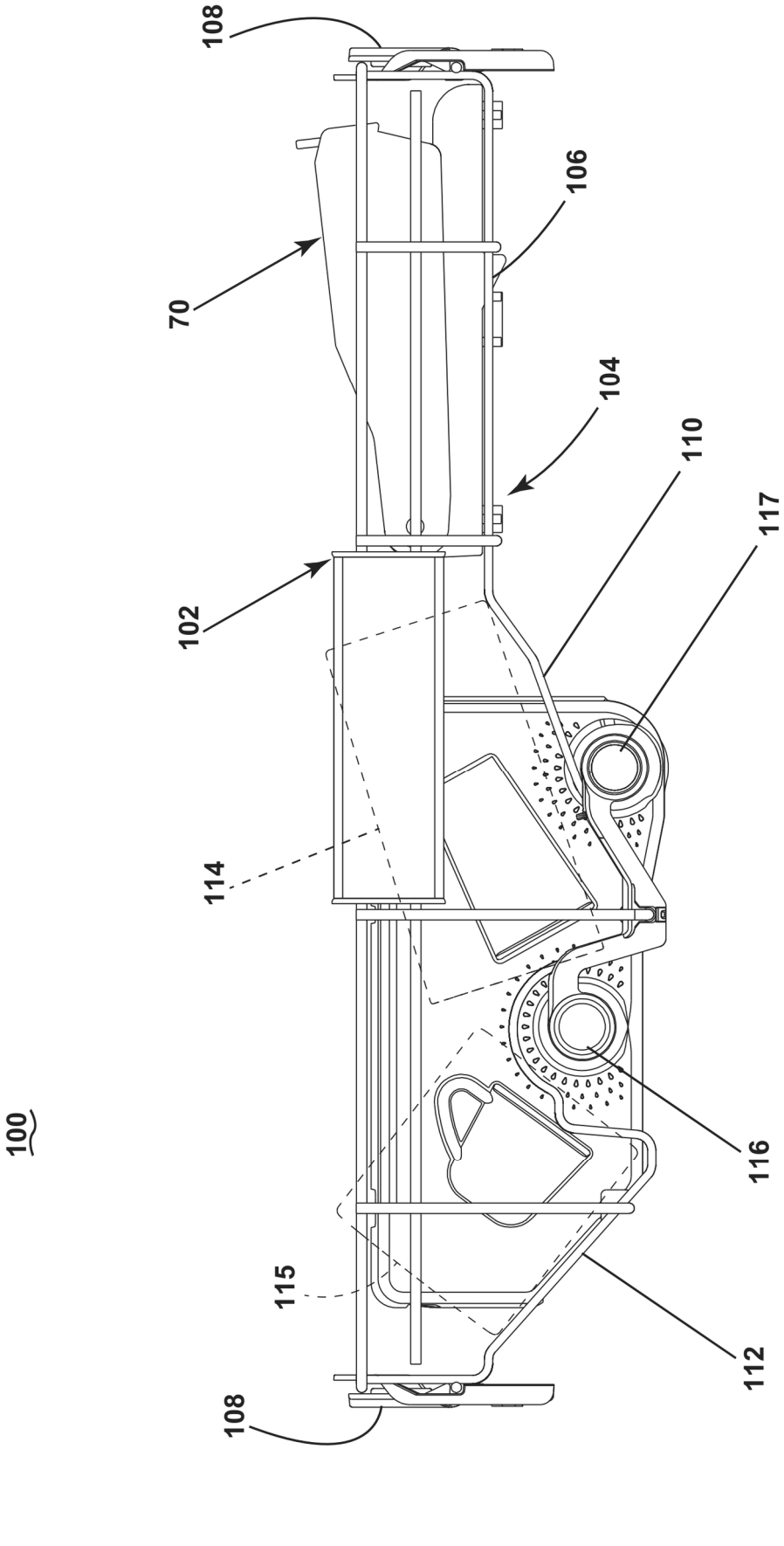


FIG. 3

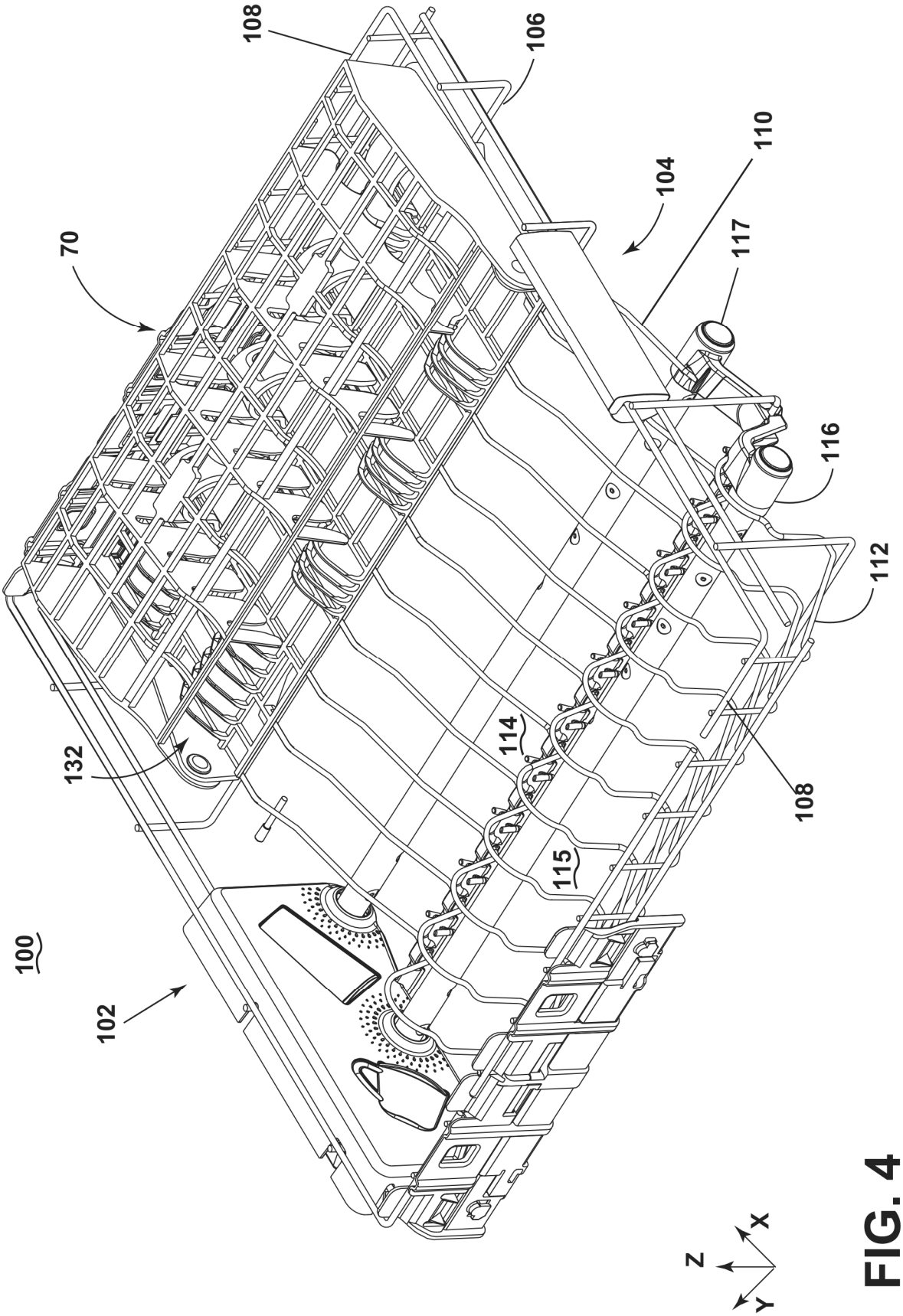


FIG. 4

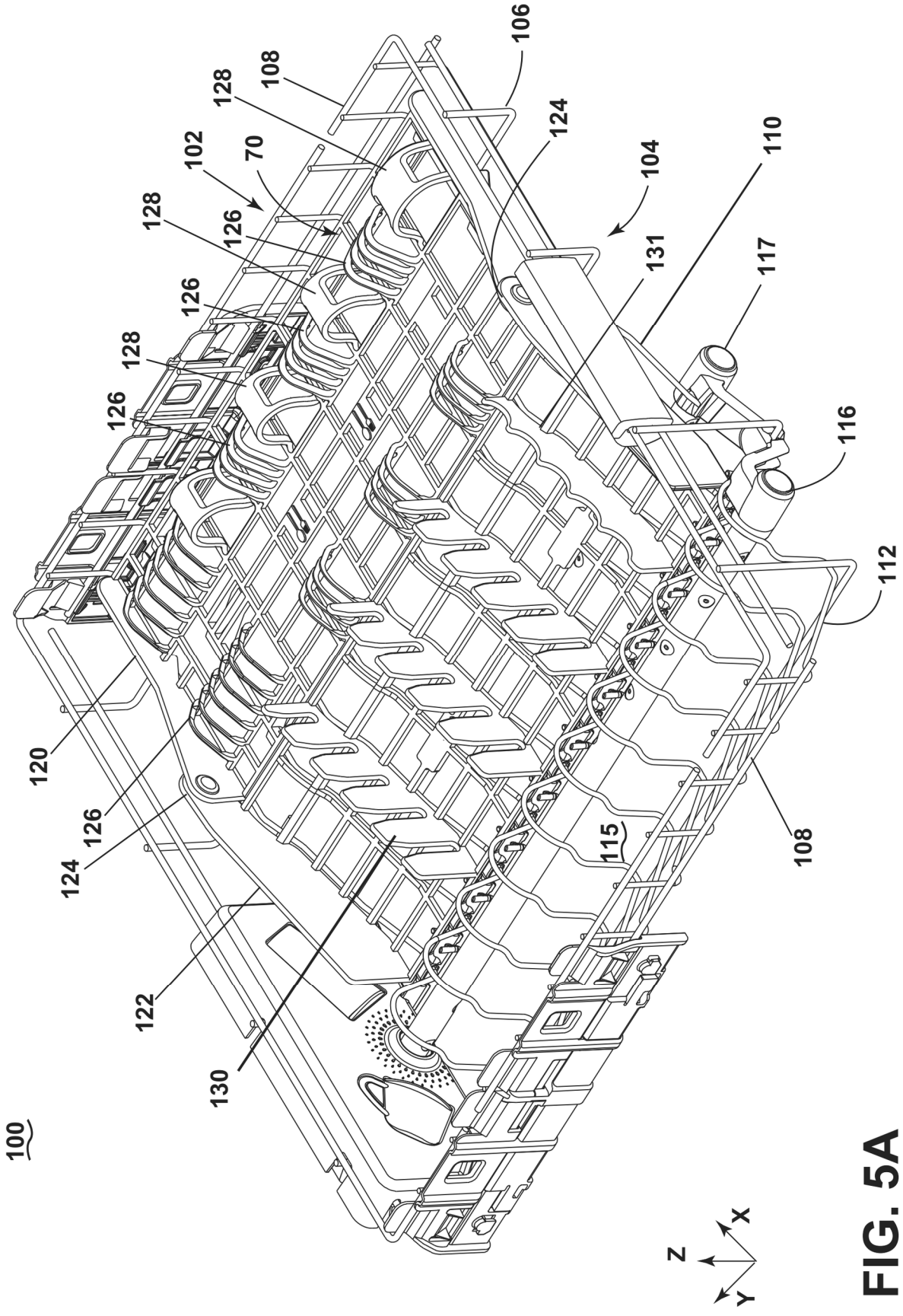

106
108
128
102
70
124
104
110
128
126
131
117
126
128
126
116
112
120
126
124
115
108
122
130
100
Z
X
Y

FIG. 5A

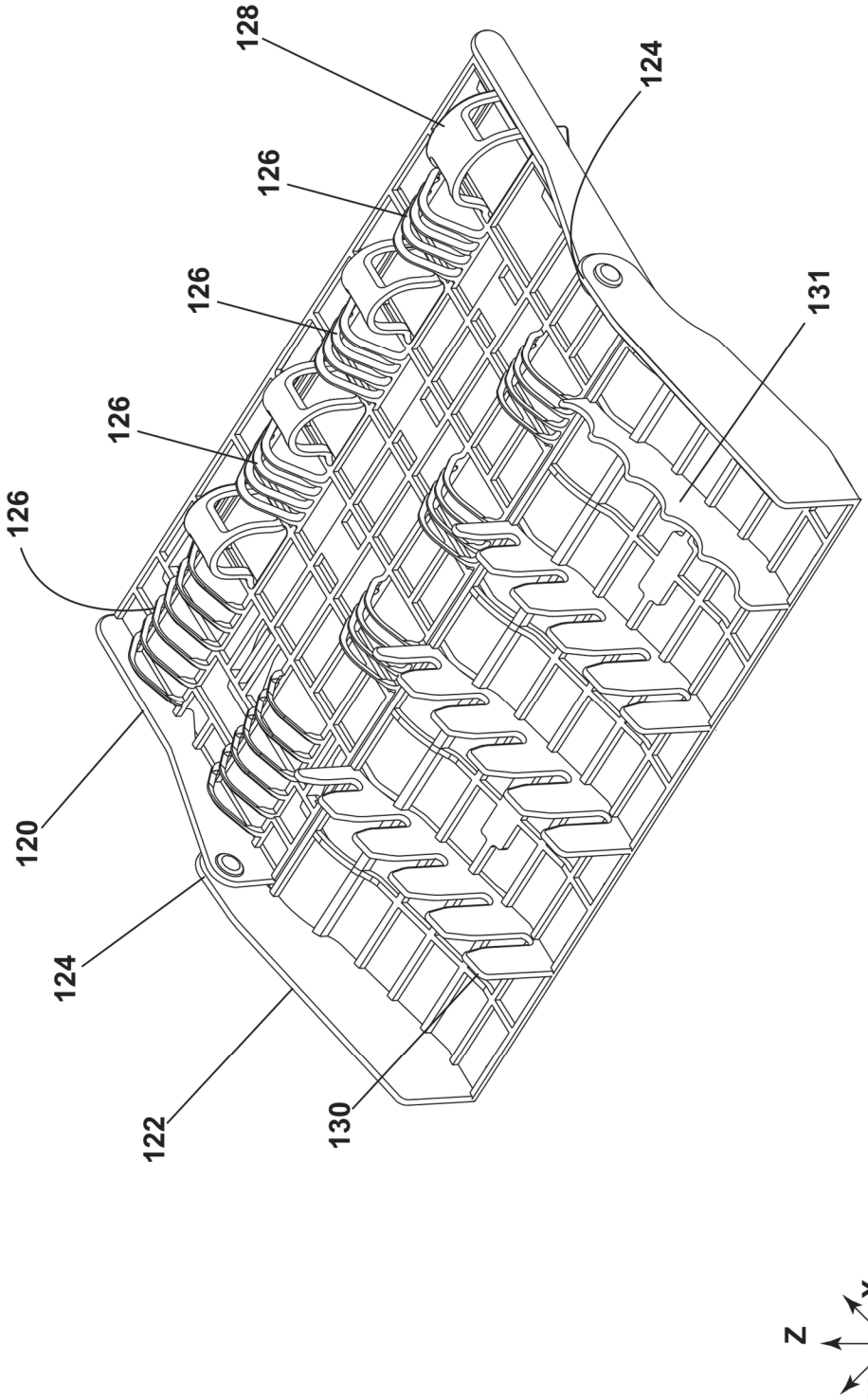


FIG. 5B

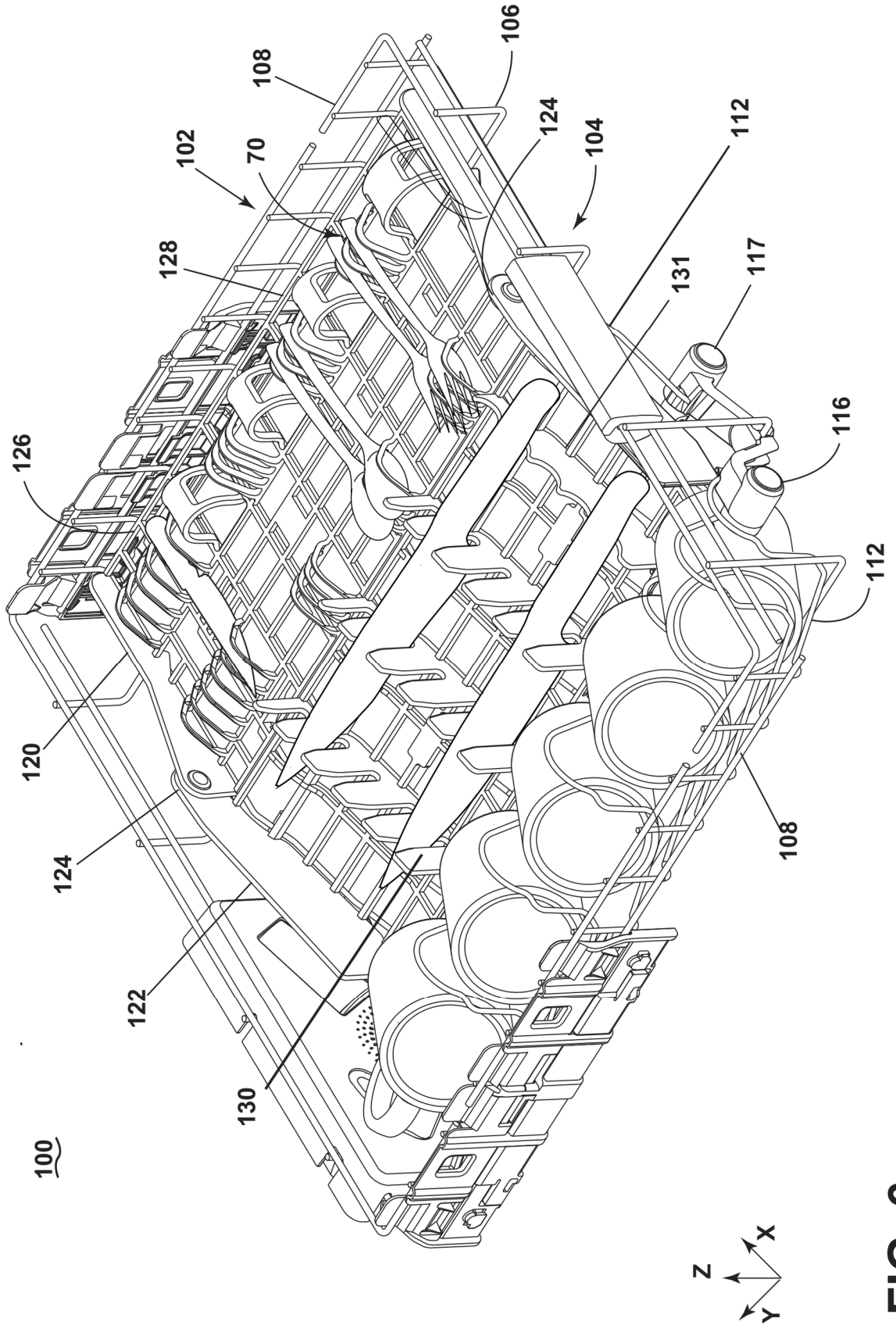

106
108
124
104
112
102
70
128
131
117
116
126
112
120
124
108
122
130
100
Z
X
Y

FIG. 6

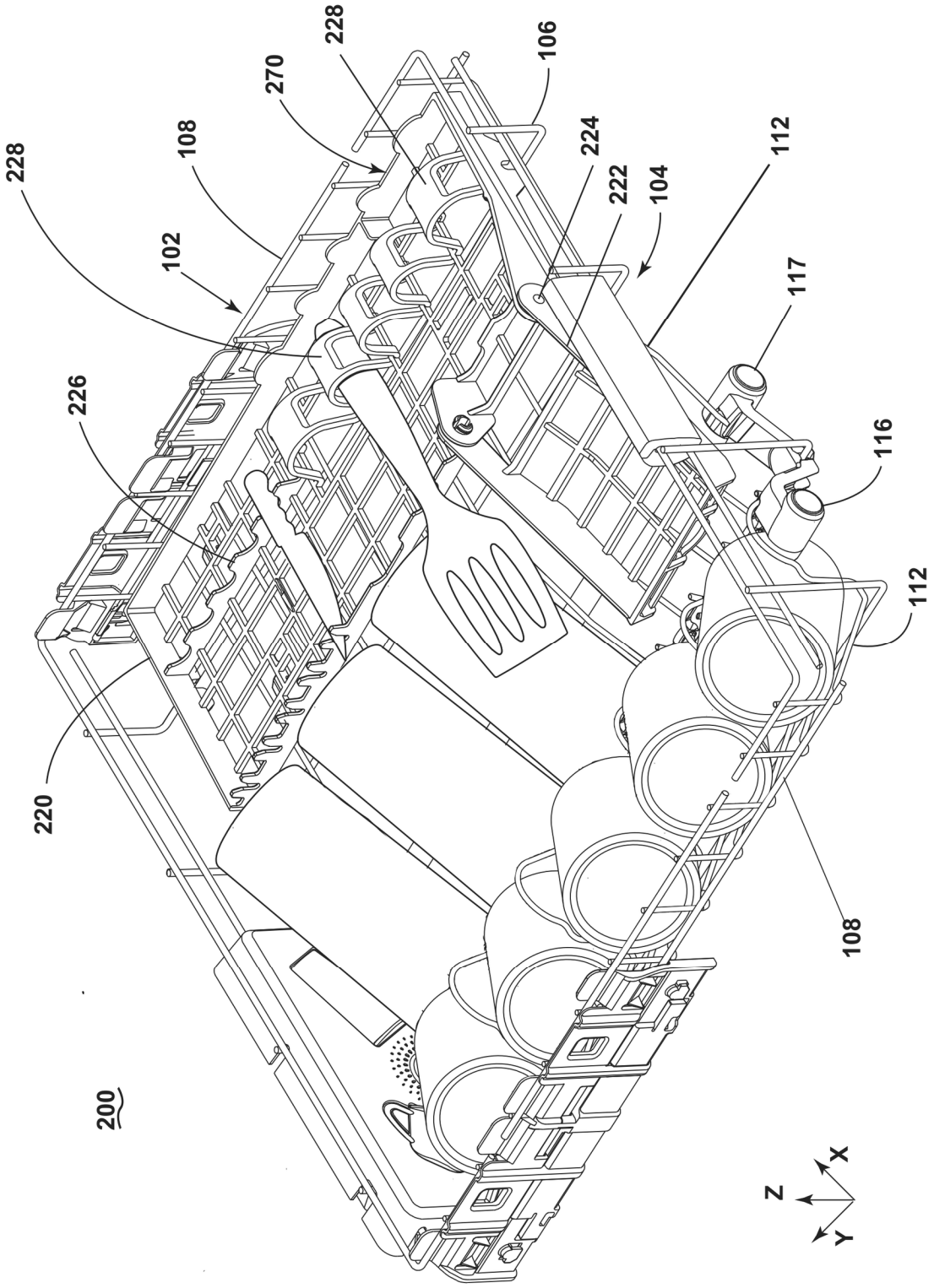

228
270
228
106
108
224
112
228
222
104
102
117
226
116
112
220
108
200
Z
X
Y

FIG. 7

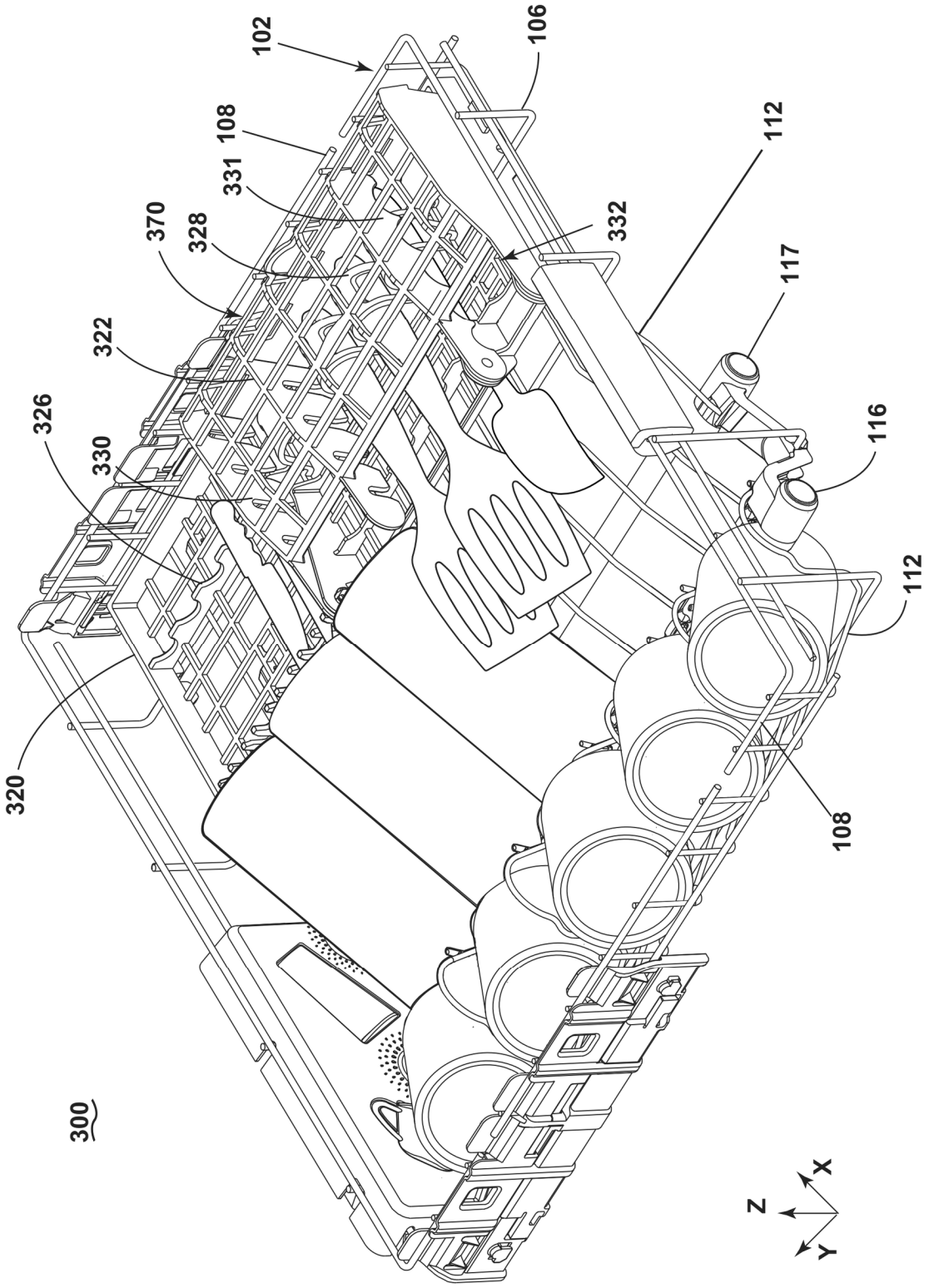

102
106
108
112
331
332
370
328
117
322
326
116
330
112
320
108
300
Z
X
Y

FIG. 8

DISHWASHER WITH A DISH RACK

CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a continuation of U.S. patent application Ser. No. 17/830,947, filed on Jun. 2, 2022, now U.S. Pat. No. 11,864,712, issued Jan. 9, 2024, which is a continuation of U.S. patent application Ser. No. 16/833,984, filed Mar. 30, 2020, now U.S. Pat. No. 11,375,874, issued Jul. 5, 2022, both of which are incorporated herein by reference in their entirety.

TECHNICAL FIELD

This disclosure generally relates to a dishwasher, and more specifically to dishwasher including a utensil caddy mounted to a dish rack.

BACKGROUND

Household dishwashers typically include one or more dish racks for holding various types of dishes in the dishwasher tub. Traditionally, a dishwasher includes an upper dish rack that holds glassware and small dishes, and a lower dish rack that holds larger dishes, such as plates. The upper and lower dish racks usually consume most of the space inside the dishwasher tub. Some dishwashers can also include a third dish rack, often referred to as a third level rack, of a much shorter height the upper and lower dish racks, with the height being such as to only accommodate silverware or other low profile utensils.

A utensil caddy is often used to specifically hold silverware. Utensil caddies are normally removably carried by the lower dish rack or on the inner surface of the door closing the dishwasher. These utensil caddies are oriented such that they hold the utensils in an upright or vertical orientation during washing.

Some dishwashes can have both a utensil caddy and a third level rack. The third level rack can normally accommodate long handle items, such as spatulas, severing spoons, stirring spoons, which, if put into the utensil caddy, would extend far enough vertically to interfere with the rotation of the sprayer below the upper rack.

SUMMARY

In one aspect, the present disclosure relates to an automatic dishwasher configured to implement an automatic treating cycle of operation. The dishwasher has a tub defining a dish treating chamber and a dish rack located within the dish treating chamber and comprising a bottom wall having a first portion defined by a substantially planar portion extending across a first portion of bottom wall and second portion defined by a depression portion extending across a second portion of bottom wall.

In another aspect, the present disclosure relates to an automatic dishwasher configured to implement an automatic treating cycle of operation. The dishwasher has a tub defining a dish treating chamber and a dish rack located within a top portion of the dish treating chamber, the dish rack having a first portion with a first vertical height and defining a utensil seat, and the dish rack having a second portion with a second vertical height and defining a cup seat, the second vertical height being greater than the first vertical height.

In another aspect, the present disclosure relates to an automatic dishwasher configured to implement an automatic treating cycle of operation. The dishwasher has a tub defining a dish treating chamber and a dish rack located within the dish treating chamber and comprising a bottom wall defining a first substantially planar portion extending across a portion of bottom wall and at least one of a second and third planar portion angled with respect to the first planar portion and defining a depression relative first planar portion.

BRIEF DESCRIPTION OF THE DRAWINGS

In the drawings:

FIG. **1** is a schematic, cross-sectional view of a dishwasher with a dish rack according to an aspect of the present disclosure.

FIG. **2** is a schematic diagram of a control system for the dishwasher of FIG. **1**.

FIG. **3** is a side view of a dish rack assembly including the dish rack of FIG. **1** with a utensil caddy according aspects of the disclosure.

FIG. **4** is a perspective view of the utensil caddy of FIG. **3** in a first position according to aspects of the disclosure.

FIG. **5**A is a perspective view of the utensil caddy of FIG. **3** in a second position according to aspects of the disclosure.

FIG. **5**B is a perspective view of the utensil caddy in the second position of FIG. **5***a* according to aspects of the disclosure.

FIG. **6** is a perspective view of the utensil caddy in the second position of FIG. **5** including utensils according to aspects of the disclosure

FIG. **7** is a perspective view of the dish rack including an exemplary utensil caddy of FIG. **3** which extends across a quarter of the dish rack assembly according to aspects of the disclosure.

FIG. **8** is a perspective view of the dish rack including an exemplary utensil caddy of FIG. **3** which extends across half of the dish rack assembly according to aspects of the disclosure.

DESCRIPTION OF EMBODIMENTS OF THE INVENTION

Aspects of the present disclosure relate to a utensil caddy including on a dish rack of dishwasher, specifically an automatic dishwasher. The utensil caddy can be configured to include, at least, a first side wall including a first set of utensil holders and a second side wall including a second set of utensil holders. The second side wall can be further configured to be moveable relative to the utensil caddy between a first position and a second position.

FIG. **1** illustrates a schematic, cross-sectional view of an exemplary dishwasher **10**, specifically an automatic dishwasher, according to an embodiment of the present disclosure. The dishwasher **10** shares many features of a conventional automatic dishwasher, which will not be described in detail herein except as necessary for a complete understanding of the disclosure. While the present disclosure is described in terms of a conventional dishwashing unit, it can also be implemented in other types of dishwashing units, such, but not limited to, as in-sink dishwashers, multi-tub dishwashers, or drawer-type dishwashers. A chassis **12** can define an interior of the dishwasher **10** and can include a frame, with or without panels mounted to the frame. For built-in dishwashers, outer panels are typically not needed. For dishwashers that are not built into existing cabinetry, the chassis **12** can include the panels mounted to the frame to form a cabinet for the dishwasher **10**. An open-faced tub **14**

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can be provided within the interior of and mounted to the chassis **12** and can at least partially define a treating chamber **16** or a dish treating chamber for washing or otherwise treating dishes. The open face of the tub **14** defines an access opening for the treating chamber **16**.

A closure element, such as a door assembly **18**, can be movably mounted to the dishwasher **10** for movement between opened and closed positions. The door assembly **18** can be configured selectively open and close the treating chamber access opening defined by the open face of the tub **14**. Thus, the door assembly **18** provides accessibility to the treating chamber **16** for the loading and unloading of dishes or other washable items. It should be appreciated that the door assembly **18** can be secured to the lower front edge of the chassis **12** or to the lower front edge of the tub **14** via a hinge assembly (not shown) configured to pivot the door assembly **18**. When the door assembly **18** is closed, user access to the treating chamber **16** can be prevented, whereas user access to the treating chamber **16** can be permitted when the door assembly **18** is open. Alternatively, the closure element can be slidable relative to the chassis **12**, such as in a drawer-type dishwasher, wherein the access opening for the treating chamber **16** is formed by an open-top tub. Other configurations of the closure element relative to the chassis **12** and the tub **14** are also within the scope of the disclosure.

Dish holders, illustrated in the form of an upper dish rack **22**, a lower dish rack **24**, and a third level rack **20**, can be located within the treating chamber **16** and receive dishes for treatment, such as washing. The third level, upper, and lower dish racks **20**, **22**, **24** can be vertically oriented with respect to one another. That is, third level, upper, and lower dish racks **20**, **22**, **24** can be spaced from one another in a vertical direction denoted by a Z-axis. The third level, upper, and lower dish racks **20**, **22**, **24** are typically mounted for slidable movement in and out of the treating chamber **16** for ease of loading and unloading. Other dish holders can be provided, such as a silverware basket, separate from or combined with third level, upper, and lower dish racks **20**, **22**, **24**. As used in this description, the term "dish(es)" is intended to be generic to any item, single or plural, that may be treated in the dishwasher **10**, including, without limitation, dishes, plates, pots, bowls, pans, glassware, and silverware. While the dishwasher **10** is illustrated herein as having three dish racks **20**, **22**, **24**, it will be understood that any suitable number and configuration of dish racks is also within the scope of the disclosure.

A utensil caddy **70** can be included with the third level rack **20**. Specifically, the utensil caddy **70** can be provided on a lateral side of third level dish rack **20**. As used herein, the term lateral can denote any direction corresponding to the X-axis. The utensil caddy **70** can be configured to hold a set of utensils so they can be treated within the treating chamber **16**. As used herein, the term utensil can refer to any implement, article or container suitable for treatment within the treating chamber **16**. For example, the set of utensils can include, but is not limited to, a spoon, a fork, a spork, a knife, a spatula, a baby-bottle nipple, a measuring spoon, a ladle, a tong, or the like. It will be appreciated that there can be any number of one or more utensil caddy's **70** within the treating chamber **16** and included with any of the third level, upper, and lower dish racks **20**, **22**, **24**.

A spray system can be provided for spraying liquid in the treating chamber **16** and may be provided in the form of, for example, an upper spray assembly **26**, a middle spray assembly **28**, and a lower spray assembly **30**. The upper spray assembly **26**, the middle spray assembly **28**, and the lower spray assembly **30** are located, respectively, above the third level dish rack **20**, beneath the upper dish rack **22**, and beneath the lower dish rack **24** and are illustrated as rotating spray arms by example but are not limited to such positions and sprayer type. The spray system can further include a rack spray assembly **32** coupled to the third level dish rack **20**; the rack spray assembly **32** will be discussed in further detail below. Furthermore, the spray system can include additional and/or alternative spray assemblies. For example, a distribution header or spray manifold can be located at the rear of the tub **14** at any vertical position. An exemplary spray manifold is set forth in detail in U.S. Pat. No. 7,594,513, issued Sep. 29, 2009, and titled "Multiple Wash Zone Dishwasher," which is incorporated herein by reference in its entirety.

A recirculation system can be provided for recirculating liquid from the treating chamber **16** to the spray system. The recirculation system can include a sump **34** and a pump assembly **36**. The sump **34** collects the liquid sprayed in the treating chamber **16** and can be formed by a sloped or recess portion of a bottom wall of the tub **14**. The pump assembly **36** can include both a drain pump **38** and a recirculation pump **40**. The drain pump **38** can draw liquid from the sump **34** and pump the liquid out of the dishwasher **10** to a household drain line (not shown). The recirculation pump **40** can draw liquid from the sump **34**, and the liquid can be simultaneously or selectively pumped through a supply conduit or tube **42** to each of the upper, middle, lower, and rack spray assemblies **26**, **28**, **30**, **32** for selective spraying. The liquid supply tube **42** extends along a wall of the tub **14** and fluidly connect the pump assembly **36** to the upper, middle, lower, and rack spray assemblies **26**, **28**, **30**, **32**. While not shown, a liquid supply system can include a water supply conduit coupled with a household water supply for supplying water to the treating chamber **16**.

While the pump assembly **36** is illustrated herein as having separate drain and recirculation pumps **38**, **40**, in an alternative embodiment, the pump assembly **36** can include a single pump configured to selectively supply wash liquid to either the spray system or the drain line, such as by configuring the pump to rotate in opposite directions, or by providing a suitable valve system.

A heating system including a heater **44** can be located, for example, within the sump **34** for heating the liquid contained in the sump **34**. The heater **44** can also heat air contained in the treating chamber **16**. Alternatively, a separate heating element (not shown) can be provided for heating the air circulated through the treating chamber **16**. A filtering system (not shown) can be fluidly coupled with the recirculation flow path for filtering the recirculated liquid.

A control system including a controller **46** can also be included in the dishwasher **10**, which can be operably coupled with various components of the dishwasher **10** to implement a cycle of operation. The controller **46** can be located within the door assembly **18** as illustrated, or it can alternatively be located somewhere within the chassis **12**. The controller **46** can also be operably coupled with a control panel or user interface **48** for receiving user-selected inputs and communicating information to the user. The user interface **48** can include operational controls such as dials, lights, switches, and displays enabling a user to input commands, such as a cycle of operation, to the controller **46** and receive information.

FIG. **2** is a schematic illustration of the controller **46** of FIG. **1**. The controller **46** can be coupled with the heater **44** for heating the wash liquid during a cycle of operation, the drain pump **38** for draining liquid from the treating chamber

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16, and the recirculation pump **40** for recirculating the wash liquid during the cycle of operation. The controller **46** can be provided with a memory **50** and a central processing unit (CPU) **52**. The memory **50** can be used for storing control software that can be executed by the CPU **52** in completing an automatic cycle of operation using the dishwasher **10** and any additional software. For example, the memory **50** can store one or more pre-programmed cycles of operation that can be selected by a user and completed by the dishwasher **10**. A cycle of operation for the dishwasher **10** can include one or more of the following steps: a wash step, a rinse step, and a drying step. The wash step can further include a pre-wash step and a main wash step. The rinse step can also include multiple steps such as one or more additional rinsing steps performed in addition to a first rinsing. The amounts of water and/or rinse aid used during each of the multiple rinse steps can be varied. The drying step can have a non-heated drying step (so called "air only"), a heated drying step or a combination thereof. These multiple steps can also be performed by the dishwasher **10** in any desired combination.

The controller **46** can also receive input from one or more sensors **54**. Non-limiting examples of sensors that can be communicably coupled with the controller **46** include a temperature sensor and turbidity sensor to determine the soil load associated with a selected grouping of dishes, such as the dishes associated with a particular area of the treating chamber **16**.

The dishwasher **10** can include all of the above exemplary systems, a selection of the above exemplary systems, and/or other systems not listed above as desired. Further, some of the systems can be combined with other systems and/or can share components with other systems. Examples of other systems that the dishwasher can further include are a dispensing system that supplies one or more treating agents or chemistries to the treating chamber **16** and an air supply system that can provide air, which can be heated or not heated, to the treating chamber **16**, such as for drying and/or cooling the dishes. An exemplary air supply system is set forth in U.S. patent application Ser. No. 12/959,673, filed Dec. 3, 2010 and published as U.S. Patent Application Publication No. 2012/0138106 on Jun. 7, 2012, both of which are incorporated herein by reference in their entireties.

FIG. **3** illustrates a side view of a dish rack assembly **100** including the utensil caddy **70** of FIG. **1** and a dish rack **102**. It will be appreciated that the dish rack assembly **100** can include any dish rack **102** as described herein. For example, the dish rack **102** can be any of the upper or lower dish racks **22**, **24**, or the third level rack **20**.

The dish rack **102** has a wire frame construction forming a bottom wall **104** from which extends a peripheral wall **108** defining the sides of the dishrack. The bottom wall **104** and peripheral wall **108** define an interior where utensils and the like can be placed for washing.

While the bottom wall **104** can have any shape, including planar, the bottom wall **104** is illustrated as having a planar portion **106** and a depression defined by a first and second angled wall **110**, **112**. The depression, as illustrated, forms a first set of cup seats **114** and a second set of cup seats **115**, which hold cups as illustrated.

The bottom wall **104** can define multiple planes. For example, the planar portion **106** can define a first plane transverse to the X-axis, while the first angled wall **110** can define a second plane and the second angled wall **112** can define a third plane. The second and the third planes can both be angled with respect to the X-axis such that they intersect with the first plane. Specifically, the second plane can intersect the first plan at the point where the planar portion **106** and the first angled wall **110** meet.

A spray assembly is carried by the dish rack **102** and includes first and second sprayers **116**, **117**, with the first sprayer **116** located between the first and second set of cup seats **114**, **115** to emit a spray into the open top of the cups, and the second sprayer **117** located to emit a spray into the planar portion **106**.

The utensil caddy **70** can be received within a region of the dish rack **102** adjacent to a portion of the bottom wall **104**, specifically the planar portion **106**. It is contemplated that the utensil caddy **70** can be removably mounted to a portion of the dish rack **102**, specifically the planar portion **106**. As such, the utensil caddy **70** can be moved to other portions of the dish rack **102** or to another dish rack **102** altogether. Alternatively, at least a portion of the utensil caddy **70** can be integrally formed with the planar portion **106** and hence the dish rack **102**. It is further contemplated that the utensil caddy **70** can be laid on its side or otherwise be defend as a horizontal utensil caddy such that utensils can be received within the utensil caddy **70** in a horizontal fashion transverse to the X-axis. Traditional utensil caddies, on the other hand, are vertically mounted such that they can be defined as a vertical utensil caddy. As such, utensils can be received within the vertical utensil caddy in a vertical fashion transverse to the Z-axis.

FIG. **4** is a perspective view of the dish rack assembly **100** of FIG. **3** including the utensil caddy **70** in a first position. As used herein, the first position can be defined as a closed configuration of the utensil caddy **70** where at least a portion of the utensil caddy **70** abuts a portion of the bottom wall **104** and does not abut the first angled wall **110**. As illustrated, the first and second set of cup seats **114**, **115**, the first and second sprayers **116**, **117**, and the utensil caddy **70** can extend along the entirety of the dish rack **102** along the Z-axis.

The utensil caddy **70** can include a periphery defining an interior with an open top **132**. The open top **132** can be defined as a portion of the utensil caddy **70** in which utensils can be passed through. The open top **132** can lie at a junction point between the first plane of the planar portion **106** and the second plane of the first angled wall **110**.

FIG. **5**A is a perspective view of the dish rack assembly **100** of FIG. **3** including the utensil caddy **70** in a second position. The second position can be defined as an open configuration of the utensil caddy **70** where at least a portion of the utensil caddy **70** is carried by, received on, or abuts a portion of the bottom wall **104**, specifically the first angled portion **112** as illustrated. It will be appreciated that the utensil caddy **70** can be advantageously shaped so that a portion of the utensil caddy **70** can transition from the closed or first position to the opened or second position and conform with the first angled wall **110**.

FIG. **5**B is a perspective view of the utensil caddy **70** in the second position of FIG. **5**A without the dish rack **102**. The utensil caddy **70** can include a first side wall **120**, a second side wall **122**, and a set of hinges **124**.

The first side wall **120** can rest on, be directly coupled to, or form a portion of the bottom wall **104** of the dish rack **102**, specifically, the planar portion **106**. The first side wall **120** can include a first set of utensil holders illustrated as a set of utensil seats **126** or loops **128**. The utensil holders can be configured to retain or hold a set of utensils such as, but not limited to, spoons, forks, sporks, knives, ladles, spatulas, or the like. Specifically, the set of utensil seats **126** can be configured to hold smaller utensils (e.g., spoons, forks, sporks, etc.) while the loops **128** can be configured to hold

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larger utensils (e.g., spatulas, ladles, whisks, etc.). Although illustrated as four separate loops **128** and four sets of utensil seats **126**, it will be appreciated that there can be any number of loops **128** or utensil seats **126** provided on the first side wall **120**. It will be further appreciated, that one or more of the sets of utensils seats **126** can be provided between adjacent loops **128** as illustrated.

The second side wall **122** can be configured to rotate along the Y-axis about the set of hinges **124** and with respect to the first side wall **120**. As such, the second side wall **122** can be moveable between the first position where at least a portion of the second side wall **122** abuts the first side wall **120**, and the second position where at least a portion of the second side wall **122** rests against or abuts the bottom wall **104**, specifically against the first angled portion **112**. As illustrated, the second side wall **122** can overlie the entire first set of cup seats **114** and not overlie the second set of cup seats **115** when in the second position.

The second side wall **122** can further include a second set of utensil holders illustrated as a pin **130** and a seat **131**. The pin **130** can be formed as a triangular projection extending from a surface while the seat **131** can be formed as a curved projection of the second side wall **122**. A space or slot can be included between adjacent pins **130**. As such, the slot can be configured to accept the blade of a knife while the seat **131** accept the handle of the knife, as illustrated. Additionally, or alternatively, the utensil holders of the second side wall **122** can be configured to hold the any suitable utensils such as, but not limited to, a spatula, a ladle, or the like.

The first side wall **120** and the second side wall **122** can be coupled together through the set of hinges **124**, specifically two hinges **124** provided on either distal end of the utensil caddy **70** along the Y-Axis. The set of hinges **124** can act as a method of coupling or a point of connection between first side wall **120** and the second side wall **122** and also provide for rotational movement about the Y-Axis for the second side wall **122** with respect to the first side wall **120**. As such, the second side wall **122** can pivot from the first position to the second position.

FIG. **6** is a perspective view of the dish rack assembly **100** of FIG. **3** in the first position and including various sets of utensils received within the utensil caddy **70** in the first position. As illustrated, a set of cups is received within the first set of cup seats **114**, and a set of mugs is received within the second set of cup seats **115**. Further, a set of utensils are received within the utensil caddy **70**, specifically, a set of knives, forks, and spoons are received within the set of utensil seats **126** and a set of larger knives are received within the second utensil holders, specifically the pins **130** and the seats **131**. It will be appreciated, however, that other such as sporks, measuring cups, or the like can be received within the utensil seats **126** and larger utensils such as spatulas, ladles, or the like can be received within the loops **128**. It will be further appreciated that although illustrated as cups and mugs either the first or the second set of cup seats **114**, **115** can receive other objects to be treated within the treating chamber **16** such as, but not limited to, baby bottles, plates, bowls, pans, or the like.

A diffuser section can be included within a portion of the utensil caddy **70**, specifically a portion of the second side wall **122**. The diffuser section can be defined as a portion of the utensil caddy **70** which directly contacts a stream of water from one or more of the first and second sprayers **116**, **117**. The stream of water emitted from the first and second sprayers **116**, **117** can, in some instances, be defined as a straight-line stream of water. This straight-line stream of water can be used to effectively clean targeted portions of various utensils, cups, mugs, or plates within the treating chamber **16**. It is contemplated, however, that placing a portion of the utensil caddy **70**, specifically the diffuser section on the second side wall **122**, in the path of the stream of water can diffuse the stream of water outward to form a fan pattern covering a larger area than the straight-line stream can be more effective at cleaning various utensils. For example, if it is desired to clean a spatula or other utensils with a large surface area, at least a portion of the stream of water from the first and second sprayers **116**, **117** that is directed toward the spatula can impact the diffuser region of the utensil caddy **70**. Once the stream of water hits the diffuser section, the stream of water can fan-out or form a cone-shaped spray area which can cover a larger surface area than the straight-line stream of water. This, in turn, can be more effective in cleaning utensils on the utensil caddy **70** which have a large surface area than through the use of non-diffused, straight-line stream of water.

In operation, the first and second sprayers **116**, **117** or any other sprayer within the treating chamber **16** (e.g., upper, lower, or middle spray assemblies **26**, **28**, **30**) can be configured to treat a set of utensils within a spray zone created by the sprayers. As used herein, the term spray zone can be defined as a region or section within the treating chamber which receives a direct or indirect flow of treating fluid. As such, utensils, cups, plates, or the like, placed within the spray zone will be washed or treated. The utensil caddy **70** can be placed in either the first or second position depending on the utensils which need to be treated. For example, if it is desired to clean a set of mugs and a set of cups, the utensil caddy **70** can be positioned in the first position such that cups and mugs can be placed within the first and second sets of cup seats **114**, **115** as illustrated in FIG. **6**. On the other hand, if it is desired to clean a set of utensils, the utensil caddy **70** can be positioned in the second position and a set of utensils can be placed within the respective utensil holders or seats, as illustrated in FIG. **6**. It is further contemplated that when the utensil caddy **70** is positioned in the second position that only the first set of cup seats **114** are covered by the second side wall **122**. As such, cups or mugs can still be received within the second set of cup seats **115**.

FIG. **7** is a perspective view of a dish rack assembly **200**. The dish rack assembly **200** is similar to the dish rack assembly **100**; therefore, like parts will be identified by like numerals in the **200** series, with it being understood that the description of the like parts of the dish rack assembly **100** applies to the dish rack assembly **200** unless otherwise noted.

The dish rack assembly **200** includes a utensil caddy **270** which includes a second side wall **222** similar to the second side wall **122** except the overall length along the Y-axis of the second side wall **222** is smaller than the overall length of a first side wall **220** along the Y-axis. Specifically, the second side wall **222** is configured to have an overall length that is a quarter of the overall length of the first side wall **220**. As such, when the utensil caddy **270** is in the second position as illustrated, an uncovered portion or an opening is formed within the first set of cup seats **114**. This, in turn, ensures that at least a portion of the first set of cup seats **114** are free or open regardless of whether the utensil caddy **270** is in the first position or the second position.

The second side wall **222** can be configured to hold smaller, more delicate utensils than the second side wall **122**. For example, the second side wall **222** can be configured to hold baby bottle nipples, caps, burrs, or the like. Addition-

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ally, or alternatively, the second side wall **222** can include a utensil holder similar to a utensil loop **228** or a utensil seat **226** to hold a set of utensils.

FIG. **9** is a perspective view of a dish rack assembly **300**. The dish rack assembly **300** is similar to the dish rack assembly **100**, **200**; therefore, like parts will be identified by like numerals in the **300** series, with it being understood that the description of the like parts of the dish rack assembly **100**, **200** applies to the dish rack assembly **300** unless otherwise noted.

The dish rack assembly **300** includes a utensil caddy **370** which includes a second side wall **322** similar to the second side wall **122**, **222** except that the second side wall **322** includes an overall length along the Y-axis that is half the overall length of a first side wall **320** along the Y-axis. This is similar to the second side wall **222** in that a portion of the first set of cup seats **114** are free or open regardless of whether the utensil caddy **370** is in the first position or the second position. However, the second side wall **322** includes the overall length of half the overall length of the first side wall **320**. This, in turn, allows for larger utensils, such as large knives, to be mounted on the second side wall **322** when the utensil caddy **370** is in the second position while still allowing for at least a portion of the first set of cup seats **114** to be open regardless of the position of the utensil caddy **370**.

A set of loops **328** can be provided on the first side wall **320** such that a set of larger utensils, illustrated as three spatulas, can be secured within the utensil caddy **370**. It is contemplated, that a set of larger utensils can be secured by the set of loops **328** regardless of whether the utensil caddy **370** is in the first position or the second position. As illustrated, the utensil caddy **370** is in the first position such that a portion of the larger utensils extend beyond the utensil caddy along the X-axis.

Benefits of the present disclosure include a dish rack assembly which is more versatile when compared to traditional dish rack assemblies. For example, traditional dish rack assemblies can include a vertical utensil caddy in a fixed position on the dish rack and a set of cup seats. Utensils can be secured within the utensil caddy while cups and mugs can be provided within the cup seats. The set of cup seats, however, are not configured to receive a set of utensils, so in cases where it is desired to treat a large amount of utensils there may not be adequate space to secure the utensils. The utensil caddy as disclosed herein, however, can be further as a horizontal utensil caddy in that utensils can be horizontally placed within the utensil caddy through the open top when the utensil caddy is in the first position and be laid horizontally across either the first or second side walls when the utensil caddy is in the second position. This allows for a more versatile dish rack assembly as the utensil caddy can be in either the first position or the second position depending on the utensils which are desired to be treated. For example, if a large amount of cups or mugs are desired to be treated, the utensil caddy can be positioned in the first position such that all the cup seats are opened. If, on the other hand, it is desired to treat a large amount of utensils, the utensil caddy can be positioned in the second position and allow for a larger amount of utensils to be secured by the first and second side walls.

Further benefits of this disclosure include the dish rack assembly, specifically the utensil caddy, with an improved washing efficiency of utensils when compared to traditional vertical utensil caddies. For example, in traditional vertical utensil caddies receive or secure the utensils in a vertical fashion. This, in turn, can place portions of the utensils out of the spray zone such that they are not as effectively cleaned. The utensil caddy as described herein, however, ensures that all of the utensils are horizontally secured and that all portions of the utensils which need to be treated are within the spray zone. Further, the utensil caddy can include a diffuser section which can diffuse the streams of water from the sprayers and effectively cover a larger surface area for the treating fluid or water to reach. As such, the washing efficiency of the utensils placed or secured within the utensil caddy can be improved when compared to the traditional vertical utensil caddies.

It will also be understood that various changes and/or modifications can be made without departing from the spirit of the present disclosure. By way of non-limiting example, although the present disclosure is described for use with a wire dish rack, it will be recognized that the rack height adjustment assembly can be employed with various rack constructions, including molded racks, such as racks molded of plastic.

To the extent not already described, the different features and structures of the various embodiments may be used in combination with each other as desired. That one feature may not be illustrated in all of the embodiments is not meant to be construed that it cannot be, but is done for brevity of description. Thus, the various features of the different embodiments may be mixed and matched as desired to form new embodiments, whether or not the new embodiments are expressly described. All combinations or permutations of features described herein are covered by this disclosure.

While the invention has been specifically described in connection with certain specific embodiments thereof, it is to be understood that this is by way of illustration and not of limitation. Reasonable variation and modification are possible within the scope of the forgoing disclosure and drawings without departing from the spirit of the invention which is defined in the appended claims.

It is intended that the following concepts can define at least a portion of the scope of the disclosure and that the apparatus and/or method(s) within the scope of these concepts and their equivalents be covered thereby. This disclosure should be understood to include all novel and non-obvious combinations of elements described herein, and the concepts may be presented in this or a later application to any novel and non-obvious combination of these elements. Any aspect of any embodiment can be combined with any aspect of any other embodiments. Moreover, the foregoing embodiments are illustrative, and no single feature or element is essential to all possible combinations that may be included in this or a later application. Further aspects of the invention are provided by the subject matter of the following clauses:

An automatic dishwasher configured to implement an automatic treating cycle of operation, comprising a tub defining a dish treating chamber and a dish rack located within the dish treating chamber and comprising a bottom wall having a first portion defined by a substantially planar portion extending across a first portion of bottom wall and second portion defined by a depression portion extending across a second portion of bottom wall.

The automatic dishwasher of the preceding clause wherein the depression portion defines a cup seat.

The automatic dishwasher of any of the preceding clauses, wherein the first substantially planar portion defines a utensil seat.

The automatic dishwasher of any of the preceding clauses, wherein the dish rack is an upper dishrack and located within a top portion of the dish treating chamber.

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The automatic dishwasher of any of the preceding clauses, wherein the depression portion is defined by at least one of a second and third planar portion angled with respect to the first planar portion.

The automatic dishwasher of any of the preceding clauses, wherein the depression portion is defined by a second and a third planar portion angled with respect to the first planar portion.

The automatic dishwasher of any of the preceding clauses, wherein the second planar portion defines a first cup seat and the third planar defines a second cup seat.

The automatic dishwasher of any of the preceding clauses, wherein first portion has a first vertical height and the second portion has a second vertical height, the second vertical height being greater than the first vertical height.

An automatic dishwasher configured to implement an automatic treating cycle of operation, comprising a tub defining a dish treating chamber and a dish rack located within a top portion of the dish treating chamber, the dish rack having a first portion with a first vertical height and defining a utensil seat, and the dish rack having a second portion with a second vertical height and defining a cup seat, the second vertical height being greater than the first vertical height.

The automatic dishwasher of the preceding clause wherein the first portion is substantially planar.

The automatic dishwasher of any of the preceding clauses wherein the second portion defining the cup seat is a depression extending across a bottom wall of the dish rack.

The automatic dishwasher of any of the preceding clauses wherein the depression is defined by at least one of a second and third planar portion angled with respect to the first planar portion.

The automatic dishwasher of any of the preceding clauses wherein the depression is defined by a second and a third planar portion angled with respect to the first planar portion.

The automatic dishwasher of any of the preceding clauses, wherein the second planar portion defines a first cup seat and the third planar defines a second cup seat.

An automatic dishwasher configured to implement an automatic treating cycle of operation, comprising a tub defining a dish treating chamber and a dish rack located within the dish treating chamber and comprising a bottom wall defining a first substantially planar portion extending across a portion of bottom wall and at least one of a second and third planar portion angled with respect to the first planar portion and defining a depression relative first planar portion.

The automatic dishwasher of the preceding clause wherein the at least one of the second and third planar portions defines a cup seat.

The automatic dishwasher of any of the preceding clauses wherein the first planar portion defines a utensil seat.

The automatic dishwasher of any of the preceding clauses wherein the depression is defined by a second and a third planar portion angled with respect to the first planar portion.

The automatic dishwasher of any of the preceding clauses wherein the second planar portion defines a first cup seat and the third planar defines a second cup seat.

The automatic dishwasher of any of the preceding clauses, wherein first substantially planar portion has a first vertical height and the depression has a second vertical height, the second vertical height being greater than the first vertical height.

What is claimed is:

1. An automatic dishwasher configured to implement an automatic treating cycle of operation, comprising:

a tub defining a dish treating chamber; and

a dish rack located within the dish treating chamber and the dish rack comprising a bottom wall from which extends a peripheral wall defining side walls of the dish rack, the bottom wall having a first portion defined by a substantially horizontal-planar portion extending across a first portion of the bottom wall and a second portion of the bottom wall defined by an angled second planar portion relative to the substantially horizontal planar first portion extending across a second portion of the bottom wall; the second portion connected to and extending from the first portion and angled away from the first portion;

the first portion supporting a first set of utensil holders for supporting one or more utensils and the second portion supporting a plurality of spaced pins defining spaced slots for supporting one or more utensils.

2. The automatic dishwasher of claim **1**, wherein the first set of utensil holders comprises loops.

3. The automatic dishwasher of claim **1**, wherein the dish rack is an upper dishrack and located within a top portion of the dish treating chamber.

4. The automatic dishwasher of claim **1**, further comprising a third planar portion angled with respect to the substantially horizontal first planar portion.

5. The automatic dishwasher of claim **4**, wherein a depression portion is defined by the second and the third planar portions.

6. The automatic dishwasher of claim **5**, wherein the third planar portion defines a cup seat.

7. The automatic dishwasher of claim **4**, wherein the third portion at an end opposite a connection to the peripheral wall has a third vertical height, the third vertical height being greater than the first vertical height.

8. The automatic dishwasher of claim **4**, further comprising a sprayer positioned beneath the second portion for spraying liquid at the second portion.

9. The automatic dishwasher of claim **8**, further comprising a second sprayer positioned between the second portion and the third portion for spraying liquid at the second portion and the third portion.

10. The automatic dishwasher of claim **1**, wherein the peripheral wall surrounding the first portion has a first vertical height and the second portion at an end opposite the connection to the first portion has a second vertical height, the second vertical height being greater than the first vertical height.

11. The automatic dishwasher of claim **1**, wherein the first set of utensil holders and the plurality of spaced pins defining spaced slots are defined by a utensil caddy.

12. The automatic dishwasher of claim **11**, wherein the first set of utensil holders are positioned on a first side wall of the utensil caddy and the plurality of spaced pins are positioned on a second side wall of the utensil caddy.

13. The automatic dishwasher of claim **12**, wherein the second side wall is moveable relative to the first side wall.

14. An automatic dishwasher configured to implement an automatic treating cycle of operation, comprising:

a tub defining a dish treating chamber; and

a dish rack located within the dish treating chamber having a first end spaced from a second end and comprising a bottom wall from which extends a peripheral wall defining side walls of the dish rack, at the first end of the dish rack, the bottom wall has a first portion defined by a first substantially horizontal planar portion extending across a first portion of the bottom wall and at the second end of the dishrack, a second portion is

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angled with respect to the first portion and defining a depression; the depression extending lower than the first portion relative to the peripheral wall;

the first portion supporting a first set of utensil holders for supporting one or more utensils and the second portion defining a cup seat for supporting one of more cups in the depression.

15. The automatic dishwasher of claim **14**, further comprising a third portion of the bottom wall defined by an angled third planar portion relative to the substantially horizontal first portion and extending across a third portion of the bottom wall; the third portion connected to and extending from the first portion and angled away from the first portion.

16. The automatic dishwasher of claim **15**, wherein the second portion supports a plurality of spaced pins defining spaced slots for supporting one or more utensils.

17. The automatic dishwasher of claim **16**, wherein the first set of utensil holders and the plurality of spaced pins defining spaced slots are defined by a utensil caddy; the utensil caddy comprising a first side wall carrying the first set of utensil holders and a second side wall carrying the plurality of spaced pins.

18. The automatic dishwasher of claim **17**, wherein the second side wall is moveable relative to the first side wall.

19. The automatic dishwasher of claim **15**, further comprising a first sprayer positioned beneath the third portion for spraying liquid at the third portion and a second sprayer positioned between the second portion and the third portion for spraying liquid at the second portion and the third portion.

* * * * *

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Whirlpool Corporation / McGarry Bair PC
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Benton Harbor, MI 49022

EXAMINER	
SHAHINIAN, LEVON J	

ART UNIT	PAPER NUMBER
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NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

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

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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APPLICATION NO.	ISSUE DATE	PATENT NO.
18/535,327	25-Feb-2025	12232681

Whirlpool Corporation / McGarry Bair PC
2000 North M63
Benton Harbor, MI 49022

EGRANT NOTIFICATION

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PATENT ASSIGNMENT COVER SHEET

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NATURE OF CONVEYANCE:	ASSIGNMENT

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Ryan Kevin Roth	09/23/2025
Sujit S. Naik	09/23/2025

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PROPERTY NUMBERS Total: 1

Property Type	Number
Patent Number:	12232681

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NAME OF SUBMITTER:	Megan Boot
SIGNATURE:	/Megan Boot/
DATE SIGNED:	10/02/2025

	This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 6
source=681 Balinski Decl#page1.tiff
source=681 Brightbill Decl#page1.tiff
source=681 Ferencevich Decl#page1.tiff
source=681 Naik Decl#page1.tiff
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COMBINED ASSIGNMENT AND DECLARATION FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET

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Title of Invention	DISHWASHER WITH A DISH RACK

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 18/535,327 filed on December 11, 2023, and all related applications and issued patents.

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.

I hereby state that I reviewed and understand the contents of the above-identified specification, including the claims.

I acknowledge the duty to disclose information material to patentability of this application in accordance with 37 C.F.R §1.56.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

WHEREAS, WHIRLPOOL CORPORATION (hereinafter referred to as "ASSIGNEE") having places of business at **2000 North M-63, Benton Harbor, Michigan 49022, U.S.A.** is desirous of acquiring the entire right, title and interest in and to said invention in the United States and throughout the world;

NOW, THEREFORE, in accord with my obligations by law and/or agreement, and/or for good and valuable consideration, the receipt and sufficiency of are hereby acknowledged, I (hereinafter referred to as "ASSIGNOR") hereby sell, assign and transfer unto said ASSIGNEE, the entire right, title and interest in and to said invention and application throughout the United States, including any and all United States Letters Patent granted on any division, continuation, continuation-in-part, reexamination and reissue of said application; and the entire right, title and interest in and to the said invention throughout the world, including the right to apply for patents and inventor certificates in respect thereof and to claim priority pursuant to rights accorded ASSIGNOR under terms of the Paris International Convention and all other available international conventions and treaties; and the entire right, title and interest in and to any and all patents, patents of addition, utility models, patents of importation, revalidation patents and inventor certificates which may be granted throughout the world in respect of said invention.

ALSO, ASSIGNOR hereby agrees to execute any documents that legally may be required in connection with the filing, prosecution and maintenance of said application or any other patent application(s) or inventor certificate(s) in the United States and in foreign countries for said invention, including additional documents that may be required to affirm the rights of ASSIGNEE in and to said invention, all without further consideration. ASSIGNOR also agrees, without further consideration but at no expense to ASSIGNOR, to identify and communicate to ASSIGNEE at ASSIGNEE'S request documents and information concerning the invention that are within ASSIGNOR'S possession or control and to provide further assurances and testimony on behalf of ASSIGNEE that lawfully may be required of ASSIGNOR in respect of the prosecution, maintenance and defense of any patent application or patent encompassed within the terms of this instrument. ASSIGNOR'S obligations under this instrument shall extend to ASSIGNOR'S heirs, executors, administrators and other legal representatives.

ASSIGNOR hereby authorizes and requests the Commissioner of Patents and Trademarks to issue any and all United States Letters Patent referred to above to ASSIGNEE, as the ASSIGNEE of the entire right, title and interest in and to the same, for ASSIGNEE'S sole use and behoof; and for the use and behoof of ASSIGNEE'S legal representatives and successors, to the full end of the term for which such Letters Patent may be granted, as fully and entirely as the same would have been held by ASSIGNOR had this agreement and sale not been made.

ASSIGNOR authorizes any member or representative of **WHIRLPOOL CORPORATION** to insert or complete any information in this document needed to effect its recordal in the U.S. Patent and Trademark Office.

LEGAL NAME OF INVENTOR

Inventor: Steven B. Balinski

Signature: Signed by: /Steven B. Balinski/ 477B5580B426497...

Date: 9/23/2025 | 9:09 AM PDT

Docusign Envelope ID: BBA9631E-346E-4259-B0DD-07F2D18CB1A3

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Title of Invention	DISHWASHER WITH A DISH RACK

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 18/535,327 filed on December 11, 2023, and all related applications and issued patents.

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.

I hereby state that I reviewed and understand the contents of the above-identified specification, including the claims.

I acknowledge the duty to disclose information material to patentability of this application in accordance with 37 C.F.R §1.56.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

WHEREAS, WHIRLPOOL CORPORATION (hereinafter referred to as "ASSIGNEE") having places of business at **2000 North M-63, Benton Harbor, Michigan 49022, U.S.A.** is desirous of acquiring the entire right, title and interest in and to said invention in the United States and throughout the world;

NOW, THEREFORE, in accord with my obligations by law and/or agreement, and/or for good and valuable consideration, the receipt and sufficiency of are hereby acknowledged, I (hereinafter referred to as "ASSIGNOR") hereby sell, assign and transfer unto said ASSIGNEE, the entire right, title and interest in and to said invention and application throughout the United States, including any and all United States Letters Patent granted on any division, continuation, continuation-in-part, reexamination and reissue of said application; and the entire right, title and interest in and to the said invention throughout the world, including the right to apply for patents and inventor certificates in respect thereof and to claim priority pursuant to rights accorded ASSIGNOR under terms of the Paris International Convention and all other available international conventions and treaties; and the entire right, title and interest in and to any and all patents, patents of addition, utility models, patents of importation, revalidation patents and inventor certificates which may be granted throughout the world in respect of said invention.

ALSO, ASSIGNOR hereby agrees to execute any documents that legally may be required in connection with the filing, prosecution and maintenance of said application or any other patent application(s) or inventor certificate(s) in the United States and in foreign countries for said invention, including additional documents that may be required to affirm the rights of ASSIGNEE in and to said invention, all without further consideration. ASSIGNOR also agrees, without further consideration but at no expense to ASSIGNOR, to identify and communicate to ASSIGNEE at ASSIGNEE'S request documents and information concerning the invention that are within ASSIGNOR'S possession or control and to provide further assurances and testimony on behalf of ASSIGNEE that lawfully may be required of ASSIGNOR in respect of the prosecution, maintenance and defense of any patent application or patent encompassed within the terms of this instrument. ASSIGNOR'S obligations under this instrument shall extend to ASSIGNOR'S heirs, executors, administrators and other legal representatives.

ASSIGNOR hereby authorizes and requests the Commissioner of Patents and Trademarks to issue any and all United States Letters Patent referred to above to ASSIGNEE, as the ASSIGNEE of the entire right, title and interest in and to the same, for ASSIGNEE'S sole use and behoof; and for the use and behoof of ASSIGNEE'S legal representatives and successors, to the full end of the term for which such Letters Patent may be granted, as fully and entirely as the same would have been held by ASSIGNOR had this agreement and sale not been made.

ASSIGNOR authorizes any member or representative of **WHIRLPOOL CORPORATION** to insert or complete any information in this document needed to effect its recordal in the U.S. Patent and Trademark Office.

LEGAL NAME OF INVENTOR

Inventor: David Jason Brightbill

Signature: Signed by: /David Jason Brightbill/ FAD2557B2A9A489...

Date: 9/24/2025 | 8:22 AM PDT

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Title of Invention	DISHWASHER WITH A DISH RACK

As the below named inventor, I hereby declare that:

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☒ United States application or PCT international application number 18/535,327 filed on December 11, 2023, and all related applications and issued patents.

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LEGAL NAME OF INVENTOR

Inventor: Joseph T. Ferencevich Signature: Signed by: /Joseph T. Ferencevich/ 600B6C1F45C7424...

Date: 9/24/2025 | 12:51 PM PDT

Docusign Envelope ID: E7610613-5605-4614-B552-C642CB248E8A

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LEGAL NAME OF INVENTOR

Inventor: Sujit S. Naik Signature: Signed by: A382E5AEB27D411...

Date: 9/23/2025 | 10:28 AM PDT

Docusign Envelope ID: 128CD803-0B96-4492-BF89-F4DD9646C5AB

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LEGAL NAME OF INVENTOR

Inventor: Frederick Thomas Roderick

Signature: Signed by: /Frederick Thomas Roderick/ A581D56D89CC4D0...

Date: 9/25/2025 | 1:47 PM PDT

Docusign Envelope ID: 4A239558-A47D-4F28-A335-77BAB0855396

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LEGAL NAME OF INVENTOR

Inventor: Ryan Kevin Roth

Signature: Signed by: /Ryan Kevin Roth/ DA08E09EC92447C...

Date: 9/23/2025 | 7:24 PM PDT

Docusign Envelope ID: 849AFBDC-50B9-4C61-8BF1-7D1910B3D893

Atty Dkt No SUB-13230-US-CON WHI025 A339

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent No.	:	12,232,681
Issue Date	:	February 25, 2025
Application No.	:	18/535,327
Confirmation No.	:	8683
Filing Date	:	December 11, 2023
First Named Inventor	:	Mark S. Feddema
Title	:	DISHWASHER WITH A DISH RACK

Dear Sir:

STATEMENT IN SUPPORT OF REQUEST TO CORRECT INVENTORSHIP UNDER 37 C.F.R. § 1.48(a)

I, Sachie Kakehi, hereby state:

1. It is my understanding that the patent that issued from the above-identified application was filed by Whirlpool Corporation.

2. I, Sachie Kakehi, am one of the named inventors in the above-identified patent.

3. The following persons are being added as an inventor:

Steven B. Balinski
David Jason Brightbill
Frederick Thomas Roderick
Joseph T. Ferencevich
Ryan Kevin Roth
Sujit S. Naik

4. I am in agreement with this change of inventorship.

9/23/2025 | 3:47 PM PDT
Date

Signed by:
5923EC009C2E46E...
Sachie Kakehi

Docusign Envelope ID: E7610613-5605-4614-B552-C642CB248E8A

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Inventor: Sujit S. Naik Signature: Signed by: A382E5AEB27D411...

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Docusign Envelope ID: D832FACC-5CE9-457D-A3DE-BE9AECA2EF95

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ALSO, ASSIGNOR hereby agrees to execute any documents that legally may be required in connection with the filing, prosecution and maintenance of said application or any other patent application(s) or inventor certificate(s) in the United States and in foreign countries for said invention, including additional documents that may be required to affirm the rights of ASSIGNEE in and to said invention, all without further consideration. ASSIGNOR also agrees, without further consideration but at no expense to ASSIGNOR, to identify and communicate to ASSIGNEE at ASSIGNEE'S request documents and information concerning the invention that are within ASSIGNOR'S possession or control and to provide further assurances and testimony on behalf of ASSIGNEE that lawfully may be required of ASSIGNOR in respect of the prosecution, maintenance and defense of any patent application or patent encompassed within the terms of this instrument. ASSIGNOR'S obligations under this instrument shall extend to ASSIGNOR'S heirs, executors, administrators and other legal representatives.

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ASSIGNOR authorizes any member or representative of **WHIRLPOOL CORPORATION** to insert or complete any information in this document needed to effect its recordal in the U.S. Patent and Trademark Office.

LEGAL NAME OF INVENTOR

Inventor: Ryan Kevin Roth

Signature: Signed by: /Ryan Kevin Roth/ DA08E09EC92447C...

Date: 9/23/2025 | 7:24 PM PDT

Docusign Envelope ID: E7610613-5605-4614-B552-C642CB248E8A

Atty Dkt No SUB-13230-US-CON WHI025 A339

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent No.	:	12,232,681
Issue Date	:	February 25, 2025
Application No.	:	18/535,327
Confirmation No.	:	8683
Filing Date	:	December 11, 2023
First Named Inventor	:	Mark S. Feddema
Title	:	DISHWASHER WITH A DISH RACK

Dear Sir:

STATEMENT IN SUPPORT OF REQUEST TO CORRECT INVENTORSHIP UNDER 37 C.F.R. § 1.324(b)

I, Sujit S. Naik, hereby state:

1. It is my understanding that the patent that issued from the above-identified application was filed by Whirlpool Corporation.

2. The following were named inventors:

Mark S. Feddema
William J. Snell
Sachie Kakehi

3. I, Sujit S. Naik, am being added as an inventor. Steven B. Balinski, David Jason Brightbill, Frederick Thomas Roderick, Joseph T. Ferencevich, and Ryan Kevin Roth are also being added as inventors.

4. I am in agreement with this change of inventorship.

9/23/2025 | 10:28 AM PDT
Date

Signed by:
A382E5AEB27D411...
Sujit S. Naik

Docusign Envelope ID: 128CD803-0B96-4492-BF89-F4DD9646C5AB

Atty Dkt No SUB-13230-US-CON WHI025 A339

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Filing Date	:	December 11, 2023
First Named Inventor	:	Mark S. Feddema
Title	:	DISHWASHER WITH A DISH RACK

Dear Sir:

STATEMENT IN SUPPORT OF REQUEST TO CORRECT INVENTORSHIP UNDER 37 C.F.R. § 1.324(b)

I, Frederick Thomas Roderick, hereby state:

1. It is my understanding that the patent that issued from the above-identified application was filed by Whirlpool Corporation.

2. The following were named inventors:

Mark S. Feddema
William J. Snell
Sachie Kakehi

3. I, Frederick Thomas Roderick, am being added as an inventor. Steven B. Balinski, David Johnson Brightbill, Joseph T. Ferencevich, Ryan Kevin Roth, and Sujit S. Naik are also being added as inventors.

4. I am in agreement with this change of inventorship.

9/25/2025 | 1:47 PM PDT
Date

Signed by:
/Frederick Thomas Roderick/
A581D56D89CC4D0...
Frederick Thomas Roderick

Docusign Envelope ID: 4A239558-A47D-4F28-A335-77BAB0855396

Atty Dkt No SUB-13230-US-CON WHI025 A339

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Title	:	DISHWASHER WITH A DISH RACK

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I, Ryan Kevin Roth, hereby state:

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9/23/2025 | 7:24 PM PDT
Date

Signed by:
/Ryan Kevin Roth/
DA08E09EC92447C...
Ryan Kevin Roth

PTO/AIA/96 (08-12)
Approved for use through 11/30/2020. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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.

STATEMENT UNDER 37 CFR 3.73(c)

Applicant/Patent Owner: WHIRLPOOL CORPORATION

Application No./Patent No.: 12,232,681 Filed/Issue Date: February 25, 2025

Titled: DISHWASHER WITH DISH RACK

Whirlpool Corporation, a corporation

(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose **one** of options 1, 2, 3 or 4 below):

1. ☑ The assignee of the entire right, title, and interest.

2. ☐ An assignee of less than the entire right, title, and interest (check applicable box):

   ☐ The extent (by percentage) of its ownership interest is _____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.

   ☐ There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

   Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. ☐ The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

   Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. ☐ The recipient, via a court proceeding or the like (*e.g.*, bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose **one** of options A or B below):

A. ☐ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.

B. ☑ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: Mark S. Feddema, William J. Snell, and Sachie Kakehi To: Whirlpool Corporation

   The document was recorded in the United States Patent and Trademark Office at

   Reel 065829, Frame 0088, or for which a copy thereof is attached.

2. From: Steven B. Balinski, David Jason Brightbill, and Frederick Thomas Roderick To: Whirlpool Corporation

   The document was recorded in the United States Patent and Trademark Office at

   Reel _____, Frame _____, or for which a copy thereof is attached.

This collectionof information is required by 37CFR 3.73(b). The informationis required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application.Confidentiality isgoverned by 35U.S.C. 122 and37 CFR 1.11and 1.14.This collection is estimated to take 12 minutes to complete, including gathering,preparing, and submitting the completed applicationform 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 besent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETEDFORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA22313-1450** .

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

PTO/AIA/96 (08-12)
Approved for use through 11/30/2020. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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.

STATEMENT UNDER 37 CFR 3.73(c)

3. From: Joseph T. Ferencevich, Ryan Kevin Roth, and Sujit S. Naik To: Whirlpool Corporation

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

4. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

5. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

6. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

☑ As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

/brianrcheslek/	2025-10-03
Signature	Date
Brian R. Cheslek	58,329
Printed or Typed Name	Title or Registration Number

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requiresthat you begiven certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirementsof the Act, please be advised that: (1)the general authority for the collectionof this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary;and (3) the principalpurpose for whichthe informationis used by the U.S. Patent and Trademark Office is to process and/or examine your submission related toa patent application or patent. If you do not furnishthe requested information, the U.S. Patent and Trademark Officemay not be able to process and/or examine yoursubmission, which may result in termination of proceedings orabandonment of the application or expiration of the patent.

Theinformation provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need forthe information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A recordrelated to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further,a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A recordfrom this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Docusign Envelope ID: A6ADE896-44F1-454E-9903-404C54258193

COMBINED ASSIGNMENT AND DECLARATION FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET

☒ THIS DOCUMENT IS BEING SUBMITTED FOR DUAL PURPOSES

Title of Invention	DISHWASHER WITH A DISH RACK

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 18/535,327 filed on December 11, 2023, and all related applications and issued patents.

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.

I hereby state that I reviewed and understand the contents of the above-identified specification, including the claims.

I acknowledge the duty to disclose information material to patentability of this application in accordance with 37 C.F.R §1.56.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

WHEREAS, WHIRLPOOL CORPORATION (hereinafter referred to as "ASSIGNEE") having places of business at **2000 North M-63, Benton Harbor, Michigan 49022, U.S.A.** is desirous of acquiring the entire right, title and interest in and to said invention in the United States and throughout the world;

NOW, THEREFORE, in accord with my obligations by law and/or agreement, and/or for good and valuable consideration, the receipt and sufficiency of are hereby acknowledged, I (hereinafter referred to as "ASSIGNOR") hereby sell, assign and transfer unto said ASSIGNEE, the entire right, title and interest in and to said invention and application throughout the United States, including any and all United States Letters Patent granted on any division, continuation, continuation-in-part, reexamination and reissue of said application; and the entire right, title and interest in and to the said invention throughout the world, including the right to apply for patents and inventor certificates in respect thereof and to claim priority pursuant to rights accorded ASSIGNOR under terms of the Paris International Convention and all other available international conventions and treaties; and the entire right, title and interest in and to any and all patents, patents of addition, utility models, patents of importation, revalidation patents and inventor certificates which may be granted throughout the world in respect of said invention.

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LEGAL NAME OF INVENTOR

Inventor: Steven B. Balinski

Signature: Signed by: /Steven B. Balinski/ 477B5580B426497...

Date: 9/23/2025 | 9:09 AM PDT

Docusign Envelope ID: BBA9631E-346E-4259-B0DD-07F2D18CB1A3

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LEGAL NAME OF INVENTOR

Inventor: David Jason Brightbill

Signature: Signed by: /David Jason Brightbill/ FAD2557B2A9A489...

Date: 9/24/2025 | 8:22 AM PDT

Docusign Envelope ID: D832FACC-5CE9-457D-A3DE-BE9AECA2EF95

COMBINED ASSIGNMENT AND DECLARATION FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET

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ASSIGNOR authorizes any member or representative of **WHIRLPOOL CORPORATION** to insert or complete any information in this document needed to effect its recordal in the U.S. Patent and Trademark Office.

LEGAL NAME OF INVENTOR

Inventor: Joseph T. Ferencevich Signature: Signed by: /Joseph T. Ferencevich/ 600B6C1F45C7424...

Date: 9/24/2025 | 12:51 PM PDT

Docusign Envelope ID: E7610613-5605-4614-B552-C642CB248E8A

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WHEREAS, WHIRLPOOL CORPORATION (hereinafter referred to as "ASSIGNEE") having places of business at **2000 North M-63, Benton Harbor, Michigan 49022, U.S.A.** is desirous of acquiring the entire right, title and interest in and to said invention in the United States and throughout the world;

NOW, THEREFORE, in accord with my obligations by law and/or agreement, and/or for good and valuable consideration, the receipt and sufficiency of are hereby acknowledged, I (hereinafter referred to as "ASSIGNOR") hereby sell, assign and transfer unto said ASSIGNEE, the entire right, title and interest in and to said invention and application throughout the United States, including any and all United States Letters Patent granted on any division, continuation, continuation-in-part, reexamination and reissue of said application; and the entire right, title and interest in and to the said invention throughout the world, including the right to apply for patents and inventor certificates in respect thereof and to claim priority pursuant to rights accorded ASSIGNOR under terms of the Paris International Convention and all other available international conventions and treaties; and the entire right, title and interest in and to any and all patents, patents of addition, utility models, patents of importation, revalidation patents and inventor certificates which may be granted throughout the world in respect of said invention.

ALSO, ASSIGNOR hereby agrees to execute any documents that legally may be required in connection with the filing, prosecution and maintenance of said application or any other patent application(s) or inventor certificate(s) in the United States and in foreign countries for said invention, including additional documents that may be required to affirm the rights of ASSIGNEE in and to said invention, all without further consideration. ASSIGNOR also agrees, without further consideration but at no expense to ASSIGNOR, to identify and communicate to ASSIGNEE at ASSIGNEE'S request documents and information concerning the invention that are within ASSIGNOR'S possession or control and to provide further assurances and testimony on behalf of ASSIGNEE that lawfully may be required of ASSIGNOR in respect of the prosecution, maintenance and defense of any patent application or patent encompassed within the terms of this instrument. ASSIGNOR'S obligations under this instrument shall extend to ASSIGNOR'S heirs, executors, administrators and other legal representatives.

ASSIGNOR hereby authorizes and requests the Commissioner of Patents and Trademarks to issue any and all United States Letters Patent referred to above to ASSIGNEE, as the ASSIGNEE of the entire right, title and interest in and to the same, for ASSIGNEE'S sole use and behoof; and for the use and behoof of ASSIGNEE'S legal representatives and successors, to the full end of the term for which such Letters Patent may be granted, as fully and entirely as the same would have been held by ASSIGNOR had this agreement and sale not been made.

ASSIGNOR authorizes any member or representative of **WHIRLPOOL CORPORATION** to insert or complete any information in this document needed to effect its recordal in the U.S. Patent and Trademark Office.

LEGAL NAME OF INVENTOR

Inventor: Sujit S. Naik Signature: Signed by: A382E5AEB27D411...

Date: 9/23/2025 | 10:28 AM PDT

Docusign Envelope ID: 128CD803-0B96-4492-BF89-F4DD9646C5AB

COMBINED ASSIGNMENT AND DECLARATION FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET

☒ THIS DOCUMENT IS BEING SUBMITTED FOR DUAL PURPOSES

Title of Invention	DISHWASHER WITH A DISH RACK

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 18/535,327 filed on December 11, 2023, and all related applications and issued patents.

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.

I hereby state that I reviewed and understand the contents of the above-identified specification, including the claims.

I acknowledge the duty to disclose information material to patentability of this application in accordance with 37 C.F.R §1.56.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

WHEREAS, WHIRLPOOL CORPORATION (hereinafter referred to as "ASSIGNEE") having places of business at **2000 North M-63, Benton Harbor, Michigan 49022, U.S.A.** is desirous of acquiring the entire right, title and interest in and to said invention in the United States and throughout the world;

NOW, THEREFORE, in accord with my obligations by law and/or agreement, and/or for good and valuable consideration, the receipt and sufficiency of are hereby acknowledged, I (hereinafter referred to as "ASSIGNOR") hereby sell, assign and transfer unto said ASSIGNEE, the entire right, title and interest in and to said invention and application throughout the United States, including any and all United States Letters Patent granted on any division, continuation, continuation-in-part, reexamination and reissue of said application; and the entire right, title and interest in and to the said invention throughout the world, including the right to apply for patents and inventor certificates in respect thereof and to claim priority pursuant to rights accorded ASSIGNOR under terms of the Paris International Convention and all other available international conventions and treaties; and the entire right, title and interest in and to any and all patents, patents of addition, utility models, patents of importation, revalidation patents and inventor certificates which may be granted throughout the world in respect of said invention.

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ASSIGNOR hereby authorizes and requests the Commissioner of Patents and Trademarks to issue any and all United States Letters Patent referred to above to ASSIGNEE, as the ASSIGNEE of the entire right, title and interest in and to the same, for ASSIGNEE'S sole use and behoof; and for the use and behoof of ASSIGNEE'S legal representatives and successors, to the full end of the term for which such Letters Patent may be granted, as fully and entirely as the same would have been held by ASSIGNOR had this agreement and sale not been made.

ASSIGNOR authorizes any member or representative of **WHIRLPOOL CORPORATION** to insert or complete any information in this document needed to effect its recordal in the U.S. Patent and Trademark Office.

LEGAL NAME OF INVENTOR

Inventor: Frederick Thomas Roderick

Signature: Signed by: /Frederick Thomas Roderick/ A581D56D89CC4D0...

Date: 9/25/2025 | 1:47 PM PDT

Docusign Envelope ID: 4A239558-A47D-4F28-A335-77BAB0855396

COMBINED ASSIGNMENT AND DECLARATION FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET

☒ THIS DOCUMENT IS BEING SUBMITTED FOR DUAL PURPOSES

Title of Invention	DISHWASHER WITH A DISH RACK

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 18/535,327 filed on December 11, 2023, and all related applications and issued patents.

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.

I hereby state that I reviewed and understand the contents of the above-identified specification, including the claims.

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ASSIGNOR authorizes any member or representative of **WHIRLPOOL CORPORATION** to insert or complete any information in this document needed to effect its recordal in the U.S. Patent and Trademark Office.

LEGAL NAME OF INVENTOR

Inventor: Ryan Kevin Roth

Signature: Signed by: /Ryan Kevin Roth/ DA08E09EC92447C...

Date: 9/23/2025 | 7:24 PM PDT

Docusign Envelope ID: A6ADE896-44F1-454E-9903-404C54258193

COMBINED ASSIGNMENT AND DECLARATION FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET

☒ THIS DOCUMENT IS BEING SUBMITTED FOR DUAL PURPOSES

Title of Invention	DISHWASHER WITH A DISH RACK

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 18/535,327 filed on December 11, 2023, and all related applications and issued patents.

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.

I hereby state that I reviewed and understand the contents of the above-identified specification, including the claims.

I acknowledge the duty to disclose information material to patentability of this application in accordance with 37 C.F.R §1.56.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

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NOW, THEREFORE, in accord with my obligations by law and/or agreement, and/or for good and valuable consideration, the receipt and sufficiency of are hereby acknowledged, I (hereinafter referred to as "ASSIGNOR") hereby sell, assign and transfer unto said ASSIGNEE, the entire right, title and interest in and to said invention and application throughout the United States, including any and all United States Letters Patent granted on any division, continuation, continuation-in-part, reexamination and reissue of said application; and the entire right, title and interest in and to the said invention throughout the world, including the right to apply for patents and inventor certificates in respect thereof and to claim priority pursuant to rights accorded ASSIGNOR under terms of the Paris International Convention and all other available international conventions and treaties; and the entire right, title and interest in and to any and all patents, patents of addition, utility models, patents of importation, revalidation patents and inventor certificates which may be granted throughout the world in respect of said invention.

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ASSIGNOR authorizes any member or representative of **WHIRLPOOL CORPORATION** to insert or complete any information in this document needed to effect its recordal in the U.S. Patent and Trademark Office.

LEGAL NAME OF INVENTOR

Inventor: Steven B. Balinski

Signature: Signed by: /Steven B. Balinski/ 477B5580B426497...

Date: 9/23/2025 | 9:09 AM PDT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent No.	:	12,232,681
Issue Date	:	February 25, 2025
Application No.	:	18/535,327
Confirmation No.	:	8683
Filing Date	:	December 11, 2023
First Named Inventor	:	Mark S. Feddema
Title	:	DISHWASHER WITH A DISH RACK

Dear Sir:

CORRECTION OF INVENTORSHIP IN PATENT, PURSUANT TO 35 U.S.C. § 256

The present communication is made under 35 U.S.C. § 256, wherein Whirlpool Corporation, the holder of the above-referenced Patent, hereby requests that the Patent Office issue a certificate naming all of the following inventors:

Mark S. Feddema

William J. Snell

Sachie Kakehi

Steven B. Balinski

David Jason Brightbill

Frederick Thomas Roderick

Joseph T. Ferencevich

Ryan Kevin Roth

Sujit S. Naik

Pursuant to 37 C.F.R. § 1.324, the Patent Holder submits that, through error and without deceptive intent, Steven B. Ballinski, David Jason Brightbill, Frederick Thomas Roderick, Joseph T. Ferencevich, Ryan Kevin Roth, and Sujit S. Naik were not named in the present issued patent. The Patent Holder further submits that these inventors have assigned their entire right, title, and interest in the patent to the Patent Holder by way of the assignment. Through the Patent Holder's undersigned attorney the Patent Holder consents to the change of inventorship. Statements

made under paragraph (b)(1) of this section by each person being added as an inventor and each person currently named as an inventor in this patent are filed herewith.

As the Patent Holder has complied with all of the requirements of 35 U.S.C. § 256, it is submitted that the requested certificate be issued in due course. If the Examiner has any questions regarding this request, or if the certificate cannot be issued, as requested, the Examiner is encouraged to contact the Patent Holder's undersigned attorney at the Examiner's convenience.

Respectfully submitted,

PRICE HENEVELD LLP

October 3, 2025
Date

/brianrcheslek/
Brian R. Cheslek, Reg. No. 58,329
3400 Innovation Court, S.E.
P.O. Box 2567
Grand Rapids, Michigan 49501-2567
Tel: 616.949.9610
Fax: 616.957.8196
bcheslek@priceheneveld.com

BRC/tpr/mad

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent No.	:	12,232,681
Issue Date	:	February 25, 2025
Application No.	:	18/535,327
Confirmation No.	:	8683
Filing Date	:	December 11, 2023
First Named Inventor	:	Mark S. Feddema
Title	:	DISHWASHER WITH A DISH RACK

Dear Commissioner:

REQUEST FOR CERTIFICATE OF CORRECTION

A request is being made for a Certificate of Correction in the above-identified patent, which issued with the following errors:

Cover of patent (72) Inventors: should be corrected as follows:

--Inventors: **Mark S. Feddema**, Kalamazoo, MI (US);
William J. Snell, Elkhart, IN (US);
Sachie Kakehi, St. Joseph, MI (US);
Steven B. Balinski, Rockford, MN (US);
David Jason Brightbill, Berrien Center, MI (US);
Frederick Thomas Roderick, Coloma, MI (US);
Joseph T. Ferencevich, St. Joseph, MI (US);
Ryan Kevin Roth, Grandville, MI (US);
Sujit S. Naik, St. Joseph, MI (US)--

A Certificate of Correction Form PTO/SB/44 is also submitted herewith, which identifies the error noted above. The Commissioner is hereby authorized to charge any additional payment, or to credit any overpayment, to Deposit Account No.16-2463.

Respectfully submitted,

PRICE HENEVELD LLP

October 3, 2025
Date

/brianrcheslek/
Brian R. Cheslek, Reg. No. 58,329
3400 Innovation Court, S.E.
P.O. Box 2567
Grand Rapids, Michigan 49501-2567
Tel: 616.949.9610
Fax: 616.957.8196
bcheslek@priceheneveld.com

BRC/tpr/mad

PTO/SB/44 (09-07)
Approved for use through 08/31/2013. OMB 0651-0033
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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.
(Also Form PTO-1050)

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 12,232,681

APPLICATION NO.: 18/535,327

ISSUE DATE : February 25, 2025

INVENTOR(S) : Feddema et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

On the Title Page:

Item (72) insert:

--72 Inventors: Mark S. Feddema, Kalamazoo, MI (US);
William J. Snell, Elkhart, IN (US);
Sachie Kakehi, St. Joseph, MI (US);
Steven B. Balinski, Rockford, MN (US);
David Jason Brightbill, Berrien Center, MI (US);
Frederick Thomas Roderick, Coloma, MI (US);
Joseph T. Ferencevich, St. Joseph, MI (US);
Ryan Kevin Roth, Grandville, MI (US);
Sujit S. Naik, St. Joseph, MI (US)--

MAILING ADDRESS OF SENDER (Please do not use customer number below):

Brian R. Cheslek PRICE HENEVELD LLP
PO Box 2567
Grand Rapids MI 49501

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. 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 1.0 hour 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, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Attention Certificate of Corrections Branch, 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.

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Docusign Envelope ID: 80C03417-98A6-41B8-8402-E265B7FF9382

Atty Dkt No SUB-13230-US-CON WHI025 A339

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent No.	:	12,232,681
Issue Date	:	February 25, 2025
Application No.	:	18/535,327
Confirmation No.	:	8683
Filing Date	:	December 11, 2023
First Named Inventor	:	Mark S. Feddema
Title	:	DISHWASHER WITH A DISH RACK

Dear Commissioner:

ASSENT OF ASSIGNEE TO CORRECTION OF INVENTORSHIP

Whirlpool Corporation is the Assignee of the above-identified patent by virtue of an Assignment from the originally named inventors to Whirlpool Corporation which was recorded in the United States Patent and Trademark Office on December 11, 2023, at Reel 065829, Frame 0088.

Whirlpool Corporation hereby assents to the correction of inventorship filed herewith. The undersigned has authority to act on behalf of the Assignee.

Dated: 10/1/2025 | 12:57 PM PDT

Signed by:
Bridget K Quinn
189A26B2DC7F4A...

Bridget K. Quinn
Secretary, Whirlpool Corporation

Docusign Envelope ID: 74587653-ECF8-49F2-AD90-3D8A63387A5C

Atty Dkt No SUB-13230-US-CON WHI025 A339

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Filing Date	:	December 11, 2023
First Named Inventor	:	Mark S. Feddema
Title	:	DISHWASHER WITH A DISH RACK

Dear Sir:

STATEMENT IN SUPPORT OF REQUEST TO CORRECT INVENTORSHIP UNDER 37 C.F.R. § 1.48(a)

I, Mark S. Feddema, hereby state:

1. It is my understanding that the patent that issued from the above-identified application was filed by Whirlpool Corporation.

2. I, Mark S. Feddema, am one of the named inventors in the above-identified patent.

3. The following persons are being added as an inventor:

Steven B. Balinski
David Jason Brightbill
Frederick Thomas Roderick
Joseph T. Ferencevich
Ryan Kevin Roth
Sujit S. Naik

4. I am in agreement with this change of inventorship.

9/30/2025 | 4:26 PM PDT
Date

Signed by:
Mark S. Feddema
04DFFB4B1B654F9...
Mark S. Feddema

Docusign Envelope ID: 0C17DC12-E099-4B45-A3B5-AC722B89D088

Atty Dkt No SUB-13230-US-CON WHI025 A339

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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First Named Inventor	:	Mark S. Feddema
Title	:	DISHWASHER WITH A DISH RACK

Dear Sir:

STATEMENT IN SUPPORT OF REQUEST TO CORRECT INVENTORSHIP UNDER 37 C.F.R. § 1.48(a)

I, William J. Snell, hereby state:

1. It is my understanding that the patent that issued from the above-identified application was filed by Whirlpool Corporation.

2. I, William J. Snell, am one of the named inventors in the above-identified patent.

3. The following persons are being added as an inventor:

Steven B. Balinski
David Jason Brightbill
Frederick Thomas Roderick
Joseph T. Ferencevich
Ryan Kevin Roth
Sujit S. Naik

4. I am in agreement with this change of inventorship.

9/22/2025 | 3:18 AM PDT
Date

Signed by:
4B3D78A592B243B...
William J. Snell

Docusign Envelope ID: D832FACC-5CE9-457D-A3DE-BE9AECA2EF95

Atty Dkt No SUB-13230-US-CON WHI025 A339

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First Named Inventor	:	Mark S. Feddema
Title	:	DISHWASHER WITH A DISH RACK

Dear Sir:

STATEMENT IN SUPPORT OF REQUEST TO CORRECT INVENTORSHIP UNDER 37 C.F.R. § 1.324(b)

I, Joseph T. Ferencevich, hereby state:

1. It is my understanding that the patent that issued from the above-identified application was filed by Whirlpool Corporation.

2. The following were named inventors:

Mark S. Feddema
William J. Snell
Sachie Kakehi

3. I, Joseph T. Ferencevich, am being added as an inventor. Steven B. Balinski, David Jason Brightbill, Frederick Thomas Roderick, Ryan Kevin Roth, Sujit S. Naik are also being added as inventors.

4. I am in agreement with this change of inventorship.

9/24/2025 | 12:51 PM PDT
Date

Signed by:
/Joseph T. Ferencevich/
Joseph T. Ferencevich

Docusign Envelope ID: A6ADE896-44F1-454E-9903-404C54258193

Atty Dkt No SUB-13230-US-CON WHI025 A339

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent No.	:	12,232,681
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Confirmation No.	:	8683
Filing Date	:	December 11, 2023
First Named Inventor	:	Mark S. Feddema
Title	:	DISHWASHER WITH A DISH RACK

Dear Sir:

STATEMENT IN SUPPORT OF REQUEST TO CORRECT INVENTORSHIP UNDER 37 C.F.R. § 1.324(b)

I, Steven B. Balinski, hereby state:

1. It is my understanding that the patent that issued from the above-identified application was filed by Whirlpool Corporation.

2. The following were named inventors:

Mark S. Feddema
William J. Snell
Sachie Kakehi

3. I, Steven B. Balinski, am being added as an inventor. David Jason Brightbill, Frederick Thomas Roderick, Joseph T. Ferencevich, Ryan Kevin Roth, and Sujit S. Naik are also being added as inventors.

4. I am in agreement with this change of inventorship.

9/23/2025 | 9:09 AM PDT
Date

Signed by:
/Steven B. Balinski/
477B558DB426497...
Steven B. Balinski

Docusign Envelope ID: BBA9631E-346E-4259-B0DD-07F2D18CB1A3

Atty Dkt No SUB-13230-US-CON WHI025 A339

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent No.	:	12,232,681
Issue Date	:	February 25, 2025
Application No.	:	18/535,327
Confirmation No.	:	8683
Filing Date	:	December 11, 2023
First Named Inventor	:	Mark S. Feddema
Title	:	DISHWASHER WITH A DISH RACK

Dear Sir:

STATEMENT IN SUPPORT OF REQUEST TO CORRECT INVENTORSHIP UNDER 37 C.F.R. § 1.324(b)

I, David Jason Brightbill, hereby state:

1. It is my understanding that the patent that issued from the above-identified application was filed by Whirlpool Corporation.

2. The following were named inventors:

Mark S. Feddema
William J. Snell
Sachie Kakehi

3. I, David Jason Brightbill, am being added as an inventor. Steven R. Balinski, Frederick Thomas Roderick, Joseph T. Ferencevich, Ryan Kevin Roth, and Sujit S. Naik are also being added as inventors.

4. I am in agreement with this change of inventorship.

9/24/2025 | 8:22 AM PDT
Date

Signed by:
David Jason Brightbill
FAD2557B2A9A489...
David Jason Brightbill

Docusign Envelope ID: BBA9631E-346E-4259-B0DD-07F2D18CB1A3

COMBINED ASSIGNMENT AND DECLARATION FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET

☒ THIS DOCUMENT IS BEING SUBMITTED FOR DUAL PURPOSES

Title of Invention	DISHWASHER WITH A DISH RACK

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 18/535,327 filed on December 11, 2023, and all related applications and issued patents.

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.

I hereby state that I reviewed and understand the contents of the above-identified specification, including the claims.

I acknowledge the duty to disclose information material to patentability of this application in accordance with 37 C.F.R §1.56.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

WHEREAS, WHIRLPOOL CORPORATION (hereinafter referred to as "ASSIGNEE") having places of business at **2000 North M-63, Benton Harbor, Michigan 49022, U.S.A.** is desirous of acquiring the entire right, title and interest in and to said invention in the United States and throughout the world;

NOW, THEREFORE, in accord with my obligations by law and/or agreement, and/or for good and valuable consideration, the receipt and sufficiency of are hereby acknowledged, I (hereinafter referred to as "ASSIGNOR") hereby sell, assign and transfer unto said ASSIGNEE, the entire right, title and interest in and to said invention and application throughout the United States, including any and all United States Letters Patent granted on any division, continuation, continuation-in-part, reexamination and reissue of said application; and the entire right, title and interest in and to the said invention throughout the world, including the right to apply for patents and inventor certificates in respect thereof and to claim priority pursuant to rights accorded ASSIGNOR under terms of the Paris International Convention and all other available international conventions and treaties; and the entire right, title and interest in and to any and all patents, patents of addition, utility models, patents of importation, revalidation patents and inventor certificates which may be granted throughout the world in respect of said invention.

ALSO, ASSIGNOR hereby agrees to execute any documents that legally may be required in connection with the filing, prosecution and maintenance of said application or any other patent application(s) or inventor certificate(s) in the United States and in foreign countries for said invention, including additional documents that may be required to affirm the rights of ASSIGNEE in and to said invention, all without further consideration. ASSIGNOR also agrees, without further consideration but at no expense to ASSIGNOR, to identify and communicate to ASSIGNEE at ASSIGNEE'S request documents and information concerning the invention that are within ASSIGNOR'S possession or control and to provide further assurances and testimony on behalf of ASSIGNEE that lawfully may be required of ASSIGNOR in respect of the prosecution, maintenance and defense of any patent application or patent encompassed within the terms of this instrument. ASSIGNOR'S obligations under this instrument shall extend to ASSIGNOR'S heirs, executors, administrators and other legal representatives.

ASSIGNOR hereby authorizes and requests the Commissioner of Patents and Trademarks to issue any and all United States Letters Patent referred to above to ASSIGNEE, as the ASSIGNEE of the entire right, title and interest in and to the same, for ASSIGNEE'S sole use and behoof; and for the use and behoof of ASSIGNEE'S legal representatives and successors, to the full end of the term for which such Letters Patent may be granted, as fully and entirely as the same would have been held by ASSIGNOR had this agreement and sale not been made.

ASSIGNOR authorizes any member or representative of **WHIRLPOOL CORPORATION** to insert or complete any information in this document needed to effect its recordal in the U.S. Patent and Trademark Office.

LEGAL NAME OF INVENTOR

Inventor: David Jason Brightbill

Signature: Signed by: /David Jason Brightbill/ FAD2557B2A9A489...

Date: 9/24/2025 | 8:22 AM PDT

Doc Code: PA..
Document Description: Power of Attorney

PTO/AIA/82A (07-13)
Approved for use through 11/30/2014. OMB 0651-0051
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TRANSMITTAL FOR POWER OF ATTORNEY TO ONE OR MORE REGISTERED PRACTITIONERS

NOTE: This form is to be submitted with the Power of Attorney by Applicant form (PTO/AIA/82B) to identify the application to which the Power of Attorney is directed, in accordance with 37 CFR 1.5, unless the application number and filing date are identified in the Power of Attorney by Applicant form. If neither form PTO/AIA/82A nor form PTO/AIA82B identifies the application to which the Power of Attorney is directed, the Power of Attorney will not be recognized in the application.

Application Number	18/535,327
Filing Date	December 11, 2023
First Named Inventor	Mark S. Feddema
Title	DISHWASHER WITH A DISH RACK
Art Unit	1711
Examiner Name	Levon J. Shahinian
Attorney Docket Number	SUB-13230-US-CON WHI025 A339

SIGNATURE of Applicant or Patent Practitioner

Signature	/brianrcheslek/	Date (Optional)	2025-10-03
Name	Brian R. Cheslek	Registration Number	58,329
Title (if Applicant is a juristic entity)	Attorney for Applicant		
Applicant Name (if Applicant is a juristic entity)	Whirlpool Corporation		

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. If more than one applicant, use multiple forms.

☑ *Total of one forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. 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 1.11 and 1.14. This collection is estimated to take 3 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, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **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.

DocuSign Envelope ID: 368CA28D-4072-4C7F-A121-1A07D260F8C6

Document Description: Power of Attorney

PTO/AIA/82B (07-13)
Approved for use through 03/31/2021. OMB 0651-0035
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POWER OF ATTORNEY BY APPLICANT

I hereby revoke all previous powers of attorney given in the application identified in either the attached transmittal letter or the boxes below.

Application Number	Filing Date

(Note: The boxes above may be left blank if information is provided on form PTO/AIA/82A.)

☑ I hereby appoint the Patent Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above: 130333

OR

☐ I hereby appoint Practitioner(s) named in the attached list (form PTO/AIA/82C) as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the patent application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above. (Note: Complete form PTO/AIA/82C.)

Please recognize or change the correspondence address for the application identified in the attached transmittal letter or the boxes above to:

☑ The address associated with the above-mentioned Customer Number

OR

☐ The address associated with Customer Number:

OR

☐ Firm or Individual Name					
Address					
City		State		Zip	
Country					
Telephone		Email			

I am the Applicant (if the Applicant is a juristic entity, list the Applicant name in the box):

Whirlpool Corporation

☐ Inventor or Joint Inventor (title not required below)

☐ Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)

☑ Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)

☐ Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document) (provide signer's title if applicant is a juristic entity)

SIGNATURE of Applicant for Patent

The undersigned (whose title is supplied below) is authorized to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

Signature	DocuSigned by: /Nathan J. Davis/ 18CE8E497387476...	Date (Optional)	3/12/2023 | 6:20 AM PDT
Name	Nathan J. Davis		
Title	Legal Director, Patents & Intellectual Property Litigation		

NOTE: Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. If more than one applicant, use multiple forms.

☑ Total of one forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. 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 1.11 and 1.14. This collection is estimated to take 3 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, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **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.

UNITED STATES
PATENT AND TRADEMARK OFFICE

P.O. Box 1450
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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
18/535,327	**10/03/2025 05:39:04 PM Z ET**	**SUB-13230-US-CON**

Title of Invention

DISHWASHER WITH A DISH RACK

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	12232681
CONFIRMATION #	8683	FILED BY	Megan Boot
PATENT CENTER #	72573930	FILING DATE	12/11/2023
CUSTOMER #	130348	FIRST NAMED INVENTOR	Mark S. Feddema
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	BRIAN CHESLEK

Documents

TOTAL DOCUMENTS: 20

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
681 Request to Correct Inventorship.pdf	2	Request under Rule 48 correcting inventorship	64 KB
681 Request for Certificate of Correction.pdf	3	Request for Certificate of Correction	228 KB
681 Assent.pdf	1	Miscellaneous Incoming Letter	160 KB
Warning: The PDF file has been signed with a digital signature and the legal effect of the document will be based on the contents of the file not the digital signature.			
681 Feddema Stmt.pdf	1	Miscellaneous Incoming Letter	177 KB
Warning: The PDF file has been signed with a digital signature and the legal effect of the document will be based on the contents of the file not the digital signature.			
681 Kakehi Stmt.pdf	1	Miscellaneous Incoming Letter	174 KB

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681 Snell Stmt.pdf	1	Miscellaneous Incoming Letter	175 KB

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681 Ferencevich Stmt.pdf	1	Miscellaneous Incoming Letter	177 KB

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681 Naik Stmt.pdf	1	Miscellaneous Incoming Letter	175 KB

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681 Balinski Stmt.pdf	1	Miscellaneous Incoming Letter	175 KB

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681 Brightbill Stmt.pdf	1	Miscellaneous Incoming Letter	179 KB

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681 Roderick Stmt.pdf	1	Miscellaneous Incoming Letter	180 KB

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681 Roth Stmt.pdf	1	Miscellaneous Incoming Letter	176 KB

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681 Statement Under 373c.pdf	9	Assignee showing of ownership per 37 CFR 3.73	424 KB
681 Roderick Decl.pdf	1	Oath or Declaration filed	221 KB

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681 Naik Decl.pdf	1	Oath or Declaration filed	214 KB

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681 Ferencevich Decl.pdf	1	Oath or Declaration filed	218 KB

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681 Balinski Decl.pdf	1	Oath or Declaration filed	215 KB

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681 Roth Decl.pdf	1	Oath or Declaration filed	216 KB

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681 Brightbill Decl.pdf	1	Oath or Declaration filed	219 KB

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681 POA.pdf	2	Power of Attorney	218 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
681 Request to Correct Inventorship.pdf	3C12A69A3CB32AD1D05B3C07DB2249651DCF709311AE669E5566D168D653C0422DA907C31A48FD8813E64D18945968E9BC523F7C66D8DE6675E0734894F143A3
681 Request for Certificate of Correction.pdf	E099171727AA006F104C9F1168CF83C43AC65D703BB199A647F42AC5FA561E648E4EF83E42AEAF9F475A6089348D349AE472CC4A1470F192C82B43A9F730969C
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681 Snell Stmt.pdf	3E1BE5961B261D1BCB8F333C682B1BA4695F92C5880BD50C3B05D99FE26CFF2F7079162EFD88CF7CED1AEC1E6AE23A75624A67259EC4B0163F64BC8822502B3C
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681 Naik Stmt.pdf	532AB6B9602E657D3F0373FFF1A1EA92E9E602647E5990D92DBAAF4D5D5236FDA45252FCB3EFCADAA1B65855FD0837844548966A50D1AD488FF92487180A891B

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681 Roth Stmt.pdf	3B2B32895AC2E7B80B186EC679A09A4BA1B1A9C44F00FF6297AA1500E90CF4D9C4B8837596BFC1C408A4D4AD9A7983FB406FB9FD6CBF5651EFCD4E60BA30BE92
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681 Balinski Decl.pdf	B3CC6307C061A4344EB9D49D6AD65F8E71DBFDFCD4B5AA8A9BF1A0F331E197039AD9ACFC1B9B60B01CD26E3E3F63D38BBD6E4DD8A24D3201015477F7BBD69B17
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681 Brightbill Decl.pdf	1EF32B9C84BCCE46838DF145CC411F38A1EB543F7DD915CE6884C428B5EA2F5AAFE657D22D8215C2B8E1823CED4C7AA4E4ED69D9E79473DE10515E6E9A0D1D4C
681 POA.pdf	0008354CB7760F45120057F5EF88CEA59F959464457C6F848B2556A390096188E90BD6E2713668ED9B7E90930A2842A30C45DD93BAF71488F195A827720008A1

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 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.

UNITED STATES
PATENT AND TRADEMARK OFFICE

P.O. Box 1450
Alexandria, VA 22313 - 1450
www.uspto.gov

ELECTRONIC PAYMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
18/535,327	**10/03/2025 05:39:04 PM Z ET**	**SUB-13230-US-CON**

Title of Invention

DISHWASHER WITH A DISH RACK

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	12232681
CONFIRMATION #	8683	FILED BY	Megan Boot
PATENT CENTER #	72573930	AUTHORIZED BY	BRIAN CHESLEK
CUSTOMER #	130348	FILING DATE	12/11/2023
CORRESPONDENCE ADDRESS	-	FIRST NAMED INVENTOR	Mark S. Feddema

Payment Information

PAYMENT METHOD	PAYMENT TRANSACTION ID	PAYMENT AUTHORIZED BY
CARD / 9595	**E202503H41046725**	**Megan Boot**

PRE-AUTHORIZED ACCOUNT	PRE-AUTHORIZED CATEGORY
162463	**37 CFR 1.20 (Post Issuance fees); 37 CFR 1.21 (Miscellaneous fees and charges)**

FEE CODE	DESCRIPTION	ITEM PRICE($)	QUANTITY	ITEM TOTAL($)
1811	CERTIFICATE OF CORRECTION	172.00	1	172.00
1816	PROCESSING FEE FOR CORRECTING INVENTORSHIP IN A PATENT	172.00	1	172.00
			TOTAL AMOUNT:	**¤344.00**

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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

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UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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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
18/535,327	12/11/2023	Mark S. Feddema	SUB-13230-US-CON

CONFIRMATION NO. 8683

130348
Whirlpool Corporation / McGarry Bair PC
2000 North M63
Benton Harbor, MI 49022

POWER OF ATTORNEY NOTICE

OC000000095640959

Date Mailed: 10/07/2025

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 10/03/2025.

- The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

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**.

/hteffera/

Petitioner Samsung Ex-1004, 0230

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United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
18/535,327	12/11/2023	Mark S. Feddema	SUB-13230-US-CON

CONFIRMATION NO. 8683

130333
PRICE HENEVELD LLP
WHIRLPOOL CORPORATION - MD 3601
2000 NORTH M63
BENTON HARBOR, MI 49022

POA ACCEPTANCE LETTER

OC000000095640984

Date Mailed: 10/07/2025

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 10/03/2025.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

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**.

/hteffera/

Petitioner Samsung Ex-1004, 0231

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/535,327	12/11/2023	Mark S. Feddema	SUB-13230-US-CON	8683

130333 7590 10/09/2025

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EXAMINER
SHAHINIAN, LEVON J

ART UNIT	PAPER NUMBER
1711	

NOTIFICATION DATE	DELIVERY MODE
10/09/2025	ELECTRONIC

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

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

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PatentDocketing@whirlpool.com
deborah_tomaszewski@whirlpool.com
ptomail@priceheneveld.com

Petitioner Samsung Ex-1004, 0232

UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
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Patent No.: 12232681
Issue Date: 02/25/2025
Appl. No.: 18/535,327
Filed: 12/11/2023

PART (A) RESPONSE FOR CERTIFICATES OF CORRECTION

This is a decision on the Certificate of Correction request filed ____.

The request for issuance of Certificate of Correction for the above-identified correction(s) under the provisions of 37 CFR 1.322 and/or 1.323 is hereby:

(Check one)
☐ Approved ☐ Approved in Part ☐ Denied

Comments: ____

PART (B) PETITION UNDER 37 CFR 1.324 OR 37 CFR 1.48

☑ This is a decision on the petition filed 03 October 2025 to correct inventorship under 37 CFR 1.324.

☐ This is a decision on the request under 37 CFR 1.48, petition filed ____. In view of the fact that the patent has already issued, the request under 37 CFR 1.48 has been treated as a petition to correct inventorship under 37 CFR 1.324.

The petition is hereby: ☑ Granted ☐ Dismissed

Comment: ____

The patented filed is being forwarded to Certificate of Corrections Branch for issuance of a certificate naming only the actual inventor or inventors.

/MICHAEL E BARR/
Supervisory Patent Examiner, Art Unit 1711
Technology Center 1700
Phone: (571) 272-1414

Certificates of Correction Branch email: CustomerServiceCoC@uspto.gov CoC Central Phone Number: (703) 756-1814

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO. : 12,232,681 B2
APPLICATION NO. : 18/535327
DATED : February 25, 2025
INVENTOR(S) : Feddema et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

On the Title Page

Item (72) insert:
--(72) Inventors: Mark S. Feddema, Kalamazoo, MI (US);
William J. Snell, Elkhart, IN (US);
Sachie Kakehi, St. Joseph, MI (US);
Steven B. Balinski, Rockford, MN (US);
David Jason Brightbill, Berrien Center, MI (US);
Frederick Thomas Roderick, Coloma, MI (US);
Joseph T. Ferencevich, St. Joseph, MI (US);
Ryan Kevin Roth, Grandville, MI (US);
Sujit S. Naik, St. Joseph, MI (US)--

Signed and Sealed this
Twenty-eighth Day of October, 2025

John A. Squires
Director of the United States Patent and Trademark Office

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

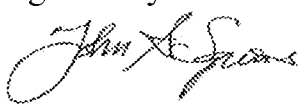
PATENT NO. : 12,232,681 B2
APPLICATION NO. : 18/535327
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Sujit S. Naik, St. Joseph, MI (US)--

Signed and Sealed this
Twenty-eighth Day of October, 2025



John A. Squires
Director of the United States Patent and Trademark Office

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130333 7590 10/28/2025

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EXAMINER	
SHAHINIAN, LEVON J	

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Petitioner Samsung Ex-1004, 0236

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APPLICATION NO.	ISSUE DATE	PATENT NO.
18/535,327	28-Oct-2025	12232681

PRICE HENEVELD LLP
WHIRLPOOL CORPORATION - MD 3601
BENTON HARBOR, MI 49022

ELECTRONIC CERTIFICATE OF CORRECTION NOTIFICATION

Your electronic certificate of correction is now available, and can be accessed via Patent Center at https://patentcenter.uspto.gov.

The electronic certificate of correction is the official certificate of correction under 35 U.S.C. 254 or 255. For more information, please visit https://www.uspto.gov/electronicgrants.