

EXHIBIT 1003



UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/167,647	10/18/2022	11473277	DFC-5558-01-02-US	3847

79958 7590 09/28/2022

Masco Corporation
Bose McKinney & Evans LLP
111 Monument Circle
Suite 2700
Indianapolis, IN 46204

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

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 Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Patents Stakeholder Experience (OPSE), Stakeholder Support Division (SSD) at (571)-272-4200.

INVENTOR(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional inventors):

Mark Cipriani, Carmel, IN;
Anthony Joseph Tentler, Windfall, IN;
Jack William Judge, Indianapolis, IN;
Thad J. Eads, Urbana, IN;
Michael Scot Rosko, Greenwood, IN;

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

Delta Faucet Company, Indianapolis, IN;

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 Patent and Trademark Office

Office of the Chief Financial Officer

Document Code:WFEE

User :Simret Direta

Refund Accounting Date:09/13/2022

Effective Date	Sale Item Reference Number	Refund Total
08/18/2022	17167647	\$1,360.00

Document Number	Fee Code	Fee Code Description	Amount Paid	Payment Method	Account Number
I20229CA02300565	1801	RCE- 1ST REQUEST	\$1,360.00		*****2007



United States Patent and Trademark Office

Office of the Chief Financial Officer

Document Code:WFEE

User :Simret Direta

Sale Adjustment Accounting Date:09/13/2022

Effective Date	Sale Accounting Date	Sale Item Reference Number
08/18/2022	09/13/2022	17167647

Document Number	Fee Code	Fee Code Description	Amount Paid	Payment Method
I20229CA02300565	1801	RCE- 1ST REQUEST	\$1,360.00	



UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/167,647	02/04/2021	Mark Cipriani	DFC-5558-01-02-US	3847
79958	7590	09/08/2022	EXAMINER	
Masco Corporation			TATE-SIMS, CRISTI J	
Bose McKinney & Evans LLP			ART UNIT	PAPER NUMBER
111 Monument Circle			1711	
Suite 2700			NOTIFICATION DATE	DELIVERY MODE
Indianapolis, IN 46204			09/08/2022	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):

dyerkeson@boselaw.com
patent@boselaw.com

Corrected Notice of Allowability	Application No. 17/167,647	Applicant(s) Cipriani et al.	
	Examiner CRISTI J TATE-SIMS	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 IDS filed 8/18/2022.
☐ 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 1-24. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

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

Certified copies:

a) ☐ All b) ☐ Some* c) ☐ None of the:

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

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

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

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)	5. ☐ Examiner's Amendment/Comment
2. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date <u>8/18/2022</u> .	6. ☐ Examiner's Statement of Reasons for Allowance
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____.	7. ☐ Other _____.
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date. _____.	

/CRISTI J TATE-SIMS/ Primary Examiner, Art Unit 1711	
---	--

PTO SB08/A

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Complete if Known	
				Application Number	17/167,647
				Filing Date	February 4, 2021
				First Named Inventor	Mark Cipriani
				Art Unit	1711
Examiner Name	Cristi J. Tate-Sims				
Sheet	1	of	2	Attorney Docket Number	DFC-5558-01-02-US

U.S. PATENT AND PATENT PUBLICATION DOCUMENTS					
*EXAMINER INITIAL	Cite No.	DOCUMENT NUMBER	Publication Date MM-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code (if known)			
	AA	2016/324395	11-2016	Cox et al.	
	AB				
	AC				
	AD				
	AE				
	AF				
	AG				
	AH				
	AI				
	AJ				
	AK				
	AL				
	AM				
	AN				
	AO				
	AP				
	AQ				
	AR				
	AS				
	AT				
	AU				
	AV				
	AW				
	AX				
	AY				
	AZ				
Examiner Signature	/CRISTI J TATE-SIMS/			Date Considered	09/02/2022

*EXAMINER: Initial if reference considered whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

PTO SB08/A

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Complete if Known	
				Application Number	17/167,647
				Filing Date	February 4, 2021
				First Named Inventor	Mark Cipriani
				Art Unit	1711
Examiner Name	Cristi J. Tate-Sims				
Sheet	2	of	2	Attorney Docket Number	DFC-5558-01-02-US

FOREIGN PATENT DOCUMENTS					
*EXAMINER INITIAL	Cite No.	DOCUMENT NUMBER	Publication Date MM-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code (if known)			
	BA	CN 86102485	11-1986	Jose Pires Ribeiro	English Language Translation
	BB	DE 3628724	02-1988	Lewag Anlagen & Gerate	English Language Translation
	BC	CN 101035735	09-2007	Whirlpool Co.	English Language Translation
	BD	DE 202007015486	03-2009	Schaefer Produkte GmbH	English Language Translation
	BE	CN 106572780	04-2017	Multistick GmbH	English Language Translation
	BF				
	BG				
	BH				
	BI				
	BJ				
	BK				
	BL				
Examiner Signature		/CRISTI J TATE-SIMS/		Date Considered	09/02/2022

*EXAMINER: Initial if reference considered whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



United States Patent and Trademark Office

Office of the Chief Financial Officer

Document Code:WFEE

User :Karen Vestal

Sale Accounting Date:08/19/2022

Sale Item Reference Number
17167647

Effective Date
08/18/2022

Document Number	Fee Code	Fee Code Description	Amount Paid	Payment Method
I20228ID32393117	1806	SUBMISSION- INFORMATION DISCLOSURE STMT	\$260.00	Deposit Account

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Complete if Known	
				Application Number	17/167,647
				Filing Date	February 4, 2021
				First Named Inventor	Mark Cipriani
				Art Unit	1711
				Examiner Name	Cristi J. Tate-Sims
Sheet	1	of	2	Attorney Docket Number	DFC-5558-01-02-US

U.S. PATENT AND PATENT PUBLICATION DOCUMENTS					
*EXAMINER INITIAL	Cite No.	DOCUMENT NUMBER	Publication Date MM-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code (if known)			
	AA	2016/324395	11-2016	Cox et al.	
	AB				
	AC				
	AD				
	AE				
	AF				
	AG				
	AH				
	AI				
	AJ				
	AK				
	AL				
	AM				
	AN				
	AO				
	AP				
	AQ				
	AR				
	AS				
	AT				
	AU				
	AV				
	AW				
	AX				
	AY				
	AZ				
Examiner Signature				Date Considered	

*EXAMINER: Initial if reference considered whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Complete if Known	
				Application Number	17/167,647
				Filing Date	February 4, 2021
				First Named Inventor	Mark Cipriani
				Art Unit	1711
				Examiner Name	Cristi J. Tate-Sims
Sheet	2	of	2	Attorney Docket Number	DFC-5558-01-02-US

FOREIGN PATENT DOCUMENTS						
*EXAMINER INITIAL	Cite No.	DOCUMENT NUMBER	Publication Date MM-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	
		Number-Kind Code (if known)				
	BA	CN 86102485	11-1986	Jose Pires Ribeiro	English Language Translation	
	BB	DE 3628724	02-1988	Lewag Anlagen & Geraete	English Language Translation	
	BC	CN 101035735	09-2007	Whirlpool Co.	English Language Translation	
	BD	DE 202007015486	03-2009	Schaefer Produkte GmbH	English Language Translation	
	BE	CN 106572780	04-2017	Multistick GmbH	English Language Translation	
	BF					
	BG					
	BH					
	BI					
	BJ					
	BK					
	BL					
Examiner Signature					Date Considered	

*EXAMINER: Initial if reference considered whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



[12] 发明专利申请公开说明书

[11] CN 86 1 02485 A

CN 86 1 02485 A

[43]公开日 1986年11月19日

[21]申请号 86 1 02485

[22]申请日 86. 4. 16

[30]优先权

[32]85. 4. 16 [33] 巴西 [31]8501857

[71]申请人 约希·彼里斯·里比罗

地址 巴西贝洛奥里藏特

[72]发明人 约希·彼里斯·里比罗

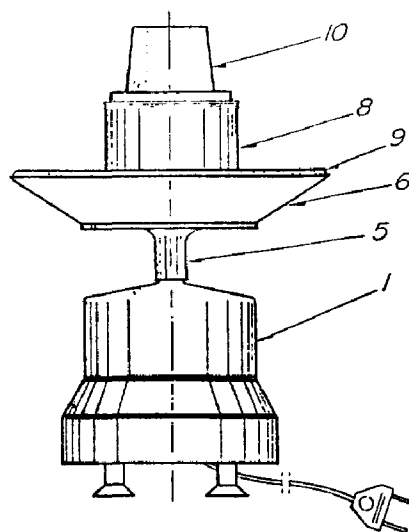
[74]专利代理机构 中国国际贸易促进委员会专利
代理部

代理人 王宪模 王 申

[54]发明名称 器皿洗涤设备

[57]摘要

本专利说明书描述了一种盘子、碟子、酒杯与水杯等用的一种器皿洗涤设备,包括有一个装有电动机(2)的基体(1),此电动机的轴从基体的上部朝外突出,套合上一个在上面设有穿孔销的平盘(5),此平盘(5)则适合匹配上一韧性板(6),并能以可更换的方式将擦刷件(9或8、10)通过所设置的接合销配合在述及的平盘(5)上。



242/8604862/03

1. 一种洗涤盘子、碟子、酒杯和水杯等的器皿洗涤设备，其擦刷作用是通过施加到待洗涤的器皿上的压力将器皿压住一所选好的擦刷件而取得的，此设备包括载有一台电动机（2）的呈框架形式的基体（1），此电动机的中央轴从基体（1）的上部向外突出，所说的轴适合套配上在其上面设有穿孔销的平盘（5），配置好的一个韧性平截头圆锥形板（6）通过穿孔套在此平盘（5）的所说穿孔销的外径部分上，而擦刷件（8，9）上在其下部设有插合销，适合同上述平盘（5）的穿孔销配合。

2. 按照权利要求1的一种器皿洗涤设备，其中电动机（2）的中心轴呈六角形截面，而上述平盘（5）上设有一轴套或中央下部轴套，此轴套有一六角形的内插合孔，适于同基体（1）上电动机（2）中的六角形截面中心轴配合。

3. 按照权利要求1的一种器皿洗涤设备，其中的擦刷件是一圆形的泡沫材料件（9），配合在平截头圆锥形韧性板（6）的上侧，同时配置有一刚性底座（7），它下面有销子与上述平盘（5）的穿孔销配合。

4. 按照权利要求1的一种器皿洗涤设备，其中的擦刷件为一圆柱形的或平截头圆锥形的装置（8），此装置（8）由一刚性底座与一擦刷件（10）组成，此擦刷件则由泡沫材料制成，装置（8）下面设有销子能同平盘（5）的穿孔销钉配合。

5. 按照权利要求1的一种器皿洗涤设备，其中
设置有一摩擦离合件。

器皿洗涤设备

本发明一般说来是关于器皿洗涤设备的，更具体地说，涉及到适于洗涤盘子、酒杯、水杯、碟子等的一种设备，此种设备的主要目的在于使家庭、饭店、酒馆与食堂等的器皿洗涤工作简便而高效化。

已知的器皿洗涤工作通常是用传统的洗碗布或灌木枝梢制的刷子进行，或者使用昂贵的机器，而这些机器是绝大多数消费者买不起的。这样的传统器皿洗涤机除了价昂之外，还是一种复杂而大型的设备，需要有合适的固定安装位置，以及水电的特殊连接部件。另一方面，此种传统的器皿洗涤设备还要花费很高的维修费用以及专用的洗涤剂。

本发明之目的在于解决上述问题，提供一种结构极其简单、实用而有效的器皿洗涤设备，这种设备属轻便型，一般说能在旅行中使用，而且不要求专用洗涤剂与特殊的安装，是绝大多数顾客愿意接收的一种设备。

本发明的器皿洗涤设备包括带有固定式短支柱的基体，基体内安装有一台电动机，它的中心轴突出到该底座的上部之外，适合连接上一碟状件，此碟状件在底座与该设备的工作或功能部件之间，起到一耦合部件的作用，而这种工作或功能部件主要包括一韧性的平截头圆锥形板、用于洗涤盘子与碟子的泡沫橡胶圆盘，以及洗涤水杯与酒杯的圆柱形或平截头圆锥形的泡沫材料体。上述泡沫橡胶圆盘与圆柱形或平截头圆锥形的泡沫材料体上设有销子，用来同该韧性的平截头圆锥形板插合，得以根据要洗的器皿类型作出变动或更换。

对照所附的图来阅读下面的说明，将更容易理解本发明之目的、优点和其它一些新的特征，在所附的图中：

图 1 是本发明器皿洗涤设备的一个示意性前视图，表明了该设备的总貌，示出了洗涤盘子用的泡沫橡胶圆盘以及洗涤杯子用的泡沫材料部件。

图 2 是图 1 所示设备的部件分解图或解体图，以剖面形式表明有关部件。

图 3 是以上图中所示器皿洗涤设备基体的平面图。

从阐明本说明书并作为它的一部分的附图中可以看到，本发明的器皿洗涤设备包括一基体 1，其中安装有电动机 2，它的中心轴从该基体的上部向上朝外突出。此基体 1 为刚性聚丙烯加工或挤压成的模塑框架，固定在配置有四个短支柱 3 的基板 4 上，此基板通常由橡胶制成。基板 4 上通常开设有位置适当的一些排水口（参看图 3），由基体罩防护，如图 2 所示，防止水渗入机体 1 内。

上述电动机的中央轴为六角形截面，能同一平盘 5 的轴套部分或其中央下部轴套牢稳地插合，平盘 5 由刚性丙乙烯制成，上面设有三个穿孔销。平盘 5 的上部适应配合一插合在该盘的穿孔销外径上的一切性板 6，作者通常呈倒置的平截头圆锥形结构，而它本身又适合要末装配上一圆盘形泡沫材料件 9 的刚性底座 7，而此泡沫材料件 9 是适合用来洗涤盘子与碟子的；要末连接到一装置 8 的刚性底座，而该装置 8 则适合用来洗涤酒杯与水杯的，情形如图 2 所示。

按照图中所示，泡沫材料件 9 的刚性底座 7 以及装置 8 的刚性底座上，都沿圆周设有销子，适合连接于韧性板 6 上并插入于设置在平盘 5 上面的穿孔销内，此平盘 5 则套合于基体 1 的轴上。

装置 8 可以取平截头圆锥形成圆柱形，包括有一个刚性聚丙烯的

底部，复盖有聚酯泡沫材料件 10、毛鬃或绒毛面或类似物质。同样，固定在刚底座 7 上的圆盘形泡沫材料件 9 也是聚酯材料制的，也可是毛鬃、绒毛面或类似适合于洗涤时擦刷器皿的物质。

本发明的器皿洗涤设备在轴上连接软线的插销接通电流后，其操作如下：

将泡沫材料件 9 浸入洗涤液一类物质中，用双手拿住盘子或碟子的边端部位压住上述泡沫材料件进行洗涤。作用到待洗器皿上的压力传递到泡沫材料件 9 上进而传至平盘 5，使电动机 2 通过它的离合器装置转动，结果引起由平盘 5、韧性板 6 与刚性底座 7 以及圆形的泡沫材料件 9 构成的组合件转动，使置放到圆形泡沫材料件 9 上的器皿（盘子或碟子）得到擦刷。一旦人们不再通过擦刷或洗涤的器皿件对旋转的部件 5、6、7 与 9 施加压力后，此设备即停止工作。

酒杯与水杯的洗涤是以类似方式进行，为此，只需将复盖有泡沫材料件 10 的平截头圆锥形或圆柱形装置 8 置换圆盘形泡沫材料件 9 即可。

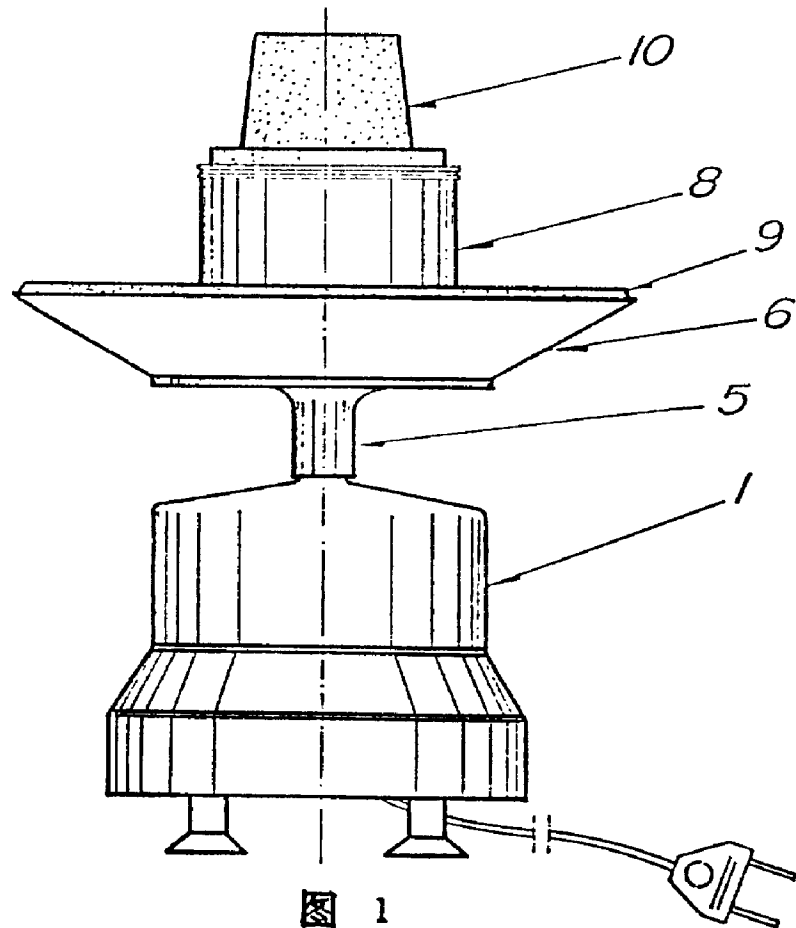


图 1

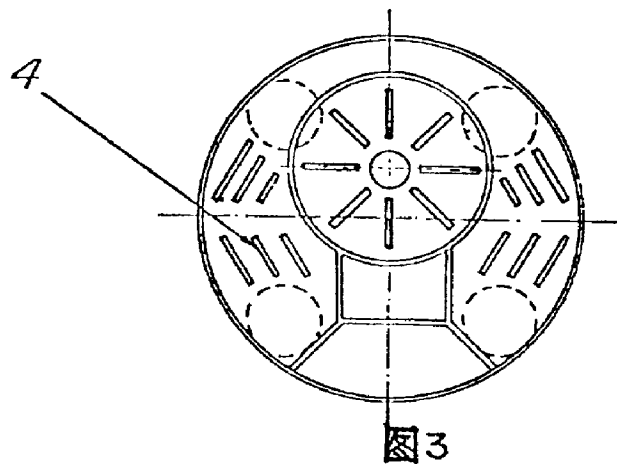
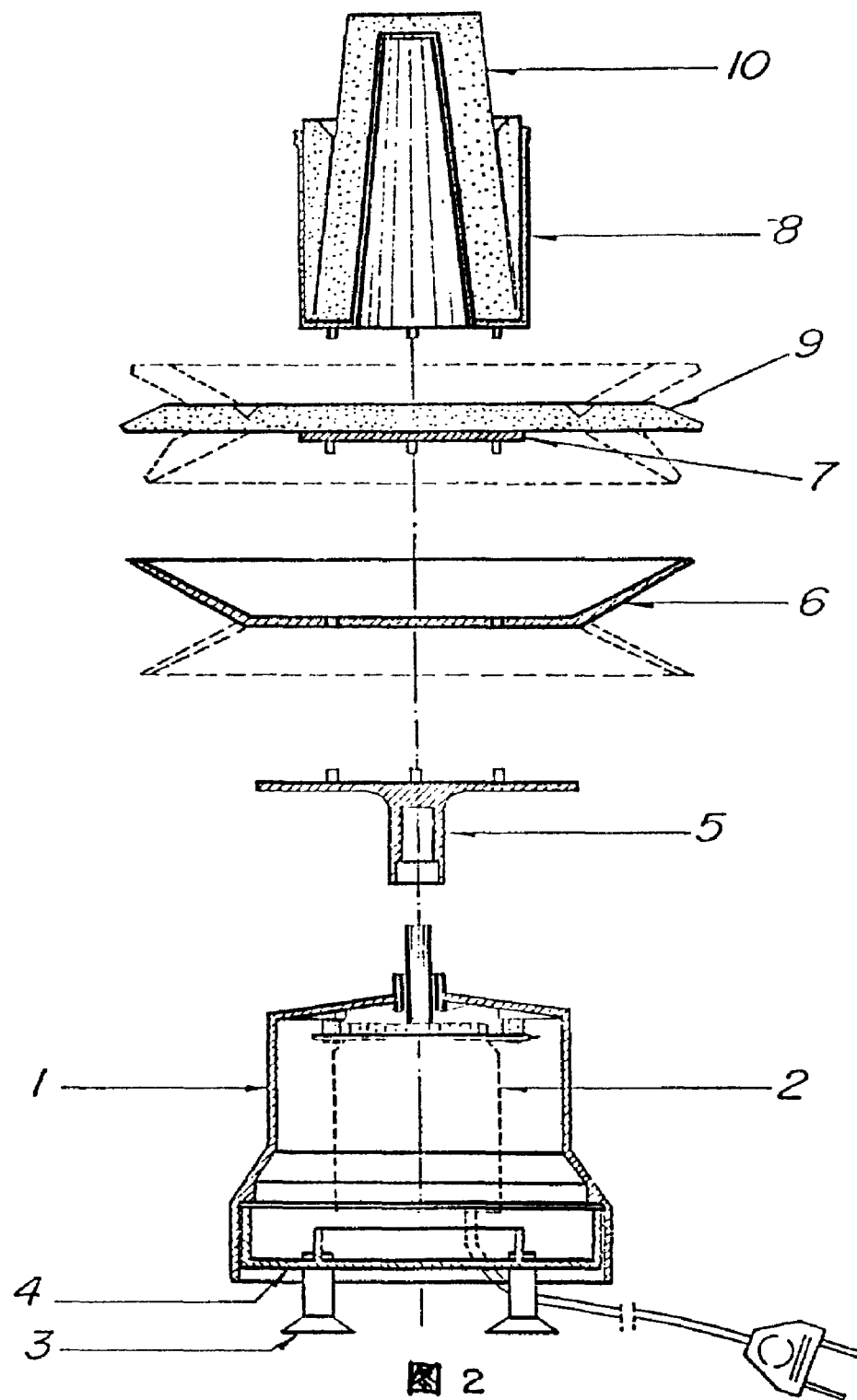


图 3



Patents

cn86102485



Dishware washing apparatus

Abstract

Patent specification has been described a kind of dishware washing apparatus of usefulness such as a kind of plate, plate, wineglass and water tumbler, includes a matrix (1) that motor (2) are housed. The axle of this motor is outstanding outwardly from the top of matrix, the square position (5) that cover closes one end is provided with perforated pins in the above, this square position (5) then is fit to a coupling last rigid sheet (6), and can brushing part (9 or 8,10) be engaged on the square position of addressing (5) by set double pointed nail in removable mode.

Classifications

A47L15/39 Washing or rinsing machines for crockery or tableware with crockery cleaned by brushes with brushes on movable supports

CN86102485A

China

[Download PDF](#)
[Find Prior Art](#)
[Similar](#)
Other languages: Chinese

Inventor: 约翰·彼里斯·里比罗

Worldwide applications

 1985 [BR](#) 1986 [NL](#) [DE](#) [JP](#) [CN](#)

Application CN198686102485A events

1985-04-16 Priority to BR8601857

1985-04-16 Priority to BR8601857A

1986-04-16 Application filed by 约翰·彼里斯·里比罗

1986-11-19 Publication of CN86102485A

Status Pending

Info: Cited by (3), Legal events, Similar documents, Priority and Related Applications

External links: Espacenet, Global Dossier, Discuss

Claims (5)

[Hide Dependent](#) ^

1, a kind of washing plate, plate, the dishware washing apparatus of wineglass and water tumbler etc., its brushing effect is vessel are pushed down a brushing part of choosing to obtain by being applied to pressure on the vessel to be washed, this equipment comprises the matrix that is the frame form (1) that is loaded with a motor (2), the axis of centres of this motor is outwards outstanding from the top of matrix (1), said axle is fit to cover and mixes the square position (5) that is provided with perforated pins in the above, the conical plate of the toughness frustum that configures (6) is enclosed within by perforation on the outer radius portion of said perforated pins of this square position (5), and brushing part (8,9) last being provided with in its underpart plugs together pin, is fit to cooperate with the perforated pins of above-mentioned square position (5).

2, according to a kind of dishware washing apparatus of claim 1, wherein the central shaft of motor (2) is hexagonal section, and above-mentioned square position (5) are provided with an axle sleeve or central lower axle sleeve, this axle sleeve has a hexagonal interior inserting hole, and the hexagonal section central shaft that is suitable in the last motor (2) of same matrix (1) cooperates.

3, according to a kind of dishware washing apparatus of claim 1, brushing part wherein is the foam pieces (9) of a circle, be engaged in the upside of the conical rigid sheet of frustum (6), dispose a rigid base (7) simultaneously, have pin to cooperate below it with the perforated pins of above-mentioned square position (5).

4, according to a kind of dishware washing apparatus of claim 1, brushing part wherein is a columniform or conical device of frustum (8), this device (8) is made up of a rigid base and a brushing part (10), this brushing part is then made by foamed material, and device is provided with the piercing pin that pin can same square position (5) below (8) and cooperates.

5, according to a kind of dishware washing apparatus of claim 1, wherein

Be provided with a friction clutch spare.

Description

Dishware washing apparatus

The present invention is in general about dishware washing apparatus, more particularly, relate to a kind of equipment that is suitable for washing plate, wineglass, water tumbler, plate etc., the main purpose of this kind equipment is to make the easy and high efficiency of the dish washing work in family, restaurant, public house and dining room etc.

Known dish washing work is normally carried out with the brush of traditional a dishcloth or shrub branch system, perhaps uses expensive machine, and these machines to be most consumers cannot afford. Traditional ware wash machine like this except high price, still a kind of complexity and large-scale equipment needs suitable fixed installation position, and the special attaching parts of water power. On the other hand, the traditional dishware washing apparatus of this kind also will spend very high maintenance cost and special-purpose washing agent.

The present invention's purpose is to address the above problem, provide extremely simple, the practical and effective dishware washing apparatus of a kind of structure, this equipment belongs to lightweight, can in travelling, use in general, and do not require special purpose detergent and special installation, be that most clients are

ready a kind of equipment of retaining.

Dishware washing apparatus of the present invention comprises the matrix that has fixed springs, a motor is installed in the matrix, its central shaft is projected into outside the top of this base, be fit to connect upward a distal of shape spare, this dish shape spare is between the work or functional part of base and this equipment, play the effect of a coupling unit, and this work or functional part mainly comprise the conical plate of the frustum of a toughness, are used to wash the foam rubber disk of plate and plate, and the conical foam material of cylindrical or frustum that washes water tumbler and wineglass. Above-mentioned foam rubber disk and the cylindrical or conical foam material of frustum are provided with pin, are used for plugging together with the conical plate of the frustum of this toughness, are able to make change or change according to the vessel type that will wash.

Conversely appended figure and read following explanation, will be more readily understood the present invention's purpose, advantage and some other new feature, in appended figure.

Fig. 1 is a front schematic view of dishware washing apparatus of the present invention, has shown total looks of this equipment, shows the foam component that the washing foam rubber disk used of plate and washing cup are used.

Fig. 2 is the exploded view or the disintegration figure of equipment shown in Figure 1, shows relevant parts with profile type.

Fig. 3 is the plane of dishware washing apparatus matrix shown in the above figure.

Can see that dishware washing apparatus of the present invention comprises a matrix 1, and motor 2 wherein is installed from illustrate this specification and the accompanying drawing of a part as it, its central shaft is upwards outstanding outwardly from the top of this matrix. The molded frame that this matrix 1 is processed or is separated into for rigid polypropylene is fixed on the substrate 4 that disposes four springs 3, and this substrate is made by rubber usually. Usually offer some discharge outlet (referring to Fig. 3) of location-appropriate on the substrate 4, by the protection of matrix cover, as shown in Figure 2, anti-sealing infiltrates in the body 1.

The axis of centres of above-mentioned motor is hexagonal section, and axle sleeve part that can serve square position 5 or its central lower shaft entangle firm quietly and plug together, and square position 5 is made by rigidity third ethene, above be provided with three perforated pins. The top of square position 5 adapts to and cooperates a rigid sheet 6 that plugs together on the perforated pins external diameter of this dish, the motor is inverted frustum conical structure usually, and itself is fit to want the rigid base 7 of last fit on one disc foam pieces 9, and this foam pieces 9 is fit to wash plate and plate; Want the end be connected to the rigid base of a device 8, this device 8 then is fit to wash wineglass and water tumbler, and situation as shown in Figure 2.

Shown in figure, the rigid base 7 of foam pieces 9 and installing on 8 the rigid base ell is provided with pin along circumference, is fit to be connected on the rigid sheet 6 and is inserted in the perforated pins that is arranged on above the square position 5, and 5 of this square positions are sleeved on the axle of matrix 1.

Device 8 frustum of a cone of can making even forms cylindrically, includes the bottom of a rigid polypropylene, and topped have polyester form material pieces 10, herpetical or ellipsus surface or a similar substance. Usually, be fixed on disc foam pieces 9 on the firm base 7 and also be polyester material system, also herpetical, villous surface or the similar material of brushing vessel when being valuable for washing.

Dishware washing apparatus of the present invention is after connecting the latch turn-on current of flexible cord on the axle, and its operation is as follows:

Foam pieces 9 is immersed in the cleaning solutions one class material, and the position, end, limit of with the hands arresting plate or plate is pushed down above-mentioned foam pieces and is washed. Affecting pressure on the vessel to be washed is delivered on the foam pieces 9 and then reaches square position 5, motor 2 is rotated by its clutch apparatus. The result causes that the sub-assembly that is made of square position 5, rigid sheet 6 and rigid base 7 and circular foam pieces 9 rotates, and makes the vessel (plate or plate) that are placed on the circular foam pieces 9 obtain brushing. In case after people no longer exerted pressure to the parts 5, 6, 7 and 9 of rotation by the vessel spare of brushing or washing, this equipment promptly quit work.

The washing of wineglass and water tumbler is to carry out in a similar manner, and for this reason, only needing has the frustum taper shape of foam pieces 10 or cylindrical appliance 8 displacement disc foam pieces 9 to get final product with topped.

Cited By (3)

Publication number	Priority date	Publication date	Assignee	Title
CN104224075A *	2014-03-23	2014-12-24	88888	Automatic cleaning device for rotary container
Family To Family Citations				
DE3728290A1 *	1987-09-28	1989-03-16	Marie Varrault	Device for cleaning drinking glasses, especially in restaurants and bars
DE4009043A1 *	1990-03-21	1991-03-28	Karlheinz Muehlebach	Drinking glass polisher with motorised cone and cylinder - ensures polishing of outer surfaces by hollow cylinder while inner surface is polished by contra-rotating cone

* Cited by examiner; † Cited by third party; ‡ Family to family citation

Similar Documents

Publication	Publication Date	Title
US9440267B2	2016-09-13	Tool for cleaning vessels
US2579393A	1951-12-18	Dishwashing, scouring, and polishing sink
CN204626046U	2015-09-09	The rotary drum washing machine of easy cleaning
CN20885077U	2019-05-14	A kind of hand held automatic cup washing device
CN104331499A	2015-03-12	Easy-to-clean pulsator washing machine

CN86102485A	1986-11-19	Dishware washing apparatus
US2664902A	1954-01-05	Center spray portable dishwashing machine
CN104771039A	2015-07-15	Portable full-automatic ultrasonic solubilizing teacup
US2664904A	1954-01-05	Dishwashing machine
CN210748881U	2020-06-16	Cleaning device convenient to clearance cooking machine
GB2194165A	1988-03-02	Egg beater
US3011192A	1961-12-05	Dishwasher
CN210131890U	2020-03-10	Multifunctional toy washing machine
CN108126591A	2018-06-08	Apparatus of laundry is put with multi-functional in a kind of bathroom
CN211432229U	2020-09-08	Rotating device and household appliance
CN208119775U	2018-11-20	A kind of bottle holding multiple types bath article
CN215820857U	2022-02-15	Safe and stable dish washer dish rack
US3169365A	1966-12-01	Washing device operated by garbage disposal unit
CN213200407U	2021-08-14	Fruit box structure capable of containing garbage
CN216397339U	2022-04-29	Washing and dewatering integrated machine for makeup eggs
CN212489821U	2021-02-09	Dish washing assisting device
CN210541425U	2020-08-19	Vortex flushing type dish washing machine
CN215136862U	2021-12-14	Multiple functional soap stirring toy
CN215227092U	2021-12-21	Automatic hand washing machine convenient for adding hand washing liquid
CN209826606U	2019-12-24	Water tank dish washer takes broken spray out

Priority And Related Applications

Priority Applications (2)

Application	Priority date	Filing date	Title
BR8501857		1985-04-16	
BR8501857A	1985-04-16	1985-04-16	WASHES DISHES

Legal Events

Date	Code	Title	Description
1986-11-19	C06	Publication	
1986-11-19	P001	Publication	
1988-10-26	W001	Invention patent application deemed withdrawn after publication	

Concepts

machine-extracted

[Download](#)
[Filter table](#)

Name	Image	Sections	Count	Query match
washing		title,claims,abstract,description	24	0.000
matrix material		claims,abstract,description	13	0.000
brushing		claims,abstract,description	11	0.000
water		claims,abstract,description	7	0.000



⌵ foam	claims,description	13	0.000
⌵ material	claims,description	7	0.000
⌵ coupling	abstract,description	2	0.000
⌵ coupling process	abstract,description	2	0.000
⌵ coupling reaction	abstract,description	2	0.000
⌵ Nails	abstract	1	0.000
Show all concepts from the description section			



⑦1 Anmelder:
LEWAG AG Anlagen und Geräte, 1000 Berlin, DE

⑦4 Vertreter:
Schmidt-Bogatzky, J., Dipl.-Ing. Dr.-Ing., 2000
Hamburg; Wilhelms, R., Dipl.-Chem. Dr.rer.nat.;
Kilian, H., Dipl.-Phys. Dr.rer.nat., Pat.-Anw., 8000
München

⑦2 Erfinder:
Mayer, Karl E.H., 2386 Stexwig, DE

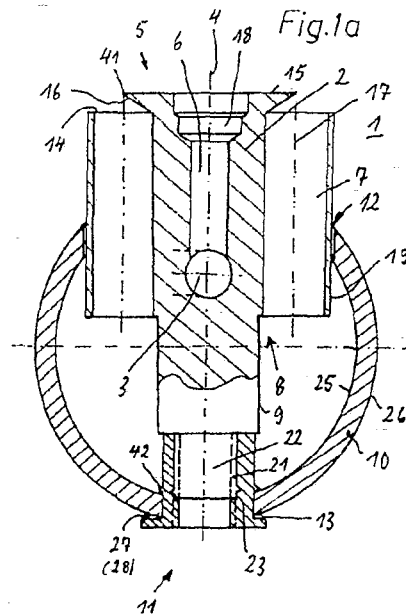
⑤6 Für die Beurteilung der Patentfähigkeit
in Betracht zu ziehende Druckschriften:

DE-PS	9 60 777
DE-PS	1 15 247
DE-OS	34 19 964
DE-OS	32 33 274
DE-GM	83 04 107
DE-GM	75 32 459
DE-GM	18 60 847
GB	13 64 107
GB	7 09 151
US	27 21 764
US	26 05 140

Prüfungsantrag gem. § 44 PatG ist gestellt

⑤4 Düse für Einrichtungen zur Behandlung von mobilen Gegenständen mit einem Fluid, Verfahren zur Befestigung der Düse an Verteilrohren für das Fluid und Anwendung der Düse

Die Erfindung betrifft eine Düse 1 für Einrichtungen zur Behandlung von mobilen Gegenständen mit einem durch ein Verteilrohr 10 geförderten Fluid. Sie besteht aus einem einstückigen Grundkörper 2, in dem allgemein parallel zur Düsenlängsachse 4 Durchbrechungen 7 ausgebildet sind. An dem dem Fluidaustritt 5 abgewandten Endabschnitt 8 des Grundkörpers 2 ist ein Zapfen 9 angeformt, der mit einer an dem Verteilrohr 10 angeordneten Halteeinrichtung 11 lösbar verbindbar ist (Fig. 1a).



Patentansprüche

1. Düse für Einrichtungen zur Behandlung von mobilen Gegenständen mit einem durch ein Verteilrohr geförderten Fluid, **gekennzeichnet durch** einen einstückigen Grundkörper (2), in dem allgemein parallel zur Düsenlängsachse (4) Durchbrechungen (7) ausgebildet sind, und durch einen an dem dem Fluidaustritt (5) abgewandten Endabschnitt (8) des Grundkörpers (2) angeformten Zapfen (9), der mit einer an dem Verteilrohr (10) angeordneten Halteeinrichtung (11) lösbar verbindbar ist. 5
2. Düse nach Anspruch 1, dadurch gekennzeichnet, daß in dem Grundkörper (2) eine Querbohrung (3) als Fluideinlaßkanal ausgebildet ist, die mit einem koaxial zur Düsenlängsachse (4) in dem Grundkörper (2) angeordneten sich bis zum Fluidaustritt (5) erstreckenden Sackloch (6) verbunden ist. 10
3. Düse nach Anspruch 1 und 2, dadurch gekennzeichnet, daß die Austrittsöffnungen (14) der Durchbrechungen (7) im Bereich des Fluidaustritts (5) abschnittsweise von einer Strahlablenkplatte (15) abgedeckt sind. 15
4. Düse nach Anspruch 3, dadurch gekennzeichnet, daß die Anströmfläche (16) der Strahlablenkplatte (15) schiefwinklig zu den Längsachsen (17) der Durchbrechungen (7) ausgebildet ist. 20
5. Düse nach Anspruch 3 und 4, dadurch gekennzeichnet, daß die Strahlablenkplatte (15) einstückig mit dem Grundkörper (2) verbunden ist. 25
6. Düse nach Anspruch 2, dadurch gekennzeichnet, daß der Austrittsabschnitt (18) des Sackloches (6) einen sich zum Fluidaustritt (5) erweiternden Querschnitt aufweist. 30
7. Düse nach Anspruch 1 und 2, dadurch gekennzeichnet, daß zwischen der Mantelfläche (19) des Grundkörpers (2) und dem Verteilrohr (10) eine Dichtung (20) angeordnet ist. 35
8. Düse nach Anspruch 1 und 2, dadurch gekennzeichnet, daß die Halteeinrichtung (11) als mit dem Verteilrohr (10) verbundene Gewindebuchse (21) ausgebildet ist, in die ein an dem Zapfen (9) ausgebildeter Gewindezapfen (22) einschraubbar ist. 40
9. Düse nach Anspruch 8, dadurch gekennzeichnet, daß die Gewindebuchse (21) als Blindniet (23) ausgebildet ist. 45
10. Düse nach Anspruch 1 und 2, dadurch gekennzeichnet, daß die Halteeinrichtung (11) als Gewindemutter (24) ausgebildet ist, in die ein an dem Zapfen (9) ausgebildeter Gewindezapfen (22) einschraubbar ist. 50
11. Düse nach Anspruch 10, dadurch gekennzeichnet, daß die Gewindemutter (24) an der Innenwand (25) oder an der Außenwand (26) des Verteilrohrs (10) angeordnet ist. 55
12. Düse nach einem der Ansprüche 8 bis 10, dadurch gekennzeichnet, daß die Gewindebuchse (21) bzw. die Gewindemutter (24) mittels einer oder mehrerer punktförmiger Löt- oder Schweißverbindungen oder einer umlaufenden Löt- oder Schweißverbindung mit dem Verteilrohr (10) verbunden ist. 60
13. Düse nach einem der Ansprüche 8 bis 10, dadurch gekennzeichnet, daß die Gewindebuchse (21) bzw. die Gewindemutter (24) mittels einer Klebverbindung (28) mit dem Verteilrohr (10) verbunden ist. 65
14. Düse nach Anspruch 1 und 2, dadurch gekennzeichnet,

zeichnet, daß als Halteeinrichtung (11) in dem Verteilrohr (10) eine Materialverdickung (29) mit Innengewinde ausgebildet ist.

15. Düse nach Anspruch 1 und 2, dadurch gekennzeichnet, daß an dem Endabschnitt (47) des Zapfens (9) ein weiterer im Durchmesser kleinerer Zapfen (44) ausgebildet ist, der durch die Durchbrechungen (13) des Verteilrohrs (10) gesteckt und mittels eines Klemmglieds an dem Verteilrohr (10) gegen axiales Verschieben gehalten ist.

16. Düse nach Anspruch 15, dadurch gekennzeichnet, daß in dem Zapfen (47) eine Nut (45) ausgebildet ist, in der als Halteglied ein als Sicherungsring (46) dienender Klemmring eingesetzt ist.

17. Düse nach Anspruch 1 und 2, dadurch gekennzeichnet, daß der Grundkörper (2) und der Zapfen (9) mittels Dichtungslagern (30, 31) in dem Verteilrohr (10) drehbar gelagert ist und daß an dem freien Endabschnitt (32) des Zapfens (9) ein weiterer Zapfen (33) angeformt ist, der mit einer Antriebseinrichtung (34) verbunden ist.

18. Düse nach Anspruch 17, dadurch gekennzeichnet, daß der Zapfen (33) mit einer mechanischen, elektromotorischen oder elektromagnetischen, pneumatischen oder hydraulischen Antriebseinrichtung (34) verbunden ist.

19. Düse nach Anspruch 18, dadurch gekennzeichnet, daß die hydraulische Antriebseinrichtung (35) als Turbinenrad (36) ausgebildet ist, die in einem mit dem Verteilrohr (10) verbundenen weiteren von Fluid beaufschlagten Rohr (37) angeordnet ist.

20. Düse nach Anspruch 19, dadurch gekennzeichnet, daß das Rohr (37) an einem Endabschnitt mit dem Verteilrohr (10) verbunden ist.

21. Düse nach Anspruch 1 und 2, dadurch gekennzeichnet, daß der Grundkörper (2) und der Zapfen (9) mittels Dichtungslagern (30, 31) in dem Verteilrohr (10) drehbar gelagert ist und daß an dem Zapfen (9) als hydraulische Antriebseinrichtung (34) ein Turbinenrad (36) angeordnet ist.

22. Düse nach einem der Ansprüche 1 bis 21, dadurch gekennzeichnet, daß die Düse (1) in dem Verteilrohr (10) senkrecht zur Verteilrohr-Längsachse (38) und zur Rotationsachse (39) des Verteilrohrs (10) parallel oder winklig ausgerichtet ist.

23. Düse nach einem der Ansprüche 1 bis 22, dadurch gekennzeichnet, daß die Düse (1) und gegebenenfalls das Verteilrohr (10) aus einem korrosionsfesten Werkstoff wie Nichteisenmetall, Edelstahl (VF2A, V4A), Titan, Kunststoff wie Teflon oder dergleichen besteht.

24. Düse nach einem der Ansprüche 1 bis 23, dadurch gekennzeichnet, daß die Düse (1) mit einem Verteilrohr (10) verbunden ist, das ortsfest starr oder in Verteilrohr-Längsachse (38) verschieblich oder um eine senkrecht zur Verteilrohr-Längsachse (38) angeordnete Rotationsachse (39) drehbar oder um die Verteilrohr-Längsachse (38) drehbar oder quer zur Verteilrohr-Längsachse (38) verschieblich ausgebildet ist.

25. Verfahren zur Befestigung der Düse nach einen der Ansprüche 1 bis 24 an einem Verteilrohr, dadurch gekennzeichnet, daß an der der Düsendurchbrechung im Verteilrohr entgegengesetzten Seite des Verteilrohres eine Halteeinrichtung angebracht wird, in der der Grundkörper der Düse befestigt wird.

26. Verfahren nach Anspruch 25, dadurch gekennzeichnet,

zeichnet, daß als Halteeinrichtung eine Gewindemutter oder ein Blindniet an dem Verteilrohr befestigt wird, in deren Innengewinde ein mit dem Grundkörper verbundener Zapfen eingeschraubt wird.

27. Verfahren nach Anspruch 26, dadurch gekennzeichnet, daß die Gewindemutter oder das Blindniet mittels Lötoder Klebverbindungen mit dem Verteilrohr verbunden wird.

28. Anwendung der Düse nach einem der Ansprüche 1 bis 24, dadurch gekennzeichnet, daß die Düse in Spülarmen von Spülmaschinen, Verteilrohren für Reinigungsanlagen oder Verteilrohren von Anlagen zur Oberflächenbeschichtung wie Lackieranlagen od. dgl. eingesetzt wird.

Beschreibung

Die Erfindung betrifft eine Düse für Einrichtungen zur Behandlung von mobilen Gegenständen mit einem Fluid, ein Verfahren zur Befestigung der Düse an Verteilrohren für das Fluid und die Anwendung der Düse.

Bei Spülmaschinen ist es z. B. üblich, an starren oder beweglichen Spülarmen Düsen vorzusehen, aus denen das Spülwasser als Fächerstrahl oder dgl. austritt. Die Spülarme und die Düsen können aus vernickeltem Messing oder dgl. bestehen. Es hat sich gezeigt, daß diese Werkstoffe bei einem Einsatz aggressiver Fluide nur eine begrenzte Standzeit haben, da die Nickelschicht sich lösen kann, so daß eine Korrosion des Grundmaterials erfolgt. Ein weiterer Nachteil der bekannten Düsen besteht darin, daß die Befestigung an den Verteilrohren oder Spülarmen durch Lötverbindungen erfolgt, wodurch die Montage dieser Düsen relativ arbeits- und damit kostenaufwendig wird.

Die Aufgabe der Erfindung besteht darin, eine gattungsgemäße Düse so auszubilden, daß sie angepaßt für den jeweiligen Einsatz bei Einrichtungen zur Behandlung von mobilen Gegenständen leicht hergestellt und einfach an Verteilrohren für das auszusprühende Fluid befestigt werden kann, wobei beim Betrieb Beeinträchtigungen der Standzeit durch Korrosionsschäden am Werkstoff vermieden werden sollen.

Erfindungsgemäß erfolgt die Lösung der Aufgabe durch einen einstückigen Grundkörper, in dem allgemein parallel zur Düsenlängsachse Durchbrechungen ausgebildet sind, und durch einen an dem dem Fluidaustritt abgewandten Endabschnitt des Grundkörpers angeformten Zapfen, der mit einer an dem Verteilrohr angeordneten Halteeinrichtung lösbar verbindbar ist.

Nach einem weiteren Merkmal der Erfindung wird an der der Düsendurchbrechung im Verteilrohr entgegengesetzten Seite des Verteilrohres eine Halteeinrichtung angebracht, in der der Grundkörper der Düse befestigt wird.

Diese vorteilhaften Lösungen ermöglichen nach einem besonderen Merkmal der Erfindung die Anwendung der erfindungsgemäßen Düse an Spülarmen von Spülmaschinen, Verteilrohren für Reinigungsanlagen oder Verteilrohren von Anlagen zur Oberflächenbeschichtung.

Weitere Ausgestaltungen der Erfindung werden in den abhängigen Ansprüchen beschrieben und nachstehend am Beispiel der in den Zeichnungen dargestellten Ausführungsformen näher erläutert. Es zeigt:

Fig. 1a bis 7 verschiedene Ausführungsformen von mit einem Verteilrohr verbundenen Düsen in schematischen Seitenansichten im Schnitt,

Fig. 8 bis 10 drei um die Düsenlängsachse rotierbare Düsen in schematischen Seitenansichten im Schnitt,

Fig. 11 einen Wascharm mit erfindungsgemäßen Düsen in der Seitenansicht im Schnitt,

Fig. 12 den Wascharm nach Fig. 11 in der Querschnitts-

Fig. 13 den Wascharm nach Fig. 11 in der Querschnitts-

sicht im Schnitt A-B.

In Fig. 1a ist eine Ausführungsform der Düse 1 schematisch in einer Seitenansicht dargestellt. Die Düse 1 besteht aus einem zylinderförmigen Grundkörper 2, der durch eine Durchbrechung 12 eines im Querschnitt kreisrunden Verteilrohres 10 geführt ist. In dem Grundkörper 2 ist eine Querbohrung 3 ausgebildet, die bei in das Verteilrohr 10 eingesetzter Düse 1 als Fluideinlaßkanal dient. Koaxial zur Düsenlängsachse 4 ist in dem Grundkörper 2 ein Sackloch 6 ausgebildet, das sich von dem Fluidaustritt 5 bis zur Querbohrung 3 erstreckt. Der dem Fluidaustritt 5 zugewandte Austrittsabschnitt 18 des Sackloches 6 ist zum Fluidaustritt 5 mit einem sich erweiternden Querschnitt ausgebildet. Parallel zur Düsenlängsachse 4 sind in einem radialem Abstand vom Sackloch 6 in dem Grundkörper 2 Durchbrechungen 7 als Durchgangslöcher ausgebildet. Es ist möglich, in dem Grundkörper 2 der Düse 1 nur die Durchbrechungen 7 auszubilden, ohne daß eine Querbohrung 3 und Sackloch 6 vorgesehen wird. Die Düse 1 ist hierdurch einfacher und preiswerter herzustellen. An dem dem Fluidaustritt 5 abgewandten Endabschnitt 8 des Grundkörpers 2 ist ein Zapfen 9 angeformt, der mit einer an dem Verteilrohr 10 angeordneten Halteeinrichtung 11 lösbar verbindbar ist.

Die Austrittsöffnungen 14 der Durchbrechungen 7 sind im Bereich des Fluidaustritts 5 abschnittsweise von einer Strahlableitplatte 15 überragt. Diese ist einstückig mit dem Grundkörper 2 verbunden. Die Anströmfläche 16 der Strahlableitplatte 15 ist schiefwinklig zu den Längsachsen 17 der Durchbrechungen 7 ausgerichtet. Die Neigung der Anströmfläche 16 kann unterschiedlich sein und hängt davon ab, welche seitliche Ablenkung des aus den Durchbrechungen 7 austretenden Fluidstrahls gewünscht wird. Die geometrische Ausbildung des aus der Düse 1 austretenden Fluidstrahls kann somit durch die Gestaltung der Anströmfläche 16 bestimmt werden. Durch entsprechende Wahl des Spitzenwinkels des zur Herstellung der Durchbrechungen 7 verwendeten Bohrers kann die Neigung der Anströmfläche 16 ausgebildet werden. Zur Ausbildung der Austrittsöffnungen 14 der Durchbrechungen 7 wird die fluidaustrittsseitige Fläche 41 des Grundkörpers 2 außenseitig abgedreht.

Im Bereich der Durchbrechung 12 kann zwischen der Mantelfläche 19 des Grundkörpers 2 und dem Verteilrohr 10 eine Dichtung 20 angeordnet sein (Fig. 6).

Für die Halteeinrichtung 11 sind verschiedene Ausführungsformen möglich. Diese kann z. B. als mit dem Verteilrohr 10 verbundene Gewindebuchse 21 ausgebildet sein, in die ein an dem Zapfen 9 ausgebildeter Gewindezapfen 22 einschraubbar ist (Fig. 1a). Zweckmäßigerweise ist die Gewindebuchse 21 als Blindniet 23 ausgebildet, das durch eine Durchbrechung 13 in dem Verteilrohr 10 gesteckt ist. Durch Ausbildung einer Materialverwölbung 42 wird das Blindniet 23 an dem Mantel des Verteilrohres 10 festgeklemmt. Es ist auch möglich, in dem Verteilrohr 10 eine Materialverdickung 29 vorzusehen, in der ein Innengewinde ausgebildet ist. In dieses Innengewinde kann dann der Gewindezapfen 22 an dem Zapfen 9 des Grundkörpers 2 eingeschraubt werden

(Fig. 4a). Nach einer weiteren Ausgestaltung kann die Halteeinrichtung 11 auch als Gewindemutter 24 ausgebildet sein, in die ein an dem Zapfen 9 des Grundkörpers 2 ausgebildeter Gewindezapfen 22 einschraubbar ist. Wie in den Fig. 4b und 7 schematisch dargestellt, kann die Gewindemutter 24 entweder an der Innenwand 25 oder aber an der Außenwand 26 des Verteilrohres 10 angeordnet sein. Um ein Lösen der Gewindebuchse 21 oder der Gewindemutter 24 von dem Gewindezapfen 22 durch mechanische Einwirkungen zu verhindern, ist es möglich, die Gewindebuchse 21 bzw. die Gewindemutter 24 mittels eines oder mehrerer punktförmiger Löt- oder Schweißverbindungen 27 mit dem Verteilrohr 10 zu verbinden. Eine derartige punktförmige Löt- oder Schweißverbindung 27 ist in Fig. 1a schematisch dargestellt. Es ist auch möglich, statt der punktförmigen Löt- oder Schweißverbindungen 27 eine um die Gewindebuchse 21 bzw. die Gewindemutter 24 umlaufende Löt- oder Schweißverbindung vorzusehen. Darüberhinaus ist es in einer weiteren Ausgestaltung der Erfindung auch möglich, die Gewindebuchse 21 bzw. die Gewindemutter 24 mittels einer Klebverbindung 28 mit dem Verteilrohr 10 zu verbinden. Diese Klebverbindung 28 kann, wie in Fig. 7 dargestellt, im Inneren des Verteilrohres 10 angeordnet sein. Es ist aber auch möglich, die Klebverbindung 28 auf der Außenwand 26 des Verteilrohres 10 vorzusehen.

Fig. 5 zeigt die Ausbildung einer weiteren Halteeinrichtung 11. An dem Endabschnitt 47 des Zapfens 9 ist ein weiterer im Durchmesser kleinerer Zapfen 44 ausgebildet, der durch die Durchbrechung 13 des Verteilrohres 10 gesteckt ist. An dem Zapfen 44 ist eine Nut 45 ausgebildet, in der als Halteglied ein als Sicherungsring 46 dienender Klemmring eingesetzt ist. Diese Ausführungsform einer Halteeinrichtung 11 ist besonders dann vorteilhaft einsetzbar, wenn die Mantelfläche 19 des Grundkörpers 2 mit engen Toleranzen in die Durchbrechung 12 und der Zapfen 4 ebenfalls mit engen Toleranzen in die Durchbrechung 13 eingeschoben werden kann.

Das Verteilrohr 10 kann einen beliebigen Querschnitt haben. Strömungstechnisch günstig ist eine kreisrunde Form. Es ist jedoch auch möglich das Verteilrohr 10 mit einem quadratischen, rechteckigen, dreieckigen Querschnitt oder dgl. auszubilden.

Für besondere Anwendungsfälle kann die Düse 1 in dem Verteilrohr 10 um ihre Düsenlängsachse 4 drehbar ausgebildet sein. Hierzu wird der Grundkörper 2 und der Zapfen 9 mittels Dichtungslagern 30, 31 in dem Verteilrohr 10 drehbar gelagert (Fig. 8). An dem freien Endabschnitt 32 des Zapfens 9 ist ein weiterer Zapfen 33 angeformt, der mit einer Antriebseinrichtung 34 verbunden ist. Die Antriebseinrichtung 34 kann mechanisch, elektromotorisch, elektromagnetisch, pneumatisch oder hydraulisch wirkend sein. Es ist auch möglich die Antriebseinrichtung 34 so auszubilden, daß an einem Verteilrohr 10 angeordnete Düsen 1 gleichsinnig, gegensinnig oder unterschiedlich zueinander gedreht werden. Hierdurch ist es möglich, den jeweiligen Einsatzfällen angepaßte Fluidsprühschirme auszubilden.

Eine besondere Ausführungsform einer hydraulischen Antriebseinrichtung 34 ist in Fig. 9 dargestellt. Bei dieser Ausführungsform ist die Antriebseinrichtung 34 als Turbinenrad 36, wie z. B. Peltonrad oder dgl., ausgebildet. Das Turbinenrad 36 befindet sich in einem weiteren Rohr 37, das an der dem Fluidaustritt 5 entgegengesetzten Seite des Verteilrohres 10 angeordnet ist. Es ist möglich, das Rohr 37 als Vorlaufkanal für das Verteil-

rohr 10 auszubilden, wenn beispielsweise an dem einen Endabschnitt des Rohres 37 und Verteilrohres 10 eine beide miteinander verbindende Strömungsumlenkung vorgesehen ist. Es ist auch möglich, an dem Zapfen 9 als hydraulische Antriebseinrichtung 34 ein Turbinenrad 36 anzuordnen. Auch bei dieser in Fig. 10 dargestellten Ausführung ist der Grundkörper 2 und der Zapfen 9 mittels Dichtungslagern 30, 31 in dem Verteilrohr 10 drehbar gelagert. Bei den in den Fig. 9 und 10 dargestellten hydraulischen Antriebseinrichtungen 34 muß in das Rohr 37 (Fig. 9) bzw. das Verteilrohr 10 (Fig. 10) eine gegenüber der durch die Düse 1 auszusprühenden Fluidmenge größere Fluidmenge eingebracht werden, damit auf das Turbinenrad 36 ein dessen Rotation bewirkender Impuls ausgeübt wird. Die Rotationsgeschwindigkeit der Düse 1 hängt von dem Verhältnis der aus der Düse 1 auszusprühenden Fluidmenge zu der in das Rohr 37 bzw. Verteilrohr 10 eingebrachten Fluidmenge ab. Das nicht aus der Düse 1 austretende Fluid kann aus der Düse 1 nachgeschalteten Düsen wie z. B. Treibdüsen bei rotierenden Verteilrohren 10 abgeführt werden.

Die Düse 1 kann in einem Verteilrohr 10 in unterschiedlichen Stellungen eingebaut werden um so eine Anpassung an den Einsatzbereich zu ermöglichen. In Fig. 11 ist schematisch ein als Wascharm 43 ausgebildetes Verteilrohr 10 dargestellt, das um eine Rotationsachse 39 drehbar ist. An den Endabschnitten ist das Verteilrohr 10 mittels Verschlußkappen 40 verschlossen. Die Düsen 1 sind in dem Verteilrohr 10 senkrecht zur Verteilrohr-Längsachse 38 aber winklig zur Rotationsachse 39 ausgerichtet (Fig. 12 und 13). Die Düsen 1 können sowohl in Drehrichtung X wie auch entgegengesetzt zur Drehrichtung X in einem Winkel geneigt sein. Es ist aber auch möglich, die Düsenlängsachse 4 parallel zur Rotationsachse 39 anzuordnen. In Verbindung mit an den Endabschnitten des Verteilrohres 10 vorgesehenen nicht näher dargestellten Treibdüsen wird durch das aus dem Verteilrohr 10 austretende Fluid auf das Verteilrohr 10 ein Drehimpuls ausgeübt. Bei einer Ausführung als Wascharm 43 kann das Verteilrohr 10 zwei oder mehrarmig ausgebildet sein.

Nach einer besonders vorteilhaften Ausgestaltung der Erfindung wird die Düse 1 und gegebenenfalls auch das Verteilrohr 10 aus einem korrosionsfesten Werkstoff wie Nichteisenmetall, Edelstahl (z. B. V2A, V4A), Titan, Kunststoff wie Teflon oder dgl. bestehen.

Der Einsatz der Düse 1 ist nicht auf besondere Anwendungsfälle bei Verteilrohren 10 beschränkt. So ist es möglich, die Düse 1 mit einem Verteilrohr 10 zu verbinden, das ortsfest starr oder in Verteilrohr-Längsachse 38 verschieblich oder um eine senkrecht zur Verteilrohr-Längsachse 38 angeordnete Rotationsachse 39 drehbar oder um die Verteilrohr-Längsachse 38 drehbar oder quer zur Verteilrohr-Längsachse 38 verschieblich ausgebildet ist. Düsen 1 mit entsprechenden Verteilrohren 10 können als Spülarms von Spülmaschinen, Verteilrohre 20 für Reinigungsanlagen im industriellen und gewerblichen Bereich sowie als Verteilrohre von Anlagen zur Oberflächenbeschichtung wie Lackieranlagen eingesetzt werden.

Da die Düse 1 nur aus einem einstückigen Grundkörper 2 besteht, ist sie aufgrund ihrer geometrischen Ausgestaltung relativ einfach zu fertigen. Die Montage von Düsen 1 an Verteilrohren 10 ist ebenfalls vergleichsweise einfach, da in den Verteilrohren 10 lediglich an den Durchbrechungen 12 entgegengesetzten Seiten der Verteilrohre 10 jeweils eine der beschriebenen Halte-

einrichtungen 11 angebracht werden muß, damit der Grundkörper 2 der Düse befestigt werden kann. Material und Werkstoffaufwand sind hierbei relativ gering.

5

10

15

20

25

30

35

40

45

50

55

60

65

3628724

Fig.1b

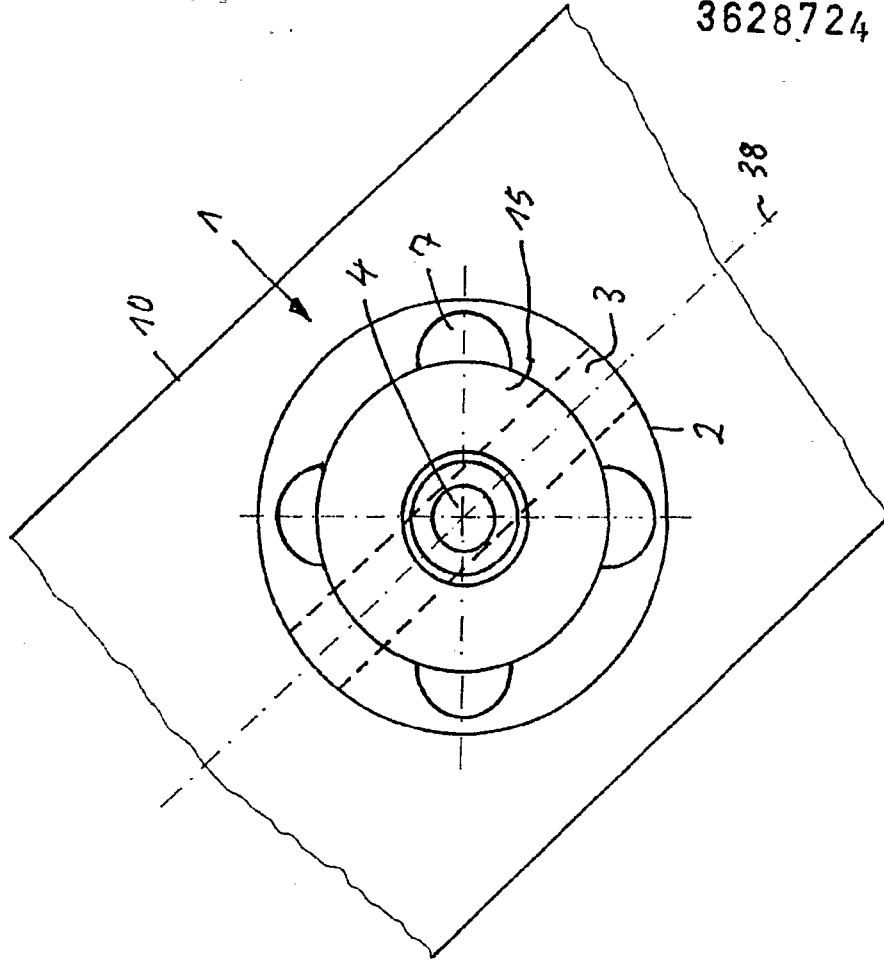
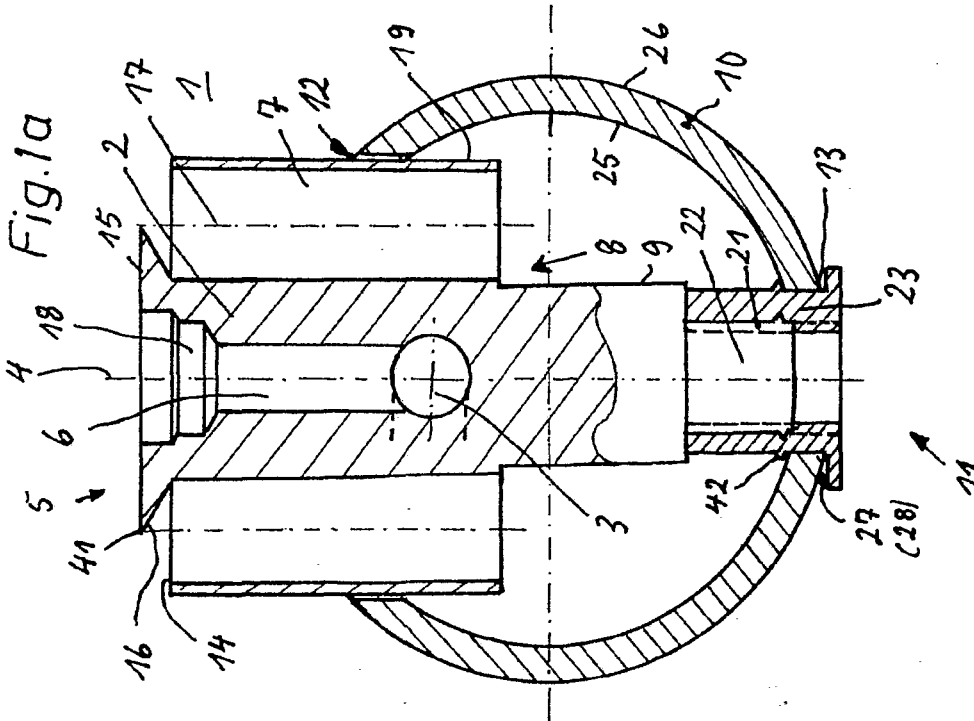


Fig.1a



3628724

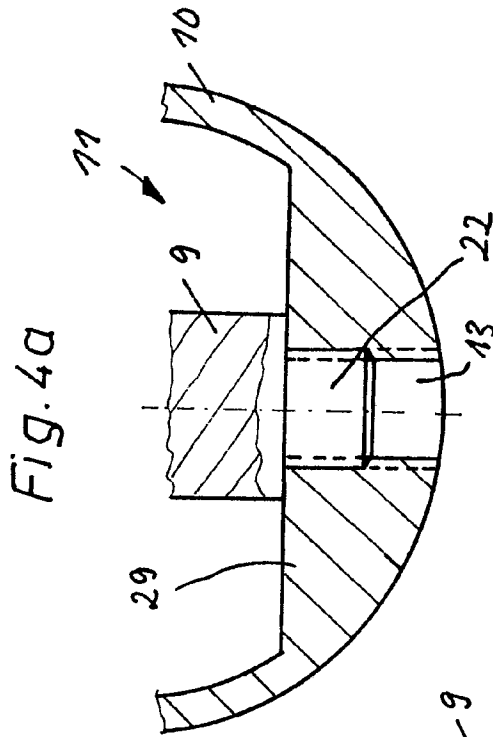


Fig. 4a

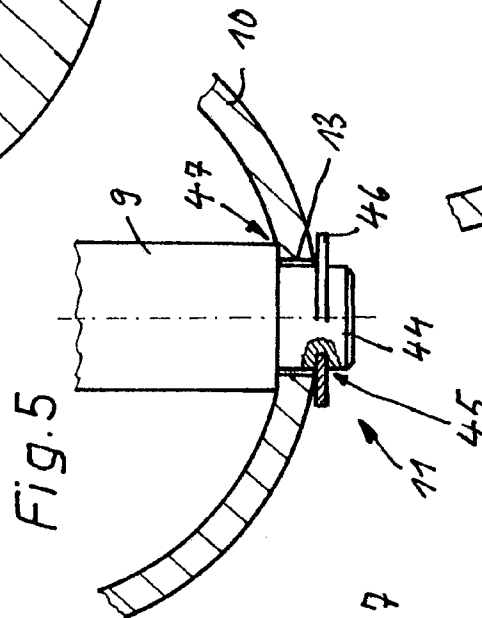


Fig. 5

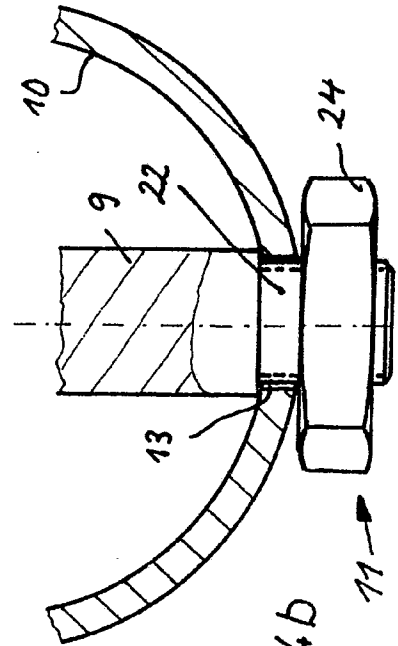


Fig. 4b

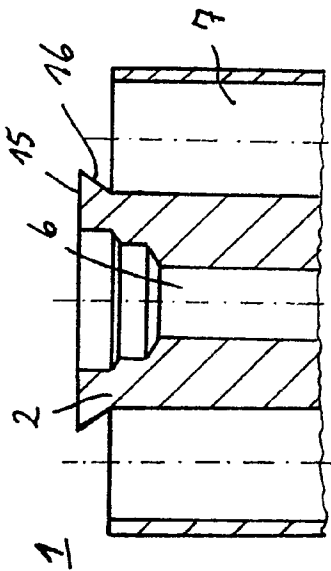


Fig. 2

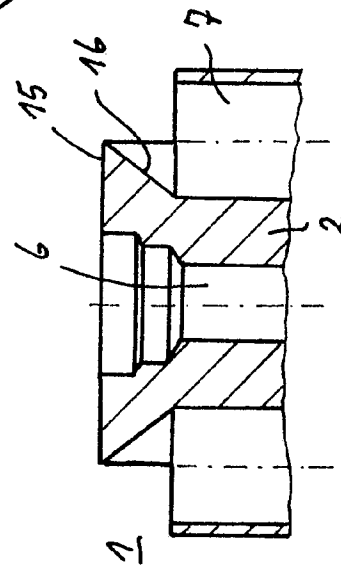
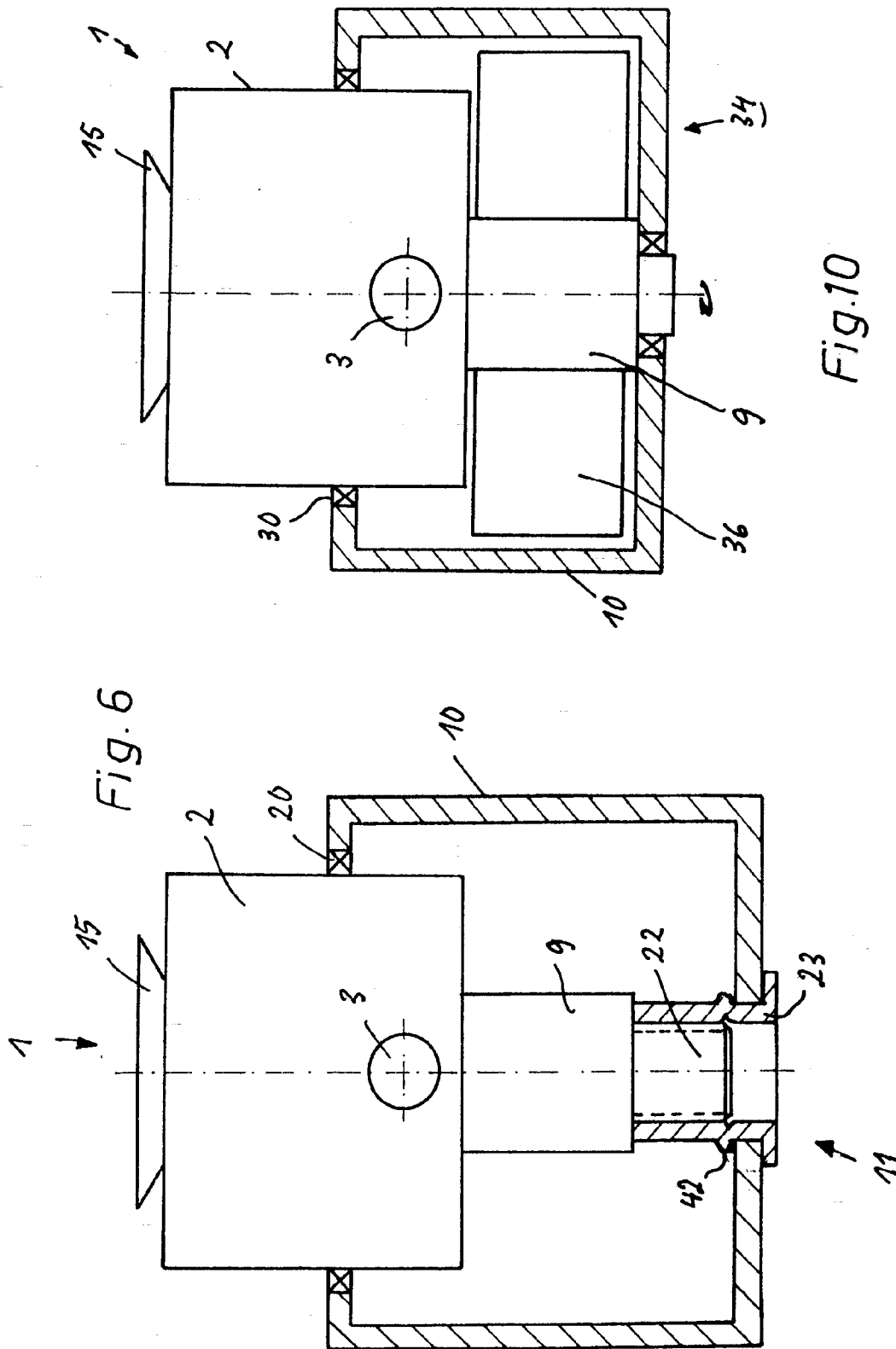


Fig. 3

3628724



3628724

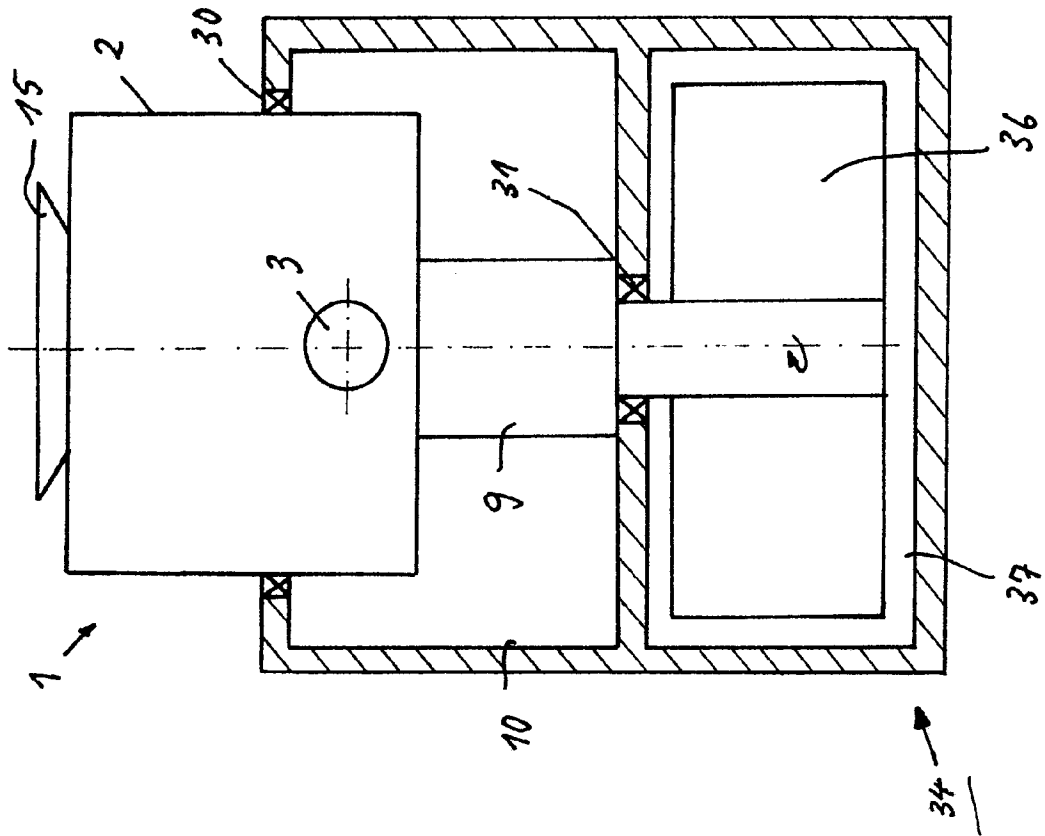


Fig. 9

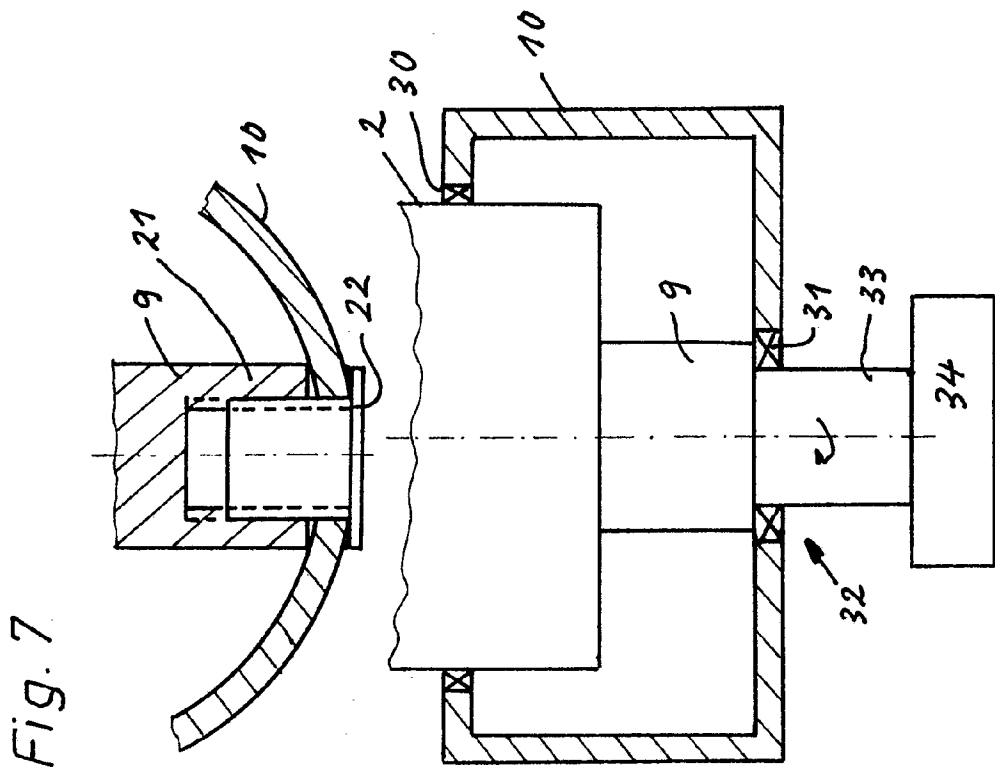


Fig. 7

Fig. 8

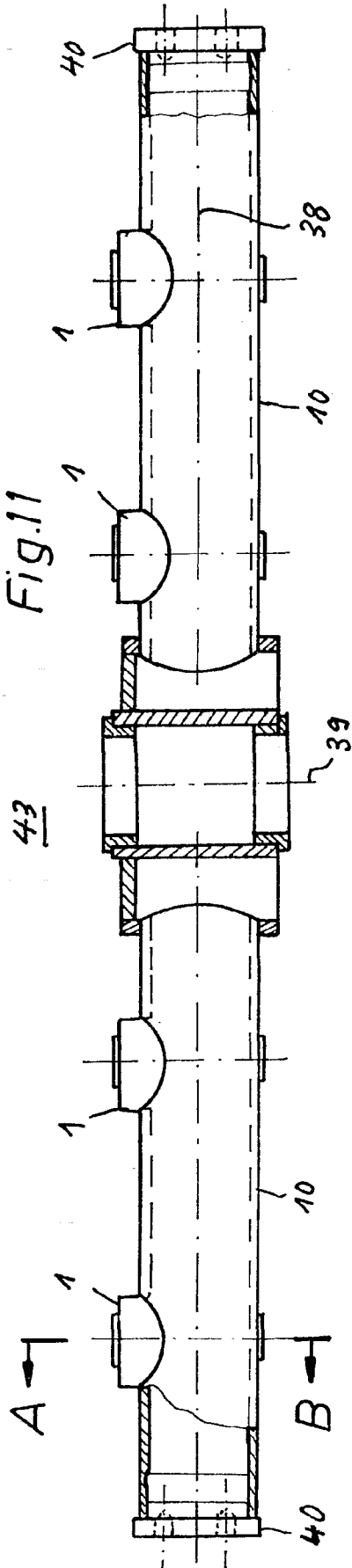


Fig. 11

Fig. 12

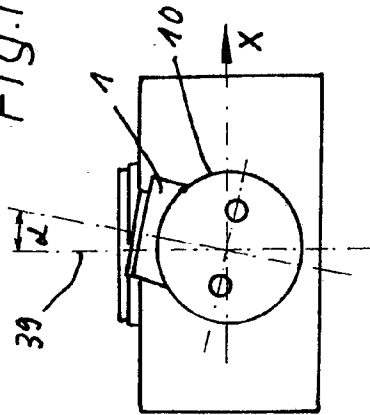
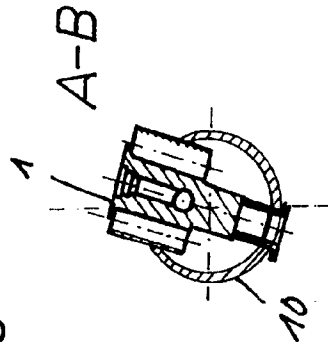


Fig. 13



3628724

Nozzle for devices for treating mobile articles with a fluid, process for attaching the nozzle to distribution pipes for the fluid and application of the nozzle

Abstract

The invention relates to a nozzle 1 for devices for treating mobile articles with a fluid transported through a distribution pipe 10. The nozzle consists of a one-part basic body 2 in which openings 7 are formed generally parallel to the nozzle longitudinal axis 4. On that end section B of the basic body 2 facing away from the fluid outlet 5, a pin 9 is integrally moulded which can be detachably connected to a holding device 11 arranged on the distribution pipe 10 (Fig. 1a). <IMAGE>

Classifications

■ A47L15/42 Details

[View 1 more classifications](#)

DE3628724A1

Germany

Find Prior Art

Similar

Other languages: German

Inventor: Karl E H Mayer

Current Assignee : Lewag Anlagen & Geräte

Worldwide applications

1986 DE 1987 IT

Application DE19863628724 events ⓘ

1986-08-23 Application filed by Lewag Anlagen & Geräte

1986-08-23 Priority to DE19863628724

1988-02-25 Publication of DE3628724A1

Status Withdrawn

Info: Patent citations (11), Cited by (4), Legal events, Similar documents, Priority and Related Applications

External links: Espacenet, Global Dossier, DPMA, Discuss

Claims (28)

Hide Dependent ^
translated from German

1. Nozzle for devices for the treatment of mobile objects with a fluid conveyed through a distribution pipe, characterized by a one-piece basic body (2), in which openings (7) are generally formed parallel to the longitudinal axis of the nozzle (4), and by one the end portion of the fluid outlet (5) facing away from (8) of the base body (2) molded-on pin (9) which is detachably connected to an electrode disposed on the manifold (10) holding means (11). 2. Nozzle according to claim 1, characterized in that in the base body (2) has a transverse bore (3) is designed as a fluid inlet duct, which is arranged with a coaxial to the longitudinal axis of the nozzle (4) in the base body (2) until the fluid outlet (5) extending blind hole (6) is connected. 3. Nozzle according to claim 1 and 2, characterized in that the outlet openings (14) of the openings (7) in the region of the fluid outlet (5) are partially covered by a beam deflector plate (15). 4. Nozzle according to claim 3, characterized in that the inflow surface (16) of the jet deflecting plate (15) is formed at an oblique angle to the longitudinal axes (17) of the openings (7). 5. Nozzle according to claim 3 and 4, characterized in that the jet deflection plate (15) is integrally connected to the base body (2). 6. Nozzle according to claim 2, characterized in that the outlet section (18) of the blind hole (6) has a cross-section widening to the fluid outlet (5). 7. Nozzle according to claim 1 and 2, characterized in that a seal (20) is arranged between the outer surface (19) of the base body (2) and the distribution pipe (10). 8. Nozzle according to claim 1 and 2, characterized in that the holding device (11) is formed with the manifold (10) threaded bushing connected (21) into which a projection formed on the pin (9) threaded pin can be screwed (22). 9. Nozzle according to claim 8, characterized in that the threaded bush (21) is designed as a blind rivet (23). 10. Nozzle according to claim 1 and 2, characterized in that the holding device (11) is designed as a threaded nut (24) into which a threaded pin (22) formed on the pin (9) can be screwed. 11. Nozzle according to claim 10, characterized in that the threaded nut (24) on the inner wall (25) or on the outer wall (26) of the distributor tube (10) is arranged. 12. Nozzle according to one of claims 8 to 10, characterized in that the threaded bush (21) or the threaded nut (24) by means of one or more point-shaped soldered or welded connections or a circumferential soldered or welded connection with the United pipe (10) is connected. 13. Nozzle according to one of claims 8 to 10, characterized in that the threaded bushing (21) or the threaded nut (24) is connected to the distribution pipe (10) by means of an adhesive connection (28). 14. Nozzle according to claim 1 and 2, characterized in that a material thickening (29) with an internal thread is formed as a holding device (11) in the distribution tube (10). 15. Nozzle according to claim 1 and 2, characterized in that at the end portion (47) of the pin (9) a further smaller diameter pin (44) is formed, which is inserted through the openings (13) of the distribution tube (10) and is held by means of a clamping member on the distribution pipe (10) against axial displacement. 16. Nozzle according to claim 15, characterized in that in the pin (47) a groove (45) is formed in which a clamping ring serving as a retaining ring (46) is used as a holding member. 17. Nozzle according to claim 1 and 2, characterized in that the base body (2) and the pin (9) by means of seal bearings (30, 31) in the distribution pipe (10) is rotatably mounted and that out at the free end (32) A further pin (33) is formed on the pin (9) and is connected to a drive device (34). 18. Nozzle according to claim 17, characterized in that the pin (33) is connected to a mechanical, electromotive or electromagnetic, pneumatic or hydraulic drive device (34). 19. Nozzle according to claim 18, characterized in that the hydraulic drive device (35) as a turbine penrad (36) is formed, which is arranged in a with the distribution pipe (10) connected to another fluid-loaded tube (37). 20. Nozzle according to claim 19, characterized in that the tube (37) is connected at one end portion to the distribution tube (10). 21. Nozzle according to claim 1 and 2, characterized in that the base body (2) and the pin (9) by means of seal bearings (30, 31) in the distribution pipe (10) is rotatably mounted and that on the pin (9) as a hydraulic Drive device (34) a turbine wheel (36) is arranged. 22. Nozzle according to one of claims 1 to 21, characterized in that the nozzle (1) in the distribution pipe (10) perpendicular to the longitudinal axis of the distributor pipe (38) and to the axis of rotation (39) of the distributor pipe (10) is aligned parallel or at an angle. 23. Nozzle according to one of claims 1 to 22, characterized in that the nozzle (1) and optionally the distribution pipe (10) made of a corrosion-resistant material such as non-ferrous metal, stainless steel (Vf2A, V4A), titanium, plastic such as Teflon or the like be. 24. Nozzle according to one of claims 1 to 23, characterized in that the nozzle (1) is connected to a distribution pipe (10) which is fixed in position or displaceable in the longitudinal axis of the distribution pipe (38) or arranged around a axis perpendicular to the longitudinal pipe axis (38) Rotation axis (39) is rotatable or rotatable about the distribution tube longitudinal axis (38) or displaceable transversely to the distribution tube longitudinal axis (38). 25. Method of attaching the nozzle according to one of the Claims 1 to 24 on a distribution pipe, thereby

characterized in that at the of the nozzle opening in Distribution tube opposite side of the distribution tube a holding device is attached in which the Base body of the nozzle is attached. 26. The method according to claim 25, characterized in that as a holding device, a threaded nut or a Blind rivet is attached to the distribution pipe in the internal thread connected to the base body Pin is screwed in. 27. The method according to claim 26, characterized in that that the threaded nut or the blind rivet by means of solder or adhesive connections connected to the distribution pipe becomes. 28. Use of the nozzle according to one of claims 1 to 24, characterized in that the nozzle in rinse arms of Dishwashers, distribution pipes for cleaning systems or distribution pipes of systems for surface treatment Layering such as painting systems or the like becomes.

Description

translated from German

The invention relates to a nozzle for devices for the treatment of mobile objects with a fluid, a method of attaching the nozzle Distribution pipes for the fluid and the application of the Jet.

In dishwashers it is e.g. B. usual to stare at or movable flush arm nozzles which the rinse water as a fan jet or the like. exit. The rinse arms and the nozzles can be off nickel-plated brass or the like. It has shown that these materials when used aggressive fluids only have a limited service life have because the nickel layer can come off so that corrosion of the base material occurs. A wide one for disadvantage of the known nozzles is that attachment to the distribution pipes or flush arms through soldered connections, which makes assembly these nozzles are relatively labor intensive and therefore costly dig.

The object of the invention is a get trained nozzle so that they are adapted for the respective use in treatment facilities easy manufacture of mobile objects and simply on distribution pipes for the fluid to be sprayed can be attached, during operation Beeinträcht the service life due to corrosion damage to the Material should be avoided.

According to the invention, the object is achieved by a one-piece body, in the general Openings are made parallel to the longitudinal axis of the nozzle are formed, and by one of the fluid outlet molded end portion of the base body Spigot arranged with one on the distribution pipe Holding device is releasably connectable.

According to a further feature of the invention, the the nozzle opening in the distribution pipe opposed a holding device attached, in which the base body of the nozzle is attached becomes.

These advantageous solutions allow for one special feature of the invention the application of the nozzle according to the invention on washing arms of dishwashers NEN, distribution pipes for cleaning systems or Ver partial pipes of systems for surface coating.

Further embodiments of the invention are in the dependent claims and described below on Example of the From shown in the drawings management forms explained in more detail. It shows:

FIG. 1a to 7 show various embodiments of a manifold connected with nozzles in schematic side views in section,

Figs. 8 to 10 has three rotatable about the nozzles longitudinal axis control orifices in schematic side views in section,

Fig. 11 is a washing arm according to the invention with control orifices in the side view, in section,

Figure 12 view. The washing arm according to Fig. 11 in the Queran,

Fig. 13, the wash arm of FIG. 11 in the Queran view in section AB.

In Fig. 1a, an embodiment of the nozzle 1 is shown schematically in a side view. The nozzle 1 consists of a cylindrical base body 2 which is guided through an opening 12 in a distribution tube 10 which is circular in cross section. In the base body 2, a transverse bore 3 is formed, which serves as a fluid inlet channel when the nozzle 1 is inserted into the distribution pipe 10. A blind hole 6, which extends from the fluid outlet 5 to the transverse bore 3, is formed in the base body 2 coaxially with the longitudinal axis 4 of the nozzle. The outlet section 18 of the blind hole 6 facing the fluid outlet 5 is designed for the fluid outlet 5 with an expanding cross section. Parallel to the nozzle longitudinal axis 4 are formed as through holes in a radial distance from the blind hole 6 in the body 2 openings. 7 It is possible to form only the openings 7 in the base body 2 of the nozzle 1 without a transverse bore 3 and blind hole 6 being provided. This makes the nozzle 1 easier and cheaper to manufacture. A pin 9 is integrally formed on the end section 8 of the base body 2 facing away from the fluid outlet 5 and can be releasably connected to a holding device 11 arranged on the distribution pipe 10.

The outlet openings 14 of the openings 7 are partially covered by a beam deflection plate 15 in the area of the fluid outlet 5. This is integrally connected to the base body 2. The inflow surface 16 of the beam deflecting plate 15 is oriented at an oblique angle to the longitudinal axes 17 of the openings 7. The inclination of the inflow surface 16 can be different and depends on which lateral deflection of the fluid jet emerging from the openings 7 is desired. The geometric formation of the fluid jet emerging from the nozzle 1 can thus be determined by the design of the inflow surface 16. By appropriate choice of the tip angle of the drill used to produce the openings 7, the inclination of the inflow surface 16 can be formed. To form the outlet openings 14 of the openings 7, the fluid outlet-side surface 41 of the base body 2 is turned off on the outside.

In the area of the opening 12, a seal 20 can be arranged between the lateral surface 19 of the base body 2 and the distribution tube 10 (FIG. 6).

Various holding forms are possible for the holding device 11. This can e.g. B. be connected to the distributor pipe 10 threaded bushing 21, into which a threaded pin 22 formed on the pin 9 can be screwed (FIG. 1a). The threaded bushing 21 is expediently designed as a blind rivet 23 which is inserted through an opening 13 in the distribution pipe 10. By forming a material curvature 42, the blind rivet 23 is clamped onto the jacket of the distribution pipe 10. It is also possible to provide a thickening 29 in the distribution pipe 10, in which an internal thread is formed. The threaded pin 22 on the pin 9 of the base body 2 can then be screwed into this internal thread (FIG. 4a). According to a further embodiment, the holding device 11 can also be designed as a threaded nut 24, into which a threaded pin 22 formed on the pin 9 of the base body 2 can be screwed. As shown in FIGS. 4b and 7 schematically, the threaded nut 24 can be arranged either on the inner wall 25 or on the outer wall 26 of the distribution pipe 10. In order to prevent loosening of the threaded bushing 21 or the threaded nut 24 from the threaded pin 22 by mechanical influences, it is possible to connect the threaded bushing 21 or the threaded nut 24 to the distribution tube 10 by means of one or more point-like soldered or welded connections 27. Such a gap punctiform solder or weld 27 is shown schematically in Fig. 1a. It is also possible, instead of the punctiform solder or weld connections 27, to provide a circumferential solder or weld connection around the threaded bushing 21 or the threaded nut 24. Moreover, it is in a further Substituted the invention staturg also possible for the threaded sleeve 21 and the threaded nut 24 by a Kiebyer bond 28 with the manifold 10 to connect. As shown in FIG. 7, this adhesive connection 28 can be arranged in the interior of the distribution tube 10. However, it is also possible to provide the adhesive connection 28 on the outer wall 26 of the distribution pipe 10.

Fig. 5 shows the configuration of another Haltseln direction 11. At the end section 47 of the pin 9, a further pin 44 with a smaller diameter is formed, which is inserted through the opening 13 of the distribution tube 10. A groove 45 is formed on the pin 44, in which a clamping ring serving as a locking ring 46 is inserted as the holding member. This embodiment of a holding device 11 can be used with particular advantage when the lateral surface 19 of the base body 2 with narrow tolerances is inserted into the opening 12 and the pin 44 can also be inserted into the opening 13 with narrow tolerances.

The distribution pipe 10 can have any cross section. A circular shape is favorable in terms of flow technology. However, it is also possible to design the distribution pipe 10 with a square, rectangular, triangular cross section or the like.

For special applications, the nozzle 1 can be designed to be rotatable in the distribution pipe 10 about its longitudinal axis 4. For this purpose, the base body 2 and the pin 9 are rotatably mounted in the distribution pipe 10 by means of sealing bearings 30, 31 (FIG. 8). At the free end portion 32 of the pin 9, a further pin 33 is formed, the device 34 is connected to a *Antriebsseinrich*. The drive device 34 can be mechanical, electromotive, electromagnetic, pneumatic or hydraulic. It is also possible to train the drive device 34 so that nozzles 1 arranged on a distribution pipe 10 are rotated in the same direction, in opposite directions or differently from one another. This makes it possible to design fluid spray screens adapted to the respective applications.

A special embodiment of a hydraulic drive device 34 is shown in FIG. 9. In this embodiment, the drive device 34 as a turbine wheel 36, such as B. Pelton wheel or the like. The turbine wheel 36 is located in a further tube 37, which is arranged on the fluid outlet 5 opposite side of the distribution tube 10. It is possible to form the pipe 37 as a feed channel for the distribution pipe 10 if, for example, a flow deflection, which is connected to one another, is provided at one end section of the pipe 37 and the distribution pipe 10. It is also possible to arrange a turbine wheel 36 on the pin 9 as a hydraulic drive device 34. Also in this embodiment shown in FIG. 10, the base body 2 and the pin 9 by means of seal bearings 30, 31 are rotatably mounted in the distribution pipe 10. In the hydraulic drive devices 34 shown in FIGS. 9 and 10, a larger amount of fluid than the fluid to be sprayed through the nozzle 1 must be introduced into the tube 37 (FIG. 9) or the distribution tube 10 (FIG. 10), so that on the turbine wheel 36 whose rotation cause the impulse to be exerted. The speed of rotation of the nozzle 1 depends on the ratio of the amount of fluid to be sprayed out of the nozzle 1 to the amount of fluid introduced into the pipe 37 or distribution pipe 10. The fluid not exiting from the nozzle 1 can be connected from the nozzle 1 downstream nozzles such. B. driving nozzles are discharged in rotating manifolds 18.

The nozzle 1 can be installed in a distribution pipe 10 in different positions to allow adaptation to the area of use. In Fig. 11 is schematically shown as a wash arm 43 ausgebill det distribution pipe 10 which is rotatable about a rotation axis 39. At the end sections, the distribution pipe 10 is closed by means of caps 40 ver. The nozzles 1 are aligned in the distributor pipe 10 perpendicular to the longitudinal axis 38 of the distributor pipe but at an angle to the axis of rotation 39 (FIGS. 12 and 13). The nozzles 1 can be inclined at an angle both in the direction of rotation *X* and counter to the direction of rotation *X*. However, it is also possible to arrange the nozzles along the longitudinal axis 4 parallel to the axis of rotation 39. In connection with provided at the end portions of the distribution tube 10 not shown th driving nozzles is exerted by the fluid emerging from the distribution tube 10 on the distribution tube 10, a rotary pulse. In an embodiment as a washing arm 43, the distribution pipe 10 can be ausgebill det two or more arms.

According to a particularly advantageous embodiment of the invention, the nozzle 1 and possibly also the distribution pipe 10 are made of a corrosion-resistant material such as non-ferrous metal, stainless steel (e.g. V2A, V4A), titanium, plastic such as Teflon or the like.

The use of the nozzle 1 is not limited to special applications in the case of manifolds 18. Thus, it is possible to connect the nozzle 1 to a distributor pipe 10, which is rigid or displaceable in the distributor pipe along the longitudinal axis 38 or rotatable about a rotation axis 39 arranged perpendicular to the distributor pipe longitudinal axis 38 or rotatable about the distributor pipe longitudinal axis 38 or transversely to the distributor pipe longitudinal axis 38 is. Nozzles 1 with corresponding distribution pipes 10 can be used as washing arms of washing machines, distribution pipes 20 for cleaning systems in the industrial and commercial sector and as distribution pipes of systems for surface coating such as painting systems.

Since the nozzle 1 consists only of a one-piece base body 2, it is relatively easy to manufacture due to its geometric configuration. The Mon days of nozzles 1 on manifolds 18 is also comparatively simple, since in the manifolds 18 only one of the holding devices 11 described must be attached to the openings 12 opposite sides of the manifolds 18 so that the base body 2 of the nozzle can be attached. Material and material expenditure are relatively low.

Patent Citations (11)

Publication number	Priority date	Publication date	Assignee	Title
DE1152470 *				
US2605140A *	1950-03-01	1952-07-29	Dearborn Motors Corp	Nozzle support for spray booms
GB709151A *	1952-03-05	1954-05-19	Shell Refining & Marketing Co	Improvements in or relating to spraying devices and processes
US2721764A *	1954-08-09	1955-10-25	Plastic Irrigation Products Co	Sprinkler apparatus
DE960777C *	1953-03-27	1957-03-28	Pumpindustri Ab	Liquid nozzle for foam nozzles for fire extinguishing purposes
DE1860847U *	1959-08-03	1962-10-25	Mannesmann Ag	IRRIGATION DEVICE.
GB1364107A *	1970-12-26	1974-08-21	Hitachi Shipbuilding Eng Co	Coating equipment
DE7532459U *	1975-10-11	1976-04-22	Eisen, Albin, 7552 Durnersheim	FLUSHING NOZZLE FOR CLEANING AND / OR FLUSHING OUT DRAINS, PIPES OR THE LIKE
DE3233274A1 *	1982-09-08	1984-03-15	Worm-Apparatebau Wolfgang Massberg & Co GmbH, 4100 Duisburg	High-pressure jet device for treating surfaces
DE8304167U1 *	1983-02-15	1984-07-26	Lucas Industries P.L.C., Birmingham, West Midlands	CONNECTING BETWEEN A RESERVOIR FOR BRAKE FLUID OR THE LIKE, AND A CUSTOMER
DE3419964A1 *	1984-05-29	1985-12-05	Alfred Kärcher GmbH & Co, 7057 Winnenden	Spray head on the jet pipe of a high pressure cleaning device
Family To Family Citations				

* Cited by examiner, † Cited by third party

Cited By (4)

Publication number	Priority date	Publication date	Assignee	Title
DE19703956A1 *	1997-02-03	1998-08-06	Raschig Ag	Dispersion unit for fluid distributor
US5927615A *	1996-08-08	1999-07-27	Eaton-Williams Group Limited	Steam outlet assembly
DE102011082702A1 *	2011-09-14	2013-03-14	Lechler GmbH	Nozzle assembly for cleaning inside surfaces of hollow chamber of e.g. bottle, has outlet openings distributed in circumferential direction of housing and laterally arranged at central longitudinal axis of nozzle housing
CN108126854A *	2017-12-27	2018-06-08	中国矿业大学	A kind of fully-mechanized digging machine foam nozzle erecting device and its application method
Family To Family Citations				

* Cited by examiner, † Cited by third party, ‡ Family to family citation

Similar Documents

Publication	Publication Date	Title
DE2901306C2	1988-02-11	
DE3420318C2	1987-06-25	
DE3407744C2	1986-01-23	Hand spray gun for a high pressure cleaning device
DE1580496B1	1970-01-29	Valve for large pressure drops
DE19821411A1	1999-02-04	Axially operable double flushing lance
DE102018133067A1	2019-06-27	Spray nozzle and method
DE102004052794B3	2005-10-06	Container cleaning device has planetary gear installed as whole in space region circumscribed by bevel gearwheels by outside diameters and in direction of rotational axes forming common spatial intersection of circumscribed spaces
DE4133208C2	1997-01-09	Cleaning device for a pipe
DE2652584A1	1977-06-02	PULSING LIQUID SPRAY DEVICE
DE3544340A1	1986-06-19	DOUBLE PURPOSE NOZZLE
DE1428424B2	1971-01-28	Rotating spray device in winding machines
DE4406864C2	1997-06-28	Pipe cleaning device
DE3628724A1	1988-02-25	Nozzle for devices for treating mobile articles with a fluid, process for attaching the nozzle to distribution pipes for the fluid and application of the nozzle
DE2539000B2	1978-09-28	Ball valve
DE2631752B2	1979-03-15	Pivoting sprinkler device Ets. Carpano & Pons, Cluses, Haute-Savoie (France)
EP2207626A1	2010-07-21	Connection of a spray head to a robot arm
DE2246520B2	1979-04-26	Spray head fitting for sanitary installations
DE1675528B2	1973-06-14	SWITCH FOR A TAP ON A BATHTUB
DE729469C	1942-12-17	Device for spraying paint liquids onto the inner walls of hollow bodies, in particular pipes
DE4345097C2	2002-09-19	Device for connecting a radiator, as well as a central radiator
DE2325091C3	1978-03-30	Housing for gate valve
EP1343591B1	2007-09-12	Nozzle device
DE202004012949U1	2004-11-18	Device for internal cleaning of containers has spray component fixed in relation to container wall and formed as axially symmetrical hollow body with spray holes isochronously and three-dimensionally creating spray jets on all sides
DE2925435A1	1981-01-22	Spray head for pressurised liq. has opening for insert - with outer axial grooves forming nozzle ducts with wall of opening
EP0638366A1	1995-02-15	Jet pipe for high-pressure cleaning device

Priority And Related Applications

Priority Applications (1)

Application	Priority date	Filing date	Title
DE19863628724	1986-08-23	1986-08-23	Nozzle for devices for treating mobile articles with a fluid, process for attaching the nozzle to distribution pipes for the fluid and application of the nozzle

Applications Claiming Priority (2)

Application	Filing date	Title
DE19863628724	1986-08-23	Nozzle for devices for treating mobile articles with a fluid, process for attaching the nozzle to distribution pipes for the fluid and application of the nozzle
IT04837/B7A	1987-08-20	NOZZLE FOR DEVICES FOR THE TREATMENT OF MOVABLE OBJECTS WITH A FLUID; PROCEDURE FOR FASTENING THE NOZZLE ON DISTRIBUTION HOSES FOR THE FLUID AND USE OF THE NOZZLE

Legal Events

Date	Code	Title	Description
1988-02-25	OMB	Search report available as to paragraph 43 lit. 1 sentence 1 patent law	
1988-02-25	OPB	Request for examination as to paragraph 44 patent law	
1989-11-02	B130	Withdrawal	

Concepts

machine-extracted

Download Filter table

Name	Image	Sections	Count	Query match
fluid		title,claims,abstract,description	33	0.000
material		claims,description	9	0.000
adhesive		claims,description	4	0.000
adhesive		claims,description	4	0.000
corrosion		claims,description	4	0.000
solder		claims,description	4	0.000
cleaning		claims,description	3	0.000
Teflon		claims,description	2	0.000
fe2+		claims,description	2	0.000
	Fe ²⁺			
metal		claims,description	2	0.000
metal		claims,description	2	0.000
painting		claims,description	2	0.000
plastic		claims,description	2	0.000
polytetrafluoroethylene		claims,description	2	0.000
stainless steel		claims,description	2	0.000
stainless steel		claims,description	2	0.000
titanium		claims,description	2	0.000
titanium		claims,description	2	0.000
	Ti			

⌵ titanium	claims,description	2	0.000
⌵ displacement reaction	claims	1	0.000
⌵ surface treatment	claims	1	0.000
Show all concepts from the description section			

Data provided by IFI CLAIMS Patent Services

[19] 中华人民共和国国家知识产权局

[51] Int. Cl.

B67D 3/04 (2006.01)

B67D 1/12 (2006.01)



[12] 发明专利申请公布说明书

[21] 申请号 200580017099.5

[43] 公开日 2007 年 9 月 12 日

[11] 公开号 CN 101035735A

[22] 申请日 2005.4.12

[21] 申请号 200580017099.5

[30] 优先权

[32] 2004.4.13 [33] BR [31] PI0401576-2

[86] 国际申请 PCT/BR2005/000053 2005.4.12

[87] 国际公布 WO2005/100233 英 2005.10.27

[85] 进入国家阶段日期 2006.11.27

[71] 申请人 惠而浦股份有限公司

地址 巴西圣保罗

[72] 发明人 C·E·多阿马拉尔 E·I·本托

[74] 专利代理机构 中国国际贸易促进委员会专利商
标事务所

代理人 范 莉

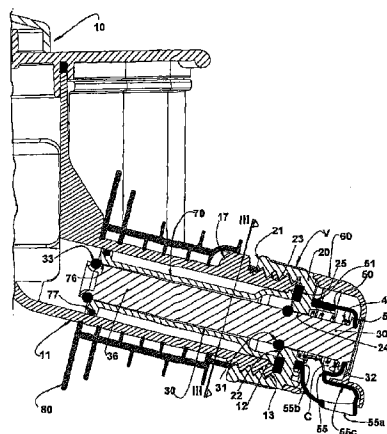
权利要求书 3 页 说明书 7 页 附图 2 页

[54] 发明名称

液体分配阀

[57] 摘要

一种液体分配阀，包括：主体部分(20)，其密封安装到储存器(10)的排放喷嘴(11)的自由端(12)上并限定了阀座(22)；杆(30)，其安装有密封件(31)并选择性地移动于关闭位置和最大打开位置之间，在所述关闭位置，密封件(31)座于阀座(22)上，在所述最大打开位置，密封件(31)与阀座(22)分开；盖部分(50)，其密封连接到位于阀座(22)下游并围绕杆(30)的主体部分(20)上，并且限定了排放室(C)；以及细长喷管(55)，其具有向下弯曲的排放端(55a)，所述盖部分(50)和细长喷管(55)的结构和尺寸如此设置使得在阀座(22)封闭时，容纳于排放室(C)中的残留液体团在该排放室内部靠重力形成真空，该真空足以保持分配阀(V)内部的所述液体团。



1.一种液体分配阀，其特征在于包括：

主体部分（20），其密封安装到储存器（10）的排放喷嘴（11）的自由端（12）上并限定了阀座（22）；

杆（30），其穿过主体部分（20）安装，带有密封件（31）并选择性地关闭位置和最大打开位置之间移动，在所述关闭位置，密封件（31）座于阀座（22）上，以阻挡液体从储存器（10）中排放，在所述最大打开位置，密封件（31）与阀座（22）分开，以允许液体排放；

弹簧装置（40），其安装到主体部分（20）上并且使杆（30）压向关闭位置；

盖部分（50），其密封连接到位于阀座（22）下游并围绕杆（30）的主体部分（20）上，并且在内部限定了排放室（C）；和

细长喷管（55），其具有向下弯曲的排放端（55a），所述盖部分（50）和细长喷管（55）的结构和尺寸如此设置使得当阀座（22）由密封件（31）封闭时，容纳于排放室（C）中的残留液体团在所述排放室内部靠重力形成真空，该真空足以使所述液体团保持在细长喷管（55）的排放端（55a）的上游。

2.如权利要求 1 所述的阀，其特征在于：盖部分（50）为管形，其具有密封连接到主体部分（20）上的端部（51）和密封连接到位于主体部分（20）以外的杆（30）的端部（30a）上的相对端部（52）。

3.如权利要求 2 所述的阀，其特征在于：盖部分（50）限定了环形管状的排放室（C），其围绕位于主体部分（20）以外的杆（30）的端部（30a）。

4.如权利要求 3 所述的阀，其特征在于：盖部分（50）的相对端部（52）由一环形壁所限定，该环形壁在内部周边地连接到相邻的杆（30）的端部（30a）上。

5.如权利要求 1 所述的阀，其特征在于：盖部分（50）由弹性体材料形成。

6.如权利要求 5 所述的阀,其特征在于:盖部分(50)和细长喷管(55)形成单个部件。

7.如权利要求 1 所述的阀,其特征在于:主体部分(20)外部还带有外壳(60),所述外壳侧向容纳盖部分(50)和细长喷管(55)。

8.如权利要求 1 所述的阀,其特征在于:细长喷管(55)具有入口端(55b),该入口端径向通向排放室(C)的内部并且通过中间部分(55c)连接到排放端(55a),所述中间部分大致正交于入口端(55b)和排放端(55a)两者的轴线。

9.如权利要求 1 所述的阀,其特征在于:杆(30)在分配阀(V)的关闭位置和打开位置之间轴向移动。

10.如权利要求 9 所述的阀,其特征在于:密封件(31)采用弹性环的形式,其安装在设置于阀座(22)上游的杆(30)的周向槽道中。

11.如权利要求 10 所述的阀,其特征在于:杆(30)具有轴向延伸部(36),该轴向延伸部位于储存器(10)的排放喷嘴(11)内部并且在其自由端部带有附加密封件(33),所述排放喷嘴(11)在内部带有与阀座(22)轴向分开的附加阀座(76),并且所述附加密封件(33)在杆(30)移动到其关闭位置时座靠于该附加阀座(76)上。

12.如权利要求 11 所述的阀,其特征在于:附加阀座(76)限定在管状套筒(70)的一端部上,所述管状套筒具有加宽且密封连接到排放喷嘴(11)的自由端(12)上的相对端部。

13.如权利要求 12 所述的阀,其特征在于:分配阀(V)的主体部分(20)具有带内螺纹(23)的管状轴向延伸部(21),所述内螺纹与设置在排放喷嘴(11)的自由端(12)上的外螺纹相接合。

14.如权利要求 13 所述的阀,其特征在于:主体部分(20)在内部环形表面中带有环形垫圈(25),当分配阀(V)安装到排放喷嘴(11)的自由端(12)上时,所述环形垫圈(25)要同时压靠管状套筒(70)的相对端部和排放喷嘴(11)的自由端(12)。

15.如权利要求 1 所述的阀,其特征在于:主体部分(20)在其管状轴向延伸部(21)上包括当分配阀(V)完全接合到排放喷嘴(11)

的自由端(12)上时要座靠在一制动装置(17)上的舌部(27),所述制动装置(17)径向且外部地结合到排放喷嘴(11)上,使所述细长喷管(55)保持向下弯曲。

16.如权利要求9所述的阀,其特征在于:弹簧装置(40)限定为围绕位于主体部分(20)以外的杆(30)的端部(30a)安装的螺旋弹簧,其具有座靠在主体部分上的端部和座靠在一外周凸起(32)上的相对端部,所述外周凸起结合到所述杆(30)的端部(30a)上。

液体分配阀

技术领域

本发明涉及一种液体分配阀，其与设置在制冷器内部的储存器、例如用于水或其他液体的储存器可操作地相关，并且允许用户控制液体选择性地、依靠重力排放到任何容器，例如玻璃杯、杯子等容器中。

背景技术

众所周知，在现有技术中有多种用于储水容器的结构，其安装为靠近限定为制冷器的制冷装置或组合的冷冻-制冷装置的冷藏室前门的内板。在同一申请人于2003年6月1日提交的巴西专利申请PI0302286-2中描述了这种结构。

在上述类型的组件中，以及液体从储存器中依靠重力分配的其他应用中，后者具有下部排放喷嘴，由用户手动致动的液体分配阀直接或间接地连接到该排放喷嘴，因此，用户可以控制液体从该储存器释放到玻璃杯、杯子或任意其他容器中以使其具有一定量的水，所述容器手动放置在分配阀的排放喷嘴的下面。

在储存器安装在制冷器内部的应用中，分配阀通常设置在制冷装置壳体的外部且位于通常设置在冷藏室前门外面的凹槽内。

本文所涉类型的液体分配阀通常具有适用于储存器的下部排放喷嘴的自由端的主体，穿过该主体设置了带有密封件的致动杆，所述密封件座靠在设置于所述阀体中的阀座上，位于所述阀座下游的阀体一侧与向下弯曲的细长喷管保持流体连通，从而引导流过所述阀座的液体流向定位于所述细长喷管下方的诸如玻璃杯的容器内。

在这些已知结构中，用户松开致动杆之后，所述密封件自动座靠在阀座上，将其密封并且防止容纳在储存器及其下部排放喷嘴中的液体通过所述阀并流入收集容器中。但是，在这些结构中，容纳于所述

阀体和布置在阀座下游的细长喷管中的残留水依靠重力向下流动，直到所述残留液体从所述主体和细长喷管中完全放空为止。因为从所述阀体内部流过细长喷管的残留液体的速度低于用户将容器从分配阀下面移走的速度，使得在收集容器已经从装填位置移走之后，总是出现残留液体的一些液滴通过细长喷管的情况。该液滴逐渐积聚在收集容器的支撑区域中，需要用户定期执行附加的排水操作。

在这里应当强调的是，这些分配阀的杆的致动通常利用可操作连接到阀杆上的触发器实现，所述触发器由液体收集容器本身驱动，或者由在液体收集过程中握住所述容器的用户的手驱动。因此，分配阀的关闭出现在收集容器或用户的手离开阀触发器的时刻，允许所述杆自动返回其静止位置，使分配阀关闭。因此，阀的关闭动作总是通过将容器从其接收来自分配阀的细长喷管的液体的位置移出而获得，使得所述分配阀的关闭在移走收集容器的动作开始时发生，并且在所述容器不再定位在用于收集残留液体的条件下，所述阀座下游的分配阀主体内的残留液体持续其朝向容器的重力下流。

尽管可以构造提供一装置的液体分配阀，所述装置在分配阀关闭之后，使仍然容纳于该分配阀主体内的残留液体的滴落减至最少，但是这种结构趋于大幅度提高阀及由此其连接的最终产品的成本。

发明内容

与上述操作缺陷相关，本发明的目的是提供一种液体分配阀，其可操作地与要安装在制冷装置内的储存器相关，所述分配阀提供了简单、坚固的低成本结构，在收集容器从所述分配阀的细长喷管下方移走导致该分配阀关闭之后，消除或至少大幅度减少了仍然容纳在阀体内部的残留液体的滴落。

本发明的另一个目的是提供一种诸如上文限定的液体分配阀，其通过在储存器内部制冷条件下的液体而使阀体冷却最小化，因而使围绕所述阀体的环境湿气的冷凝最小化。

本发明的另一个目的是提供一种诸如上文限定的液体分配阀，在

储存器相对于与其相连的制冷装置的结构安装和拆卸期间，所述液体分配阀可以和与其相连的所述储存器一起移动，从而方便了所述储存器的清洁操作。

本发明的附加目的是提供一种诸如上文限定的液体分配阀，其可以相对于所述储存器的下部排放喷嘴容易地安装和拆卸。

本发明的这些及其他特征通过提供一种液体分配阀实现，其包括：主体部分，其密封连接到储存器的排放喷嘴的自由端上并界定了阀座；穿过主体部分安装的杆，其带有密封件并选择性地移动于关闭位置和最大打开位置之间；弹簧装置，其安装在主体部分上并将所述杆压向关闭位置；盖部分，其密封连接到位于所述阀座下游并围绕所述杆的主体部分上，并在内部限定了排放室；以及细长喷管部分，其具有向下弯曲的排放端，所述盖和细长喷管部分的结构和尺寸如此设置使得当所述阀座由所述密封件封闭时，容纳于排放室中的残留液体团在该排放室内部靠重力形成真空，该真空足以保持所述细长喷口的排放端上游的所述液体团。

利用上面限定的结构，在分配阀的阀座闭合之后，容纳于排放室和细长喷管中的残留液体重力排放直到足以允许形成在该排放室中的真空与残留液体团的重量平衡，从而在收集容器不再位于接收可能流出分配阀的液体团的收集位置时，防止所述残留液体从分配阀中依靠重力向外流出并滴在收集容器的支撑表面上。

附图说明

本发明将参照以本发明实施例作为实例给出的附图描述如下，其中：

图 1 是安装在部分示出的制冷器门的内板上的储存器的剖视图，所述储存器具有下部排放喷嘴，其中本发明的分配阀在闭合条件下安装并说明；

图 2 是与图 1 类似的放大图，但是仅示出了带有分配阀的储存器的排放喷嘴；和

图 3 是沿图 1 中直线 II-II 剖开的剖视图。

具体实施方式

如前所述并参照附图，本发明的液体分配阀应用于要安装在制冷装置内部、更准确地说是冷藏室内部的储存器 10 上，从而使储存在所述储存器中的液体持续制冷。尽管可以按照不同的方式设计储存器 10 并且将其安装于冷藏室内部的不同位置，但是通常优选地将其安装在所述冷藏室的门“P”的内板上，并且使其具有细长的下部排放喷嘴 11，所述排放喷嘴设置穿过所述冷藏室的门“P”的厚度从而允许用于用户自己从门“P”的外面获取储存在储存器中的液体，而无需开门。

在所示实施例中，储存器 10 采用了同一申请人的巴西专利申请 PI0302286-2 中所描述和要求保护的形式，因此，在本专利申请中无需对其进行详细描述。

由于具有本发明所涉及的基本元件的所示结构，分配阀“V”安装在排放喷嘴 11 的自由端 12 上，所述排放喷嘴通常具有外螺纹 13，其功能将首先描述。

根据本发明，所述液体分配阀包括可以是板状的主体部分 20，所述主体部分横向于排放喷嘴 11 设置并且包括具有内螺纹 23 的管状轴向延伸部 21，所述内螺纹与设置在排放喷嘴 11 的自由端 12 中的外螺纹相接合。

主体部分 20 中心处具有阀座 22，所述阀座限定在穿过主体部分 20 设置的中心轴向孔 24 的内端中，所述轴向孔连通位于所述阀座 22 上游和下游的主体部分 20 的两侧。

在所示结构中，主体部分 20 在围绕阀座 22 的内部环形表面中安装有弹性体材料制成的环形垫圈 25，并且当分配阀“V”安装到所述排放喷嘴 11 上时，所述环形垫圈压靠排放喷嘴 11 的自由端 12。

液体分配阀还包括穿过主体部分 20 安装的杆 30，其带有密封件 31 并且通常沿轴向方向在图 1 所示的关闭位置和最大打开位置（未显示）之间选择性地移动，在所述关闭位置，密封件 31 座于阀座 22 上，

阻止液体从储存器 10 中流出，在所述最大打开位置，密封件 31 与阀座 22 分开，使液体从储存器 10 中流出。

尽管所示结构包括通过用户致动而轴向移动的杆 30，但是应当理解，也可以使用使杆具有旋转或角位移的阀的其他致动装置，假设它们可以使各自的密封件在分配阀“V”的关闭和打开位置之间移动。

在这些结构中，希望杆 30 总是弹性压向关闭位置，以保证分配阀“V”在用户停止对其操作时关闭。因此，本发明的分配阀“V”还包括弹簧装置 40，其安装在主体部分 20 上并且将杆 30 压向图 1 所示的关闭位置。在所示实施例中，弹簧装置 40 限定为围绕主体部分 20 以外的杆 30 的端部 30a 安装的螺旋弹簧，所述螺旋弹簧具有座靠主体部分 20 的端部和座靠外周凸起 32 的相对端部，所述外周凸起结合在杆 30 的所述端部 30a 上。

分配阀“V”还包括盖部分 50，其密封连接到位于阀座 22 下游且围绕杆 30 的主体部分 20 上，并且在内部界定了排放室“C”。根据所示实施例，盖部分 50 为具有一端部 51 和一相对端部 52 的管状，所述端部 51 密封连接到主体部分 20 上，所述相对端部 52 密封连接到位于主体部分 20 以外的杆 30 的端部 30a 上，所述盖部分 50 因此界定了环形管形状的排放室“C”，所述排放室围绕位于主体部分 20 以外的杆 30 的端部 30a。应该注意到，盖部分 50 的端部 51 和相对端部 52 气密连接到主体部分 20 和杆 30 的端部 30a 的相应部分上，不允许大气通过排放室“C”的端部 51、52 与分配阀“V”的相邻部件之间的连接部进入该排放室“C”。

由于杆 30 在其操作位置之间轴向移动，盖部分 50 的相对端部 52 由环形壁界定，所述环形壁在内部周边地连接到杆 30 的相邻端部 30a 上，因此，在杆轴向移动期间，盖部分 50 伴随杆 30 的运动被迫发生弹性变形。因此，在所示实施例中，盖部分 50 由弹性体材料制成，其作为整体部件通过设置在管状盖部分的侧壁中的相应开口还结合有细长喷管 55，其具有向下弯的排放端 55a 和通向排放室“C”内部的入口端 55b。

如图所示,细长喷管 55 配置为具有入口端 55b,其径向通向排放室“C”的内部并且通过中间部分 55c 连接到排放端 55a,所述中间部分大致正交于入口端 55b 和排放端 55a 的轴线。

利用上述结构,排放室“C”以这种方式设置为在其中容纳当分配阀“V”打开时流过阀座 22 的液体,允许该液体通过细长喷管 55 靠重力向下流动以便随后收集在定位于所述细长喷管 55 下方的任何容器(未显示)中。

为了允许分配阀“V”以本发明提出的方式操作,盖部分 50 和细长喷管 55 的结构和尺寸设置为当阀座 22 由密封件 31 封闭时,容纳于排放室“C”中的残留液体团利用重力在该排放室中形成真空,该真空足以使所述液体团保持在细长喷管 55 的排放端 55a 的上游,防止残留液体团在收集容器已经从所述细长喷管 55 下方的装填位置移走之后从细长喷管 55 向外滴出。

分配阀“V”还可以具有通常为注塑材料的外壳 60,其安装在主体部分 20 上从而侧向容纳盖部分 50 和细长喷管 55,保护由盖部分 50 和细长喷管 55 构成的组件的弹性体材料结构。

如图所示,密封件 31 为弹性环的形式,其安装在设置于阀座 22 上游的杆 30 的圆周槽道中。

为了阻挡远离主体部分 20 的区域内的冷却液体,杆 30 可以具有位于储存器 10 的排放喷嘴 11 内部的轴向延伸部 36 并且在其自由端部具有附加的密封件 33,所述排放喷嘴 11 在内部带有与阀座 22 轴向分开的附加阀座 76,当杆 30 移动到其关闭位置时,所述附加密封件 33 座靠在所述附加阀座 76 上。附加阀座 76 可以界定在管状套筒 70 的一端,所述管状套筒具有加宽的且密封连接到排放喷嘴 11 的自由端 12 上的相对端。在所示结构中,管状套筒 70 的加宽端部座于排放喷嘴 11 的自由端 12 的内部周边凹陷上,通过由主体部分 20 压紧的垫圈 25 的致动而保持在其中。

应当进一步注意的是,管状套筒 70 具有邻近附加阀座 76 的端部,所述阀座 76 利用弹性密封圈 77 密封连接到储存器 10 的排放喷嘴 11

的内壁上,防止了容纳于储存器 10 中的冷却液体渗入到界定于管状套筒 70 和排放喷嘴 11 的内壁之间的空间中。利用所示构造,附加阀座 76 阻挡了接近冷藏室的内部且远离排放喷嘴 11 的自由端 12 的区域中的冷却液体,防止了低温储存液体冷却暴露在大气中的主体部分 20 的区域,在被冷却时会在分配阀“V”的该区域内产生冷凝。

为了允许主体部分 20 在螺接到排放喷嘴 11 的自由端 12 上时到达固定位置,其中,细长喷管 55 使其排放端 55a 保持向下弯曲,主体部分 20 在其管状轴向延伸部 21 上包括当分配阀“V”完全覆盖在排放喷嘴 11 的自由端中时要座靠在一制动装置 17 上的舌部 27,所述制动装置径向且外部地结合到排放喷嘴 11 上,使所述细长喷嘴保持向下弯曲。

在此处所述类型的装置中,排放喷嘴 11 可以容纳在弹性体材料制成的管状垫圈 80 中,所述管状垫圈设置成允许储存器 10 容易地与排放喷嘴 11 和分配阀“V”一起相对于冷藏室的前门安装和拆卸,并且同时确保排放喷嘴 11 的结构与冷藏室前门的相邻内壁之间的适当隔热。

为了允许液体沿着界定于杆 30、主体部分 20 及管状套筒 70 之间的环形空间流动,杆 30 构造为具有沿其延伸部的至少一部分的纵向槽 38,当杆 30 移动到所述各阀座 22 和附加阀座 76 的打开位置时,待分配液体沿槽 38 流动。

利用下部触发器 90 可以产生杆 30 从关闭位置向打开位置的移动,所述触发器优选地连接到门“P”的结构上并且结合到具有自由端的杠杆 91 上,所述自由端抵靠杆 30 的端部驱动,所述杆 30 可通过外壳 60 中的相应前部开口触及。

尽管在这里只描述了实现本发明的一种形式,但是应当理解,在不脱离所附权利要求中阐述的建设性概念的情况下,可以对部件的形式和布置进行各种变形。

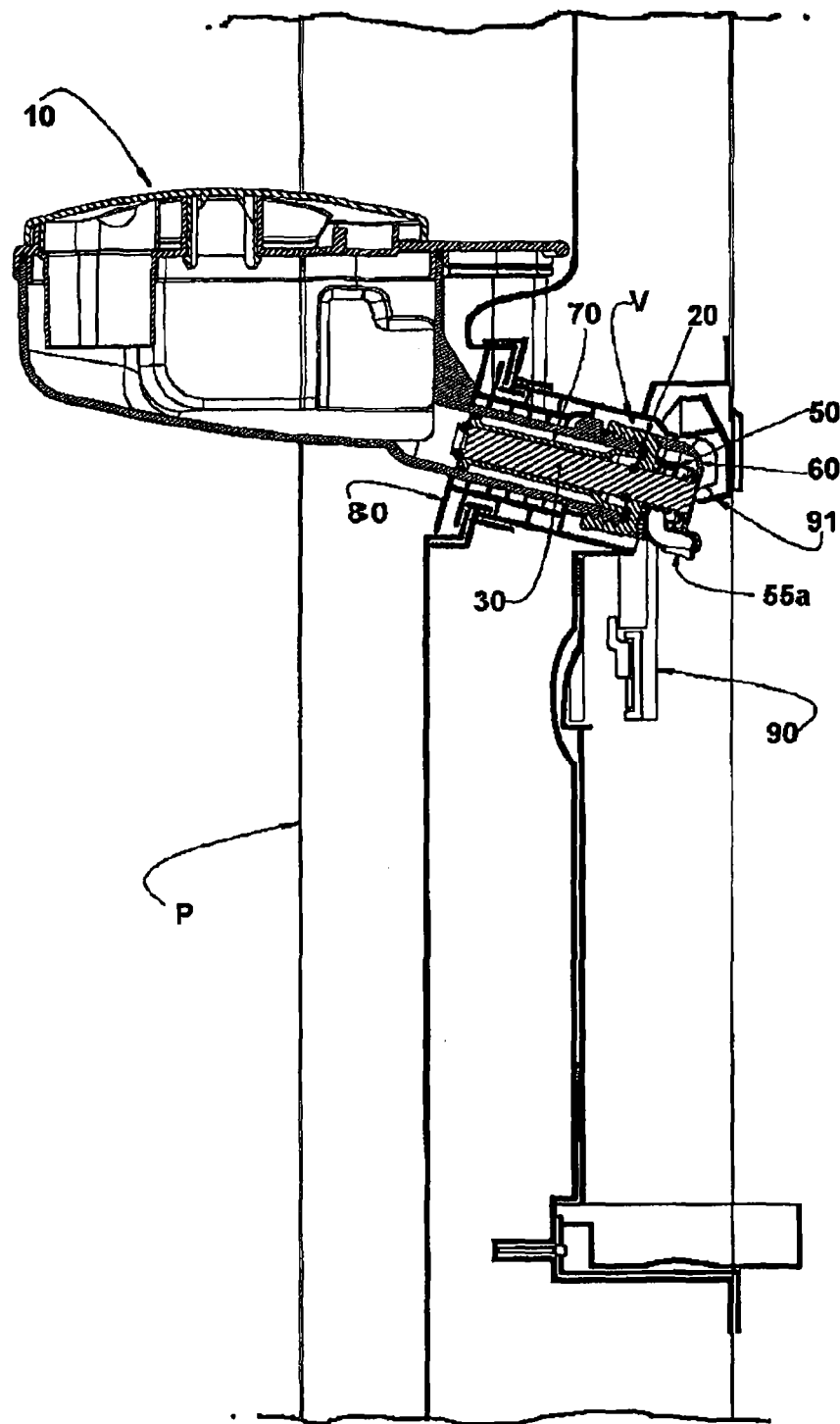


图1

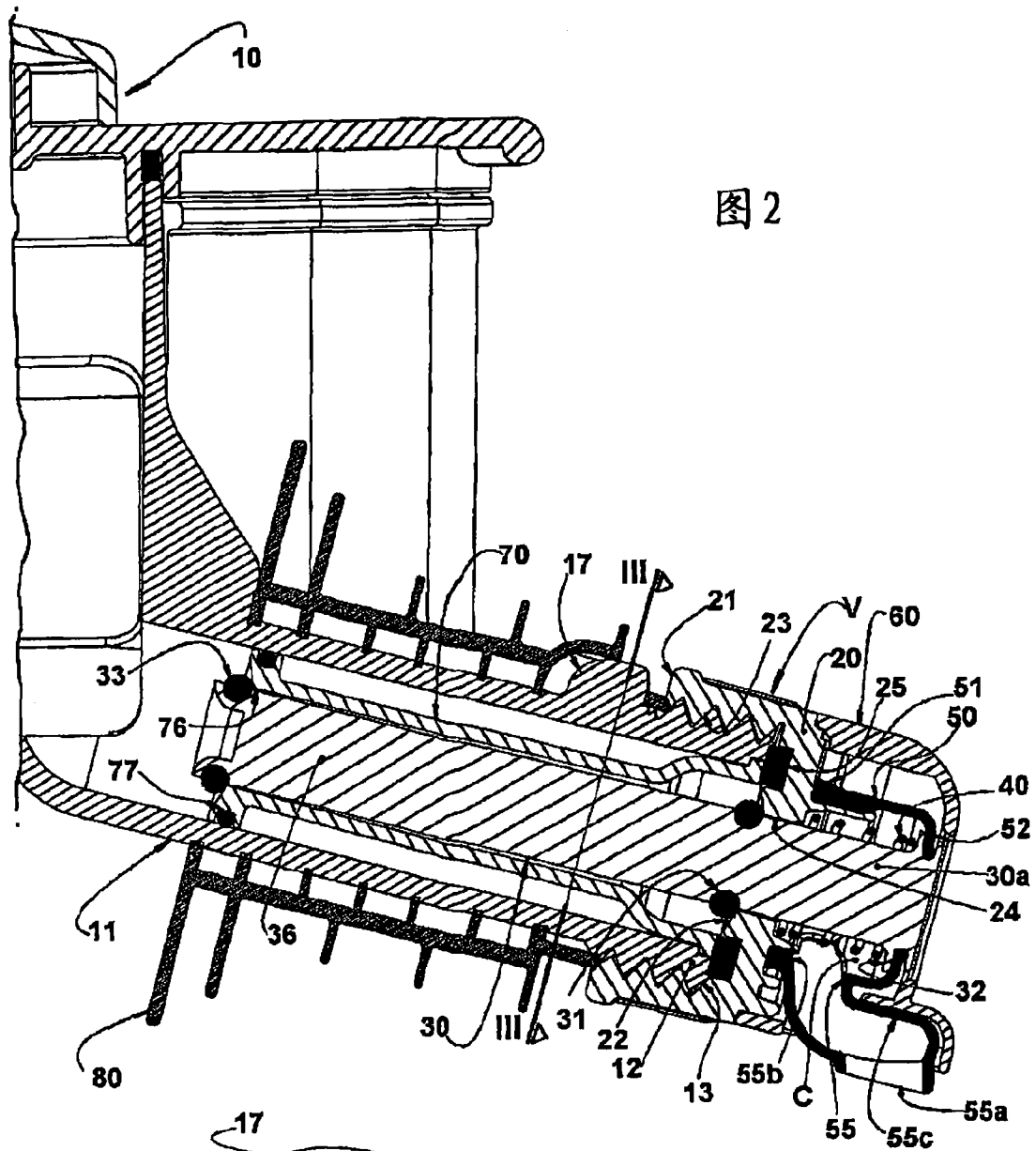


图 2

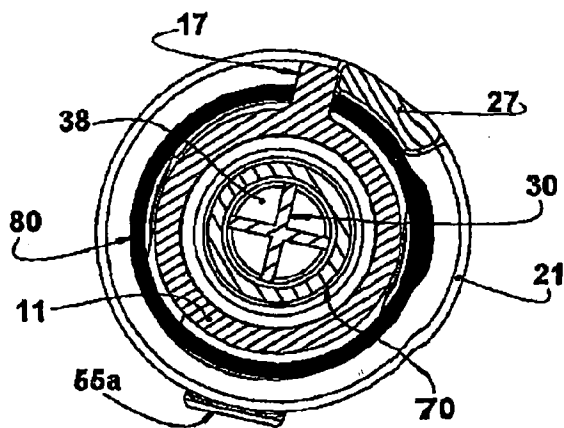


图 3



Liquid dispensing valve

Abstract

A liquid dispensing valve comprising: a body portion (20) hermetically mounted to a free end (12) of a discharge nozzle (11) of a reservoir (10) and defining a seat (22); a rod (30) carrying a seal (31) and being selectively displaced between a closing position in which the seal (31) is seated on the seat (22) and a maximum opening position in which the seal (31) is spaced from the seat (22); a cap portion (50) hermetically affixed to the body portion (20) downstream the seat (22) and around the rod (30); and defining a discharge chamber (52) and an elongated spout (55) having a discharge end (55a) turned downwards, said cap portion (50) and said elongated spout (55) being configured and dimensioned so that, when the seat (22) is closed, the mass of residual liquid contained in the discharge chamber (52) forms, inside the latter, a vacuum which is sufficient to retain said mass of liquid inside the dispensing valve (V).

Classifications

see B67D3/04 Liquid-dispensing taps or cocks adapted to seal and open tapping holes of casks, e.g. for beer

View 3 more classifications

CN101035735A

China

Download PDF Free Power An Details

Other languages: Chinese

Inventor: 刘圣河; 刘圣河; 林本林

Current Assignee: Whirlpool SA, Whirlpool Corp

Worldwide applications

2004 BR 2005 US ES PL CN MX DE AU EP AR WO KR TW

Application CNA2005800170995A events 2

2004-04-13 Priority to BR0401576-2A

2004-04-13 Priority to BR0401576-2

2005-04-12 Application filed by Whirlpool SA

2007-09-12 Publication of CN101035735A

Status Pending

Info: Patent citations (12), Cited by (10), Legal events, Similar documents, Priority and Related Applications

External links: Espacenet, Global Dossier, Discuss

Claims (14)

Hide Dependent ^

1. liquid dispensing valve is characterized in that comprising:

Base portion (20); its sealing are installed to the free end (12) of the discharge nozzle (11) of holder (10) and go up and define valve seat (22);

Bar (30); it passes base portion (20) and laterally, have sealing member (31) and optionally mobile between off position and maximum open position, at described off position, sealing member (31) seen discharges from holder (10) with barrier liquid, in described maximum open position on valve seat (22), sealing member (31) separates with valve seat (22), to allow fluid discharge;

Spining installation (40); it is installed on the base portion (20) and makes bar (30) press to off position;

Cover (50); it is sealably coupled to and is positioned at valve seat (22) downstream and on the base portion (20) of bar (30), and defines drain chamber (52) in holder with

Elongated jet pipe (55); it has rectinate discharge end (55a), the structure of described cover (50) and elongated jet pipe (55) and size so are arranged so that when valve seat (22) is sealed by sealing member (31), the residual liquid group that is contained in the drain chamber (52) is inner by gravity formation vacuum in described drain chamber, and this vacuum is enough to make described liquid holds to remain on the upstream of the discharge end (55a) of elongated jet pipe (55);

2. valve as claimed in claim 1, it is characterized in that: cover (50) is for tubular, and it has the end (31) on base portion of being sealably coupled to (20) and is sealably coupled to opposed end (52) on the end (50a) that is positioned at base portion (20) bar (30) in addition;

3. valve as claimed in claim 2 is characterized in that: cover (50) defines annular tube shaped drain chamber (52), and it is around the end (50a) that is positioned at base portion (20) bar (30) in addition;

4. valve as claimed in claim 3 is characterized in that: the opposed end (52) of cover (50) is limited by an annular wall, this annular wall interior periphery be connected on the end (50a) of adjacent bar (30);

5. valve as claimed in claim 1 is characterized in that: cover (50) is formed by elastomeric material;

6. valve as claimed in claim 5 is characterized in that: cover (50) and elongated jet pipe (55) form single parts;

7. valve as claimed in claim 1 is characterized in that: base portion (20) outside also has shell (60), and described shell side is to containment cap part (50) and elongated jet pipe (55);

8. valve as claimed in claim 1, it is characterized in that: elongated jet pipe (55) has arrow end (55b), this arrow end radially leads to the inside of drain chamber (52) and is connected to discharge end (55a) by curve portion (55c), and described curve portion roughly is orthogonal to arrow end (55b) and both ends of discharge end (55a);

9. valve as claimed in claim 1 is characterized in that: bar (30) moves axially between the off position of distributing valve (V) and open position.

10. valve as claimed in claim 9 is characterized in that: sealing member (31) adopts the form of resilient ring, and it is installed in the circumferential conduit of the bar (30) that is arranged at valve seat (22) upstream.

11. valve as claimed in claim 10, it is characterized in that: bar (30) has the portion of extending axially (36), this portion of extending axially is positioned at discharge nozzle (11) inside of holder (10) and has additional encryption sealing (33) at its free end, described discharge nozzle (11) has the additional valve seat (76) of axially separating with valve seat (22) in inside, and described additional encryption sealing (33) rests on this additional valve seat (76) when bar (30) moves to its off position.

12. valve as claimed in claim 11 is characterized in that: additional valve seat (76) is limited on the end of tubular sleeve (70), and described tubular sleeve has the opposed end on the free end (12) of widening and being sealably coupled to discharge nozzle (11).

13. valve as claimed in claim 12, it is characterized in that: the base portion (20) of distributing valve (V) has the tubular shafts of band negative thread (23) to extension (21), and described negative thread engages with outside thread on the free end that is arranged on discharge nozzle (11) (12).

14. valve as claimed in claim 13, it is characterized in that: base portion (20) has ring washer (25) in inner annular surface, when the free end (12) that is installed to discharge nozzle (11) when distributing valve (V) was gone up, described ring washer (25) will press the opposed end of tubular sleeve (70) and the free end (12) of discharge nozzle (11) simultaneously.

15. valve as claimed in claim 1, it is characterized in that: base portion (20) will rest against tongue (27) on the brake equipment (17) at its tubular shafts to comprising on the extension (21) when distributing valve (V) full engagement when the free end (12) of discharge nozzle (11) is gone up, described brake equipment (17) radially and externally is attached on the discharge nozzle (11), makes described elongated jet pipe (55) bending that keeps down.

16. valve as claimed in claim 9, it is characterized in that: spring installation (40) is defined as the coil spring of installing around the end (30a) that is positioned at base portion (20) bar (30) in addition, it has end and the opposed end that rests against on the periphery projection (32) on the base portion of resting against, and described periphery projection is attached on the end (30a) of described bar (30).

Description

Liquid dispensing valve

Technical field

The present invention relates to a kind of liquid dispensing valve, its be arranged on refrigerator in-to-in holder, for example to be used for the holder of water or other liquid operationally relevant, and allow user's controlling liquid optionally, rely on gravitational discharge to any container, for example in the container such as glass, cup.

Background technology

As everyone knows, the multiple structure that is used for tank is arranged in the prior art, it is installed as the inner panel near the reefer Qianmen of the freezing-fridge equipment of fridge equipment that is defined as refrigerator or combination in the Brazilian patent application P10302285-2 that submitted on June 1st, 2003, this structure has been described same applicant.

In the assembly of the above-mentioned type, and liquid relies on from holder in other application of weight distribution, the latter has the bottom discharge nozzle, liquid dispensing valve by user's manual activation is connected on this discharge nozzle directly or indirectly, therefore, the user can controlling liquid from this holder be discharged into glass, cup or arbitrarily other containers so that it has a certain amount of water, described container manually be placed on distributing valve discharge nozzle below.

Be installed in the application of refrigerator in-to-in at holder, distributing valve is arranged on the outside of refrigeration device housing usually and is positioned at the groove that is arranged on outside, reefer Qianmen usually.

The liquid dispensing valve of the related type of this paper has the free-ended main body of the bottom discharge nozzle that is applicable to holder usually, pass this main body being provided with and have the actuator lever of sealing member, described seal seats leans against on the valve seat that is arranged in the described valve body, valve body one side that is positioned at described valve seat downstream keeps fluid to be communicated with reclinate elongated jet pipe, thereby directed flow is crossed the flow direction of described valve seat and is positioned in the container such as glass below the described elongated jet pipe.

In these known structure, the user unclamps after the actuator lever, and described sealing member rests against on the valve seat automatically, with its sealing and prevent to be contained in liquid in holder and its underpart discharge nozzle by described valve and flow in the collection container. But, in these structures, be contained in described valve body and the residuary water that is arranged in the elongated jet pipe in valve seat downstream relies on gravity to flow downward, up to described residual liquid from described main body and elongated jet pipe fully till the emptying be lower than the user removes container below distributing valve speed because flow through the speed of the residual liquid of elongated jet pipe from described valve inner, make at collection container after the loading position is removed, the situation of some drops of residual liquid always occur by elongated jet pipe. This drop is gradually accumulated in the supporting zone of collection container, needs the user regularly to carry out additional drain operation.

What here should emphasize is, the binary pair that the common utilization of the actuating of the bar of these distributing valves can be operationally connected on the valve rod is realized, described binary pair is driven by liquid collecting container itself, perhaps by the user's who holds described container in fluid collection procedure hand-drive. Therefore, closing the moment that the hand that appears at collection container or user leaves the valve binary pair of distributing valve allows described bar to return its dead position automatically, and distributing valve is closed. Therefore, the closing movement of valve always obtains by container is shifted out from the position of the liquid of the elongated jet pipe of distributing valve from its reception, when beginning, the action that makes being closed in of described distributing valve remove collection container takes place, and no longer be positioned at described container and be used to collect under the condition of residual liquid, it is dirty that the residual liquid in the distributing valve main body in described valve seat downstream continues its gravity towards container.

Although can construct the liquid dispensing valve that a device is provided, described device is after distributing valve is closed, make the drippage that still is contained in the residual liquid in this distributing valve main body reduce to minimum, reach the cost of its bonded assembly final products thus but this structure is tending towards increasing substantially valve.

Summary of the invention

Relevant with the aforesaid operations defective, the purpose of this invention is to provide a kind of liquid dispensing valve, it is operationally relevant with the holder that will be installed in the fridge equipment, described distributing valve provides simple, crash-resistant low cost structure, remove below the elongated jet pipe of

described distributing valve at collection container and to cause after this distributing valve closes, eliminate or reduced the drippage that still is contained in the residual liquid of valve inner at least significantly.

Another object of the present invention provides a kind of all liquid dispensing valves that limits as mentioned, and it minimizes the valve body cooling by the liquid under holder internal refrigeration storage condition, thereby the condensation of the ambient moisture that centers on described valve body is minimized.

Another object of the present invention provides a kind of all liquid dispensing valves that limits as mentioned, during the structure Assembly & Disassembly of holder with respect to coupled fridge equipment, described liquid dispensing valve can move together with coupled described holder, thereby has made things convenient for the clean operation of described holder.

Attached purpose of the present invention provides a kind of all liquid dispensing valves that limits as mentioned, and it can be with respect to the bottom discharge nozzle of described holder Assembly & Disassembly easily.

These and other feature of the present invention realizes that by a kind of liquid dispensing valve is provided it comprises: base portion, and it is sealably coupled on the free end of discharge nozzle of holder and has defined valve seat; Pass the bar that base portion is installed, it has sealing member and optionally is displaced between off position and the maximum open position; Spring installation, it is installed on the base portion and with described bar and presses to off position; Cover, it is sealably coupled to and is positioned at described valve seat downstream and on the base portion of described bar, and defines drain chamber in inside; And elongated jet pipe part, it has reclinate discharge end, the structure of described lid and elongated jet pipe part and size so are arranged so that when described valve seat is sealed by described sealing member, the residual liquid group that is contained in the drain chamber forms vacuum by gravity in that this drain chamber is inner, and this vacuum is enough to keep the described liquid bolus of the discharge end upstream of described elongated spout.

The structure that utilization limits above, after the valve seat closure of distributing valve, be contained in residual liquid gravitational discharge in drain chamber and the elongated jet pipe up to being enough to allow to be formed on the vacuum in this drain chamber and the weight balancing of residual liquid group, thereby when collection container no longer is positioned at reception and may flows out the assembling position of liquid bolus of distributing valve, prevent that described residual liquid from relying on gravity outwards to flow out and drop on the stayed surface of collection container from distributing valve.

Description of drawings

The present invention is described below with reference to the accompanying drawing that provides as an example with the embodiment of the invention, wherein:

The cutaway view of the holder on the inner panel of the refrigerator door shown in Fig. 1 is mounted in partly, described holder has the bottom discharge nozzle, and distributing valve wherein of the present invention is installed and explanation under closure condition;

Fig. 2 is and the similar enlarged drawing of Fig. 1 still only to show the discharge nozzle of the holder that has distributing valve; With

Fig. 3 is the cutaway view of cutting open along Fig. 1 cathetus II-II.

The specific embodiment

As previously mentioned and with reference to accompanying drawing, liquid dispensing valve of the present invention is applied to be installed in fridge equipment inside, more precisely on the reefer in-to-in holder 10, thereby makes the liquid continuous refrigeration that is stored in the described holder. Although can design holder 10 according to different modes and it is installed on reefer in-to-in diverse location, but usually preferably it is installed on the inner panel of door "P" of described reefer, and make it have elongated bottom discharge nozzle 11, described discharge nozzle setting pass described reefer door "P" thus thickness allow to be used for user oneself and obtain the liquid that is stored in holder from the outside of door "P", and need not to open the door.

In the embodiment shown, holder 10 has adopted described in same applicant's the Brazilian patent application PI0302286-2 and claimed form, therefore, need not to be described in greater detail in present patent application.

Since have primary element involved in the present invention shown in structure, distributing valve "V" is installed on the free end 12 of discharge nozzle 11, described discharge nozzle has outside thread 13 usually, its function will at first be described.

According to the present invention, described liquid dispensing valve comprises it can being tubular base portion 20, described base portion is provided with transverse to discharge nozzle 11 and comprises the tubular shafts with negative thread 23 to extension 21, and described negative thread engages with outside thread in the free end 12 that is arranged on discharge nozzle 11.

Base portion 20 centers have valve seat 22, and described valve seat is limited in the inner of the central axial bore 24 that passes base portion 20 settings, and described axial hole is communicated with the both sides of the base portion 20 that is positioned at described valve seat 22 upstream and downstreams.

Shown in the structure, base portion 20 is being equipped with the ring washer 25 that elastomeric material is made in the inner annular surface of valve seat 22, and when distributing valve "V" was installed on the described discharge nozzle 11, described ring washer pressed the free end 12 of discharge nozzle 11.

Liquid dispensing valve also comprises the bar 30 that passes base portion 20 installations, it has sealing member 31 and in axial direction optionally moves between off position shown in Figure 1 and maximum open position (not shown) usually, at described off position, 31 of sealing members are on valve seat 22, stop liquid from holder 10, to flow out, in described maximum open position, sealing member 31 separates with valve seat 22, and liquid is flowed out from holder 10.

Although shown in structure comprise by the user and actuating and axially movable bar 30, but be to be understood that, also can use bar to have other actuating devices of the rotation or the valve of angular transposition, suppose they can make separately sealing member distributing valve "V" close and open position between move.

In these structures, with bar 30 always elasticity press to off position, close when the user stops it being operated to guarantee distributing valve "V". Therefore, distributing valve of the present invention "V" also comprises spring installation 40, and it is installed on the base portion 20 and with bar 30 and presses to off position shown in Figure 1. In the embodiment shown, spring installation 40 is defined as the coil spring of installing around the end 30a of base portion 20 bar 30 in addition, described coil spring has seat by the end of base portion 20 and the opposed end of the outer all projections 32 of seat, and described periphery projection is combined on the described end 30a of bar 30.

Distributing valve "V" also comprises cover 50, and it is sealably coupled to and is positioned at valve seat 22 downstreams and on the base portion 20 of bar 30, and has defined drain chamber "C" in inside. According to illustrated embodiment, cover 50 is for having the tubulose of an end 51 and an opposed end 52, described end 51 is sealably coupled on the base portion 20, described opposed end 52 is sealably coupled on the end 30a that is positioned at base portion 20 bar 30 in addition, therefore described cover 50 has defined the drain chamber "C" of ring pipe shape, and described drain chamber is around the end 30a that is positioned at base portion 20 bar 30 in addition. Should be noted that, the end 51 of cover 50 and opposed end 52 are airtight connected on the appropriate section of end 30a of base portion 20.

and bar 30, and the connecting portion that does not allow atmosphere to pass through between the adjacent component of the end 51,52 of drain chamber "C" and distributing valve "V" enters this drain chamber "C".

Because bar 30 moves axially between its operating position, the opposed end 52 of cover 50 is defined by annular wall, described annular wall interior periphery be connected on the adjacent end portion 30a of bar 30, therefore, during bar moved axially, cover 50 followed the motion of bar 30 to be forced to take place elastic deformation. Therefore, in the embodiment shown, cover 50 is made by elastomeric material, its as a whole parts also be combined with elongated jet pipe 55 by the respective openings in the sidewall that is arranged on the tubular cover part, it has decurved discharge end 55a and leads to drain chamber "C" in-to-in arrival end 55b.

As shown in the figure, elongated jet pipe 55 is configured to have arrival end 55b, and it radially leads to the inside of drain chamber "C" and is connected to discharge end 55a by centre portion 55c, and described centre portion roughly is orthogonal to the axis of arrival end 55b and discharge end 55a.

Utilize said structure, drain chamber "C" is set to hold the liquid that flows through valve seat 22 when distributing valve "V" when opening therein by this way, allows this liquid to flow downward by gravity by elongated jet pipe 55 so that be collected in subsequently in any container (not shown) that is positioned described elongated jet pipe 55 belows.

Operate in the mode that the present invention proposes in order to allow distributing valve "V", the structure of cover 50 and elongated jet pipe 55 and size are set to when valve seat 22 is sealed by sealing member 31, the residual liquid group that is contained in the drain chamber "C" utilizes gravity to form vacuum in this drain chamber, this vacuum is enough to make described liquid bolus to remain on the upstream of the discharge end 55a of elongated jet pipe 55, prevents that residual liquid group from outwards oozing from elongated jet pipe 55 after removing the loading position below described elongated jet pipe 55 at collection container.

Distributing valve "V" can also have the shell 60 that is generally injected plastics material, thereby it is installed in side direction containment cap part 60 and elongated jet pipe 55 on the base portion 20, protects the elastomer material structure of the assembly that is made of cover 50 and elongated jet pipe 55.

As shown in the figure, sealing member 31 is the form of resilient ring, and it is installed in the circumference conduit of the bar 30 that is arranged at valve seat 22 upstreams.

In order to stop away from the cooling liquid in the zone of base portion 20, bar 30 can have discharge nozzle 11 in-to-ins that are positioned at holder 10 and extend axially portion 36 and have additional sealing member 33 at its free end, described discharge nozzle 11 has the additional valve seat 76 of axially separating with valve seat 22 in inside, when bar 30 moved to its off position, described additional encryption sealing 33 rested against on the described additional valve seat 76. Additional valve seat 76 can be defined in an end of tubular sleeve 70, and described tubular sleeve has the opposite end on the free end of widening and be sealably coupled to discharge nozzle 11 12. Shown in the structure, the enlarged width end portions seat of tubular sleeve 70 is on the interior periphery depression of the free end 12 of discharge nozzle 11, the actuating by the packing ring 25 that compressed by base portion 20 remains on wherein.

What should further note is, tubular sleeve 70 has the end of contiguous additional valve seat 76, described valve seat 76 utilizes elastic seal ring 77 to be sealably coupled on the inwall of discharge nozzle 11 of holder 10, has prevented to be contained in cooling liquid in the holder 10 and has penetrated in the space between the inwall that is defined in tubular sleeve 70 and discharge nozzle 11. Construct shown in the utilization, additional valve seat 76 has stopped near the inside of reefer and away from the cooling liquid in the zone of the free end 12 of discharge nozzle 11, prevented that the low-temperature storage liquid cooling is exposed to the zone of the base portion 20 in the atmosphere, when being cooled, can in this zone of distributing valve "V", produce condensation.

Arrive the fixed position when allowing base portion 20 on the free end 12 that is screwed to discharge nozzle 11, wherein, elongated jet pipe 55 makes its discharge end 55a bending that keeps down, base portion 20 comprises the tongue 27 that will rest against on the brake equipment 17 when distributing valve "V" covers in the free end of discharge nozzle 11 fully on extension 21 at its tubular shafts, described brake equipment radially and externally is attached on the discharge nozzle 11, makes the bending that keeps down of described elongate nozzle.

Herein in the device of described type, discharge nozzle 11 can be contained in the tubular gasket 80 that elastomeric material makes, described tubular gasket is arranged to allow holder 10 easily with discharge nozzle 11 and distributing valve "V" the Qianmen Assembly & Disassembly with respect to reefer, and guarantees suitably heat insulation between the adjacent inner wall at the structure of discharge nozzle 11 and reefer Qianmen simultaneously.

In order to allow liquid to flow along the annular space that is defined between bar 30, base portion 20 and the tubular sleeve 70, bar 30 is configured to have the longitudinal slot 38 along at least a portion of its extension, when bar 30 moved to the open position of described each valve seat 22 and additional valve seat 76, liquid to be allocated flowed along groove 38.

Utilize bottom binary pair 90 can produce bar 30 from off position moving to open position, described binary pair preferably is connected on the structure of door "P" and is attached to and has on the free-ended lever 91, described free end drives against the end of bar 30, and described bar 30 can touch by the respective front opening in the shell 60.

Realize of the present invention a kind of form although only described here, should be appreciated that under the situation that does not break away from the constructive notion of setting forth in the claims, can carry out various distortion the form and the layout of parts.

Patent Citations (12)

Publication number	Priority date	Publication date	Assignee	Title
Family To Family Citations				
US3940030A *	1974-08-16	1976-02-24	Himeji Kondo	Dispenser device for taking out contents
G686314134D0 *	1983-05-21	1983-05-29	Mardon Hlingworth	Tap for liquid container
US4742851A	1986-07-17	1988-05-10	The Coleman Company, Inc.	Dripless faucet for beverage containers
US4856676A *	1987-09-03	1989-08-15	Jet Spray Corp.	Post mix dispenser
NL9100393A *	1991-03-05	1992-10-01	Petrus Nicolaas Roelof Johannes	VALVE, VALVE ASSEMBLY AND FILLING DEVICE.

US5494194A *	1993-12-10	1996-02-27	White Consolidated Industries, Inc.	Viscous material dispenser
US5581605A *	1994-10-24	1996-09-03	Berthlex, Inc.	Sealing and dispensing device
US5683015A	1994-12-12	1997-11-04	Samsung Electronics Co., Ltd.	Water dispenser having a fillable storage vessel and adapted to be mounted in a refrigerator door
DE19835569C2 *	1998-08-06	2000-06-08	Guenter Grifmann	Retractable tap
FR2792913B1 *	1999-04-29	2001-06-01	Oreal	DEVICE FOR ACTUATING A DISPENSING MEMBER IN PARTICULAR A VALVE, AND ASSEMBLY EQUIPPED WITH THE OPERATING DEVICE ACCORDING TO THE INVENTION
EP1268307B1 *	2000-04-07	2009-07-15	International Dispensing Corporation	Dispensing valve for fluids
BR0302286B1	2003-06-11	2014-01-07		REFRIGERATOR WATER RESERVOIR

* Cited by examiner; † Cited by third party

Cited By (10)

Publication number	Priority date	Publication date	Assignee	Title
CN102257302B *	2008-12-19	2013-10-23	Behr博世莱茵门子家用电器有限公司	Water valve and household refrigeration unit
Family To Family Citations				
BRPI0603945A	2006-09-21	2008-05-13	Behr Continental Electrodomestic	Improvement introduced in water dispensing device applied to refrigeration doors
BRPI0804374A2 *	2008-10-16	2010-07-13	Whirlpool S/a	chilled water supply valve arranged on the door of a refrigerator
ITTO20120244A1 *	2012-03-19	2013-09-20	Indesit Co Spa	VALVE FOR THE DELIVERY OF A BEVERAGE, IN PARTICULAR OF A HOUSEHOLD REFRIGERATION APPARATUS
ITTO20120246A1 *	2012-03-19	2013-09-20	Indesit Co Spa	VALVE FOR THE DELIVERY OF A BEVERAGE, IN PARTICULAR OF A HOUSEHOLD REFRIGERATION APPARATUS
ITTO20120247A1 *	2012-03-19	2013-09-20	Indesit Co Spa	VALVE FOR THE DELIVERY OF A BEVERAGE, IN PARTICULAR OF A HOUSEHOLD REFRIGERATION APPARATUS
PL2641864T3 *	2012-03-19	2015-06-30	Indesit Co Spa	Beverage dispensing valve, in particular for a household refrigeration appliance
EP2641865A3 *	2012-03-19	2013-11-20	Indesit Company S.p.A.	Beverage dispensing valve, in particular for a household refrigeration appliance
CN103115474B *	2013-02-04	2015-12-02	海信容声(广东)冰箱有限公司	A kind of refrigerator with drinking water function
CN208449347U *	2018-07-05	2019-02-01	梁丽霞	A kind of extruded type liquid container of anti-return

* Cited by examiner; † Cited by third party; ‡ Family to family citation

Similar Documents

Publication	Publication Date	Title
CN101035735A	2007-09-12	Liquid dispensing valve
CA2301446A1	2004-05-27	Foaming liquid dispenser
JP5049778B2	2012-10-17	Fluid dosing device
RU2449985C2	2012-05-10	Drink dispensing container
US9945371B2	2018-04-17	Venting bellows pump system
CN1125688C	2003-10-29	Release Valve assembly for pump sprayer
US5823372A	1998-10-20	Pump insert for bottle caps
US20050045846A1	2005-03-03	Gate valve
US7757908B2	2010-07-20	Dispenser pump

CN11265749A	2000-09-20	Packaging and cooling unit of cooler with automatic feeding
CN1149950C	2004-05-19	Hot liquid container with separate cooling reservoir
CN1946613A	2007-04-11	Improved small hand-operated pump
KR20060072783A	2006-07-12	Viscous liquid dispensing pump
AU2006237726A1	2006-10-26	Dispenser with improved supply-closing means
KR20160047625A	2015-05-04	Foam dispenser
CN110379750A	2014-05-14	Pump devices and methods for using the same
WO2009057919A3	2009-07-23	Foam production pump not causing contamination of contents
RU2008145059A	2008-06-27	Key VALVE ADAPTER WITH REDUCED CONSUMPTION
RU2591068C2	2016-07-10	Tool for pouring of liquid, equipped with anti-drip valve system
CN1313170C	2007-05-02	Fluid product dispensing device
US20090057345A1	2009-03-05	Fluid dispenser
US20040034482A1	2004-05-06	Fluid dispensing apparatus
CN110106862A	2007-11-07	Pump for manually dispensing a fluid substance sealed in a container
EP1562019A1	2005-08-10	Actuating device for self cooling packaging
CN1146004A	1997-03-26	Water dispenser for refrigerator

Priority And Related Applications

Priority Applications (2)

Application	Priority date	Filing date	Title
BR0401576-2A	2004-04-13	2004-04-13	Liquid Dispensing Valve
BRP04015762		2004-04-13	

Legal Events

Date	Code	Title	Description
2007-09-12	C06	Publication	
2007-09-12	P001	Publication	
2007-11-07	C10	Entry into substantive examination	
2007-11-07	S001	Entry into force of request for substantive examination	
2011-11-30	D02	Deemed withdrawal of patent application after publication (patent law 2001)	
2011-11-30	W001	Invention patent application deemed withdrawn after publication	Open date: 20070912

Concepts

machine-extracted

Download Filter table

Name	Image	Sections	Count	Query match
liquid		title,claims,abstract,description	55	0.000
sealing		claims,description	21	0.000
gravity		claims,description	7	0.000
material		claims,description	6	0.000
installation		claims,description	5	0.000
upstream manufacturing		claims,description	5	0.000

▣ bending	claims,description	3	0.000
▣ fluid	claims,description	3	0.000
▣ rest	claims,description	3	0.000
▣ biosynthetic process	claims	1	0.000
▣ formation reaction	claims	1	0.000
▣ resting	claims	1	0.000

Show all concepts from the description section



(19)
Bundesrepublik Deutschland
Deutsches Patent- und Markenamt

(10) **DE 20 2007 015 486 U1** 2009.04.30

(12)

Gebrauchsmusterschrift

(21) Aktenzeichen: **20 2007 015 486.0**

(22) Anmeldetag: **05.11.2007**

(47) Eintragungstag: **26.03.2009**

(43) Bekanntmachung im Patentblatt: **30.04.2009**

(51) Int Cl.⁸: **A47L 17/00** (2006.01)

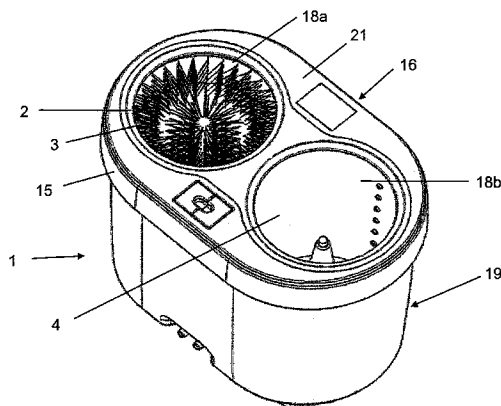
(73) Name und Wohnsitz des Inhabers:
Schicker & Schäfer GmbH, 42327 Wuppertal, DE

(74) Name und Wohnsitz des Vertreters:
**Patentanwälte Lippert, Stachow & Partner, 51427
Bergisch Gladbach**

Die folgenden Angaben sind den vom Anmelder eingereichten Unterlagen entnommen

(54) Bezeichnung: **Vorrichtung zum manuellen Spülen von Trinkgefäßen**

(57) Hauptanspruch: Vorrichtung zum manuellen Spülen von Trinkgefäßen mit einem oben offenen Vorspültopf mit vorzugsweise mindestens einer Spülbürste und einem daneben angeordneten oben offenen Nachspültopf mit mindestens einer innerhalb desselben angeordneten Spritzdüse und einem dieser zugeordneten Wasseranschluss, um in diesem ein zu reinigendes Trinkgefäß mit Spülwasser zu beaufschlagen, dadurch gekennzeichnet, dass die Spülvorrichtung Befestigungsmittel (15) und/oder Dichtungsmittel (15) aufweist, die an korrespondierende Befestigungsmittel und/oder einen Dichtungsbereich (10a) einer Grundplatte (10) einer Theke oder einer Spüle angepasst sind, um an der Grundplatte (10) befestigt und/oder an dem Dichtbereich derselben abdichtend angelegt zu werden.



Beschreibung

[0001] Die Erfindung betrifft eine Vorrichtung zum manuellen Spülen von Trinkgefäßen mit einem oben offenen Vorspültopf mit vorzugsweise mindestens einer Spülbürste und einem daneben angeordneten oben offenen Nachspültopf mit mindestens einer innerhalb desselben angeordneten Spritzdüse und einem dieser zugeordneten Wasseranschluss, um in dem Nachspültopf ein zu reinigendes Trinkgefäß mit Spülwasser zu beaufschlagen.

[0002] Derartige Vorrichtungen zum manuellen Spülen von Trinkgefäßen werden oftmals in einem bereits vorhandenen Spülbecken einer Spüle platziert, um dort benutzt zu werden. Hierdurch wird der Spülvorgang an demselben Ort vorgenommen, an welchem ansonsten eine übliche Handspülung erfolgt. Außerdem ist hierdurch zumeist eine einfache Wasserzufuhr durch einen in unmittelbarer Nähe angeordneten Wasserhahn möglich. Diese Betriebsweise bedingt jedoch, dass das Spülbecken nicht mehr anderweitig nutzbar ist, beispielsweise zum Spülen anderer Gegenstände.

[0003] Alternativ werden gattungsgemäße Vorrichtungen als unabhängige und freistehende Vorrichtungen betrieben, die beispielsweise auf der Arbeitsfläche einer Theke angeordnet sind. Dies bedingt jedoch, dass dieser Bereich der Theke nicht anderweitig nutzbar ist und zudem die sonstigen Handhabungen an der Theke durch die aufgestellte Vorrichtung behindert werden, die zumeist eine beträchtliche Höhe aufweist, da sie üblicherweise auch zum Spülen hoher Gläser wie 1-Liter Biergläser, Bierkrüge und dergleichen ausgelegt ist.

[0004] Der Erfindung liegt die Aufgabe zugrunde, eine gattungsgemäße Vorrichtung derart weiterzubilden, dass die oben genannten Probleme gelöst werden, insbesondere die Handhabung der Vorrichtung optimiert und vereinfacht ist.

[0005] Diese Aufgabe wird durch eine Vorrichtung nach dem unabhängigen Anspruch 1 gelöst. Weiterhin wird diese Aufgabe durch eine Vorrichtung nach den unabhängigen Ansprüchen 17 bis 19 sowie durch eine Theke oder Spüle nach dem unabhängigen Anspruch 20 gelöst.

[0006] Die erfindungsgemäße Spülvorrichtung kann somit als Einbaugerät in einer Theke oder Spüle eingesetzt sein oder eingesetzt werden, beispielsweise in deren Grundplatte, wozu die Vorrichtung besonders angepasst ist. Die Spülvorrichtung kann hierzu entsprechend angepasste Befestigungsmittel und/oder Dichtungsmittel aufweisen, die an korrespondierende Befestigungsmittel und/oder einem korrespondierenden Dichtungsbereich der Grundplatte von Theke oder Spüle angepasst sind, um an dieser

befestigt und/oder abdichtend angelegt zu werden. Es versteht sich, dass jeweils gegebenenfalls auch ein Zwischenelement oder Passstück wie beispielsweise ein Zwischenring zwischen Spülvorrichtung und Grundplatte vorgesehen sein kann, auch wenn vorzugsweise die Spülvorrichtung unmittelbar an der Grundplatte befestigt und/oder gegenüber dieser abgedichtet ist. Eine Abdichtung im Sinne der Erfindung kann insbesondere eine spritzwasserdichte oder zumindest im Wesentlichen wasserdichte Abdichtung sein. Die Vorrichtung kann hierbei dauerhaft oder vorzugsweise demontierbar an der Grundplatte befestigt oder befestigbar sein, so dass die Vorrichtung für Wartungs- oder Reparaturzwecke entfernbar ist. Durch die erfindungsgemäße Integration an die Grundplatte kann die Spülvorrichtung unabhängig von anderen Einrichtungen wie z. B. einem Spülbecken betrieben werden, wobei der begrenzte Arbeitsraum an Spüle oder Theke optimal ausnutzbar ist.

[0007] Der Einfachheit halber sei im Folgenden auf die Theke Bezug genommen, wobei hierunter stets Spüle und/oder Theke zu verstehen sind.

[0008] Vorzugsweise ist die an der Grundplatte integrierte oder zur Integration an einer hierzu besonders angepassten Grundplatte geeignete Spülvorrichtung zum Betrieb als eigenständige, frei stehende Vorrichtung ausgebildet. Die Spülvorrichtung kann wahlweise als Einbaugerät in die Grundplatte integriert werden oder aber bei Bedarf als frei stehende Vorrichtung an Spüle oder Theke oder an einem anderen gewünschten Ort eingesetzt werden. Die Spülvorrichtung weist hierzu vorzugsweise ein vollständiges Gehäuse mit vollständiger umlaufender Außenwand und gegebenenfalls vollständiger Bodenplatte auf, wobei das Gehäuse, vorzugsweise einschließlich Bodenbereich, spritzwassergeschützt oder zumindest im Wesentlichen wasserdicht ausgebildet sein kann. Gegebenenfalls kann auch für einen freistehenden Einsatz der Vorrichtung auf eine Bodenplatte verzichtet werden. Die Spülvorrichtung kann somit bereits sämtliche Anschlüsse für einen eigenständigen, freistehenden Betrieb derselben aufweisen, so dass auch entsprechende Kupplungen und/oder Absperrventile, insbesondere Schnellkupplungen, zur Anbringung von Wasserleitungen (Zu- und/oder Ablauf) bereits vorgesehen sein können. Die Spülvorrichtung kann somit bei Bedarf auch in herkömmlicher Weise in einem Spülbecken eingesetzt betrieben werden. Gegebenenfalls kann die Spülvorrichtung auch derart ausgeführt sein, dass durch Ergänzung von Teilbereichen oder im Wesentlichen der gesamten Gehäuseaußenwand und/oder der Bodenplatte eine eigenständig und freistehend betreibbare Vorrichtung gebildet werden kann. Das zur Bildung einer wasserdichten Vorrichtung zu ergänzende Gehäuseteil, gegebenenfalls einschließlich Bodenbereich, kann einteilig ausgeführt sein. Die entsprechenden Befestigungsmittel können hierzu an der Vorrichtung bereits

vorgesehen oder einteilig an dieser angeformt sein. So kann die an der Spüle befestigbare Vorrichtung derart ausgebildet sein, dass sie lediglich in eine Gehäuseschale einzusetzen ist, welche einschließlich der Bodenplatte spritzwasserdicht oder allgemein wasserdicht ausgeführt sein kann, um eine freistehend betreibbare Vorrichtung auszubilden. Die gegebenenfalls zu ergänzenden Gehäuseteile sind hierbei vorzugsweise unabhängig von den Befestigungs- und/oder Dichtungsmitteln zur Anordnung der Vorrichtung an der Grundplatte von Spüle und/oder Theke ausgebildet oder vorgesehen.

[0009] Vorzugsweise sind die Befestigungs- und/oder Dichtungsmittel, die mit korrespondierenden Mitteln der Grundplatte zusammen wirken, baulich an der Spülvorrichtung integriert, vorzugsweise unlösbar befestigt oder einstückig an dieser angeformt, so dass diese ohne Beeinträchtigung der Handhabung der Spülvorrichtung auch bei freistehendem Betrieb derselben an dieser verbleiben können. Gegebenenfalls können die Befestigungs- und/oder Dichtungsmittel jedoch auch als separate Bauteile ausgeführt sein.

[0010] Die Befestigungsmittel der Spülvorrichtung für die Grundplatte können als Formschlussmittel ausgeführt sein, vorzugsweise als radial vorspringende Bereiche der Vorrichtung oder des Gehäuses, die am oberen Bereich der Spülvorrichtung angebracht sein können, insbesondere in Form eines umlaufenden, vorkragenden Randes, der gegenüber allen anderen Teilbereichen des Gehäuses nach außen vorkragen kann, vorzugsweise allenfalls bis auf die Wasseranschlüsse der Zu- und/oder Ableitungen. Die Befestigungsmittel können mit korrespondierenden Formschlussmitteln der Grundplatte unmittelbar oder mittels Zwischenkonstruktionen zusammenwirken. Derartige Zwischenkonstruktionen können teilweise oder vollständig unterhalb der Grundplatte angebracht sein. Die Formschlussmittel können jeweils derart ausgebildet sein, dass diese durch Einsetzen der Spülvorrichtung in die korrespondierende Aufnahme der Grundplatte miteinander zur Wechselwirkung kommen, um die Spülvorrichtung an der Grundplatte vorzumontieren und/oder bestimmungsgemäß zu montieren, um einen Betrieb derselben zu ermöglichen. Vorzugsweise sind die Befestigungsmittel an Spülvorrichtung und Grundplatte derart ausgebildet, dass lediglich dadurch, dass diese zum Zusammenwirkung gebracht werden, insbesondere lediglich durch Einsetzen der Spülvorrichtung in die korrespondierende Aufnahme der Grundplatte, die Vorrichtung bestimmungsgemäß gegenüber der Grundplatte abgedichtet ist. Die Anpresskraft der korrespondierenden Befestigungs- und/oder Dichtungsmittel aneinander kann hierbei im Wesentlichen oder ausschließlich durch das Eigengewicht der Spülvorrichtung bestimmt werden. Es versteht sich, dass weitere Feststell- und/oder Sicherungsmittel vorgesehen

sein können, z. B. um die Vorrichtung in Sollposition an der Grundplatte zu sichern und/oder diese gegen die Grundplatte zu verspannen, z. B. um die Dichtigkeit der Dichtung und/oder die Haltekraft der Befestigungsmittel zu erhöhen.

[0011] Die Befestigungs- und/oder Dichtungsmittel der Spülvorrichtung zur Zusammenwirkung mit der Grundplatte können beispielsweise formschlüssig und/oder durch dauerhaft wirkende Stoffschlussmittel wie Klebemittel oder einstückige Anformung an der Spülvorrichtung, insbesondere an dem Gehäuse derselben, angebracht sein. Die Anbringung kann jeweils unlösbar erfolgen. Die Anbringung erfolgt vorzugsweise derart, dass diese Mittel axial verschiebungssicher und lastabtragend an der Vorrichtung oder dem Gehäuse befestigt sind und vorzugsweise dem Eigengewicht der Spülvorrichtung auch unter Berücksichtigung der bei bestimmungsgemäßem Betrieb wirkenden Kräfte, standhalten. Die Anbringung kann derart erfolgen, dass die Befestigungs- und/oder Dichtungsmittel gegen in vertikaler Richtung wirkende Kräfte, die zur Montage oder Demontage dieser Mittel an der Vorrichtung notwendig sind, zusätzlich in ihrer Lage gesichert sind.

[0012] Die radial vorspringenden Befestigungsmittel und/oder die Dichtungsmittel der Spülvorrichtung zur Zusammenwirkung mit denen der Grundplatte können jeweils als umlaufender Rand der Vorrichtung oder des Gehäuses der Vorrichtung ausgebildet sein. Das Gehäuse kann hierbei Vor- und/oder Nachspültopf außenseitig vollständig und vollumfänglich umgeben, zumindest am oberen Randbereich derselben. Das Gehäuse kann in einem radialen Abstand zu der Wandung von Vor- und/oder Nachspültopf ausgebildet sein.

[0013] Gegebenenfalls können die Befestigungs- und/oder Dichtungsmittel der Spülvorrichtung als identische Mittel ausgebildet sein, die gleichzeitig beide Funktionen übernehmen können, was insbesondere bei Ausbildung der Mittel als umlaufender Rand gegeben sein kann.

[0014] Die radial vorspringenden Bereiche, insbesondere in Form eines radial umlaufenden Randes, können sich konisch zum oberen Randbereich der Spülvorrichtung hin erweitern und sich gegebenenfalls konisch erweiternd bis zum oberen Rand der Spülvorrichtung oder des Gehäuses derselben erstrecken. Der Konus kann vorzugsweise gegenüber allen anderen Bereichen des Gehäuses nach außen vorkragen, vorzugsweise allenfalls bis auf lokal vorspringenden Bereich am unteren Bereich des Gehäuses, beispielsweise am unteren 1/3 des Gehäuses, wie z. B. der Anschlüsse des Wasserzu- und/oder -ableitungen. Der Konus kann über seine Höhe eine konstante Neigung aufweisen oder auch konkav oder konvex gewölbt sein. Hierdurch ist ins-

gesamt eine einfache Bauform gegeben, wobei zugleich mit der Oberseite der Thekengrundplatte auf einfache Weise eine Befestigung sowie auch sichere Abdichtung ermöglicht ist. Der Konuswinkel zu der Längsachse der Vorrichtung kann $\geq 1-2^\circ$ oder $\geq 3-5^\circ$ betragen, beispielsweise $\geq 10-15^\circ$. Der Konuswinkel kann $\leq 30-45^\circ$ oder $\leq 20-25^\circ$, gegebenenfalls auch $\leq 10-15^\circ$ betragen. Gegebenenfalls kann der obere Randbereich der Spülvorrichtung jeweils auch als Stufenabsatz oder auf andere geeignete Weise ausgeführt sein.

[0015] Der radial vorspringende und z. B. konisch ausgebildete Randbereich der Spülvorrichtung, der als Befestigungs- und/oder Dichtungsmittel ausgebildet sein kann, kann sich in der Höhe nur jeweils über den oberen Randbereich der Spülvorrichtung erstrecken. Gegebenenfalls kann auch die gesamte Außenwandung der Spülvorrichtung konisch ausgebildet sein. Der konische Rand kann sich in der Höhe auch zumindest im Wesentlichen über die gesamte Dicke der Grundplatte oder nach vertikal unten oder oben über diese hinaus erstrecken oder über $\geq 1/2$ oder $\geq 1/4$ der Höhe derselben. Entsprechendes kann auch für die Höhe eines an der Grundplatte vorgesehenen Befestigungsrandes gelten, dessen vertikale Erstreckung größer als Dicke der Grundplatte ist. Ein solcher Befestigungsrand kann z. B. als umgebördelter Rand ausgebildet sein.

[0016] Die an dem oberen Randbereich der Vorrichtung angeordneten Dichtungsmittel weisen vorzugsweise eine größere Elastizität auf, als das Material des Spültopfes und/oder des Gehäuses. Vorzugsweise ist das Dichtungsmaterial nicht porös. Das Dichtungsmaterial kann einstückig an der Außenwand des Gehäuses angeformt sein, beispielsweise durch geeignete Mehrkomponenten-Spritzverfahren. Die Dichtungsmittel sind vorzugsweise derart ausgebildet, um mit der Oberseite der korrespondierenden Aufnahme, insbesondere der Oberfläche der Grundplatte von Spüle oder Theke, eine zumindest im Wesentlichen geschlossene und fugenlose Oberfläche auszubilden. Die Dichtung kann ferner zumindest im Wesentlichen bündig mit der Oberfläche der Grundplatte abschließen.

[0017] Vorzugsweise sind der Vor- und/oder Nachspültopf doppelwandig mit beabstandeter Innen- und Außenwandung ausgeführt.

[0018] Die Spülvorrichtung ist vorzugsweise derart ausgebildet, dass diese wahlweise freistehend oder als Einbaugerät nutzbar ist. Unter „freistehend“ sei hier im Allgemeinen eine Anordnung im nicht in einer Theke montierten Zustand und vorzugsweise unabhängig von einem Spülbecken einer Spüle, welches als Wasserauffang für von der Spülvorrichtung abgegebenem Wasser dient, verstanden. Die Spülvorrichtung kann hierbei auch anstelle einer Standfläche an

einer Halterung wie z. B. einer Wand oder einem seitlichen Träger hängend gehalten sein.

[0019] Vor- und/oder Nachspültopf können jeweils einen separaten Wasserzu- und/oder -ablauf aufweisen, um diesen Wasser zuzuführen oder von diesen abzuleiten, wozu Anschlüsse für entsprechende Zu- und Ableitungen wie z. B. entsprechende Kupplungen vorgesehen sein können. Dem Vor- und/oder Nachspültopf, vorzugsweise dem Nachspültopf, kann ein Wasseranschluss zugeordnet sein, wobei das Wasser gegebenenfalls über den jeweils anderen Topf dem Wasserablauf zugeführt werden kann. Gegebenenfalls können Wasserzu- und -ablauf auch jeweils separat oder für die Spülvorrichtung insgesamt an demselben Topf angeordnet sein. Überschüssiges Abwasser insbesondere des Nachspültopfes kann auch direkt einer Ableitung des jeweiligen Topfes zugeführt werden. Ferner kann ein Ablauf für etwaiges in die Spülvorrichtung eingedrungenes Spritzwasser vorgesehen sein, vorzugsweise ist ein derartiger Ablauf am Bodenbereich der Spülvorrichtung angeordnet.

[0020] Die Außenwandung von Vor- und/oder Nachspültopf kann allgemein als vollumfänglich umlaufende Gehäusewandung ausgeführt sein, welche Vor- und Nachspültopf unter Ausbildung einer integralen Vorrichtung umgeben kann. Allgemein können jedoch auch Vorspül- und Nachspültopf separat ausgebildet sein und gegebenenfalls in getrennten Aufnahmen der Thekengrundplatte angeordnet sein, auch wenn dies nicht bevorzugt ist. Durch das Vor- und Nachspültopf umgebende umlaufende Gehäuse können ferner auf einfache Weise auch die Befestigungs- und/oder Dichtungsmittel das Gehäuse vollumfänglich umgebend ausgebildet sein oder z. B. mehrere um den Gehäuseumfang verteilt angeordnete Befestigungsmittel vorgesehen sein. Gegebenenfalls können für Vor- und Nachspültopf auch getrennt Aufnahmen in der Grundplatte vorgesehen sein, wobei die beiden Töpfe unter Ausbildung einer einheitlichen Vorrichtung miteinander verbunden sein können, z. B. durch eine gemeinsame Bodenplatte.

[0021] Umgibt das Gehäuse Vor- und Nachspültopf vollumfänglich, vorzugsweise mit einem gewissen Abstand zu der Innenwandung von Vor- und/oder Nachspültopf, so können in dem Zwischenraum zwischen Gehäusewandung und der Wandung des jeweiligen Topfes und/oder in dem Übergangsbereich zwischen Vor- und Nachspültopf platzsparend weitere Einrichtungen der Spülvorrichtung angeordnet sein, beispielsweise Wasserzu- und/oder -abführungen, Heizeinrichtungen, Thermostate, Schalter oder dergleichen. Dies gilt insbesondere dann, wenn Vor- und/oder Nachspültopf eine Querschnittsgestalt aufweisen, die sich von dem mittleren Bereich der Vorrichtung zu den jeweiligen Enden hin erweitert, beispielsweise eine runde Querschnittsform, eine im

wesentlichen dreieckige oder quadratische Querschnittsform mit gegenüberliegenden Eckbereichen, ohne auf diese Grundformen beschränkt zu sein.

[0022] Der oberseitige Bereich der Vorrichtung zwischen äußerem Gehäuserand und der Innenwandung von Vor- und/oder Nachspültopf kann zum Topfinneren hin leicht abfallen, wodurch etwaiges Spritzwasser dem Topfinneren zugeführt wird. Diese Schräge kann sich bis zumindest etwa zum äußeren Gehäuserand erstrecken, gegebenenfalls bis auf einen gewissen Randbereich, der z. B. horizontal ausgebildet sein kann.

[0023] Die Spülvorrichtung kann eine geschlossene Wasserzu- und/oder -abfuhr aufweisen bzw. Kuppelungselemente, die wasserdicht an eine externe Wasserzu- und/oder -ableitung anschließbar sind. Es kann hierdurch, gegebenenfalls bis auf die oben offenen Vor- und/oder Nachspültöpfe und gegebenenfalls einen Überlauf zwischen diesen, ein geschlossenes Wassersystem vorliegen, wodurch eine separate Wasserauffangeinrichtung wie ein Spülbecken entbehrlich sein und ein unkontrollierter Wasseraustritt an der Spülvorrichtung vermieden werden kann. Die Wasserzu- und -abfuhr sind vorzugsweise unmittelbar benachbart einander an der Vorrichtung angeordnet. Vorzugsweise sind Wasserzu- und -abfuhr an einer Stelle der Spülvorrichtung angeordnet, die bei montierter Spülvorrichtung ober- oder unterhalb einer Theken- oder Spülengrundplatte angeordnet sein kann, besonders bevorzugt im unteren Bereich der Spülvorrichtung, am Bodenbereich oder an der Unterseite der Spülvorrichtung. Vor- und/oder Nachspültopf können jeweils eine separate Wasserzu- und/oder -abfuhr aufweisen, vorzugsweise ist diesen eine gemeinsame Wasserzu- und -abfuhr zugeordnet, die einen Verteiler aufweisen kann. Die Wasserabfuhr kann an einem außerhalb der Spülvorrichtung vorgesehenen Hauptwasserablauf angeschlossen oder anschließbar sein, z. B. an einem Hauptwasserablauf einer anderen Wasser verbrauchenden Einrichtung wie einem manuellen Spülbecken, Geschirrspülmaschine, Waschmaschine oder dergleichen. Es kann somit beispielsweise ein geschlossener Wasserzulauf zu dem Vor- und/oder nach Nachspültopf, vorzugsweise zu letzterem, vorgesehen sein, wobei das Wasser anschließend z. B. durch einen vorzugsweise geschlossenen Überlauf dem jeweils anderen Topf, insbesondere dem Vorspültopf, zugeführt wird und dann über den geschlossenen Wasserablauf einem Hauptwasserablauf einer anderen Einrichtung oder des Aufstellraumes in der Spülvorrichtung abgeleitet wird. Es können auch Vor- und Nachspültopf je einen separaten Überlauf aufweisen. Die Wasserableitungen von Vor- und Nachspültopf können getrennt aus dem Gehäuse geführt sein, vorzugsweise münden diese innerhalb des Gehäuses in einen Sammler, so dass die Spülvorrichtung einen gemeinsamen Wasserablauf für Vor- und Nachspültopf aufweist.

[0024] Weiterhin kann die Spülvorrichtung Anschlüsse für eine Reinigungsmittelzu- und/oder -ableitung aufweisen, mittels derer ein Reinigungsmittel, vorzugsweise ein geeigneter Flüssigreiniger, dem Vor- und/oder Nachspültopf zu- und/oder abgeführt werden kann. Hierdurch ist die Reinigung der eingebauten Spülvorrichtung wesentlich erleichtert. Es können hierzu die Reinigungsmittelzu- und/oder -ableitungen mit geeigneten Sperrmitteln wie Absperrhähnen versehen sein, um das Reinigungsmittel nur bei Bedarf der Spülvorrichtung zuzuführen. Gegebenenfalls können diese Sperrmittel auch automatisch, z. B. aufgrund eines gegebenen Leitungsdruckes des Reinigungsmittels (z. B. im Zulauf) oder eines Reinigungsmitteldurchflusses (z. B. im Ablauf) öffnen oder schließen. Vor Öffnen der Reinigungsmittelzuleitung kann in Vor- und/oder Nachspültopf vorhandenes Spülwasser entfernt werden, z. B. manuell oder automatisch, wozu eine entsprechend ansteuerbare Pumpe vorgesehen sein kann oder eine diskontinuierlich oder kontinuierlich betreibbare Dosiereinrichtung. Die Pumpensteuerung kann mit den Sperrmitteln der Reinigungsmittelzu- und/oder -ableitung gekoppelt sein, so dass bei beabsichtigter Öffnung der Reinigungsmittelzuleitung zunächst die Pumpe für einen geeigneten Zeitraum betätigt wird, um Vor- und/oder Nachspültopf zu entleeren. Ferner können die Sperrmittel der Reinigungsmittelzuleitung an Sperrmittel anderer fluidführender Zu- und/oder Ableitungen gekoppelt sein, z. B. dem Wasserzu- und/oder -ablauf von Vor- und/oder Nachspültopf, so dass beispielsweise bei Öffnen des Reinigungsmittelzulaufs die Sperrmittel der anderen Zu- und/oder Ableitungen schließen. Dies kann unter Umständen gleichzeitig oder zeitlich verzögert erfolgen.

[0025] Weiterhin kann die Spülvorrichtung eine Reinigungsmittelzuleitung aufweisen, die mit dem anderen Ende mit einem Reinigungsmittelreservoir, welches ausschließlich der Spülvorrichtung zugeordnet sein kann, verbunden sein kann. Alternativ oder zusätzlich kann das Reinigungsmittelreservoir auch einer anderen Einrichtung zugeordnet sein, die mit der Spülvorrichtung durch eine entsprechende Reinigungsmittelzuleitung verbunden ist. Eine derartige Einrichtung kann beispielsweise eine Geschirrspülmaschine oder eine andere vorzugsweise im Bereich der Theke vorgesehene Reinigungseinrichtung, die vorzugsweise der Reinigung von mit Lebensmitteln in Berührung kommenden Gegenständen dient, sein. Gegebenenfalls kann die Reinigungsmittelzuleitung auch mit einer anderen, ein Reinigungsmittel abgebenden Einrichtung fluidführend verbunden sein, beispielsweise an dem Reinigungsmittelablauf einer Geschirrspülmaschine oder mit einer anderen Reinigungseinrichtung für mit Lebensmitteln in Berührung kommenden Gegenständen, wobei das Reinigungsmittel auch frische oder gebrauchte Spüllauge der jeweils anderen Einrichtung sein kann. Der Reinigungsmittelverbrauch kann hierdurch insgesamt ge-

senkt werden, wobei bereits anderweitig eingesetztes Reinigungsmittel der Spülvorrichtung zugeführt werden kann. Alternativ oder zusätzlich kann der Reinigungsmittelablauf der Spülvorrichtung mit dem Zulauf einer anderen Einrichtung verbunden sein, um das Reinigungsmittel erneut zu benutzen, beispielsweise um die andere vorzugsweise mit Lebensmitteln in Berührung kommenden Einrichtung oder in dieser befindliche Gegenstände zu reinigen, wie z. B. eine Geschirrspülmaschine oder dergleichen. Eine zusätzliche Pumpe zur Zufuhr des Reinigungsmittels von der anderen Einrichtung zu der Spülvorrichtung ist hier unter Umständen entbehrlich.

[0026] Vorzugsweise wird das Reinigungsmittel dem Vor- und/oder Nachspültopf am oberen Randbereich desselben zugeführt, wo eine oder mehrere gegebenenfalls verschließbare Reinigungsmittelaustrittsöffnungen vorgesehen sein können. An dem Bodenbereich von Vor- und/oder Nachspültopf kann ein Reinigungsmittelablauf vorgesehen sein, der mit dem Wasserablauf identisch sein kann. Das Reinigungsmittel kann jedoch auch unterhalb des üblichen Wasserstandes in dem jeweiligen Spültopf, der z. B. durch einen Überlauf desselben definiert wird, oder im Bodenbereich zugeführt werden oder es kann in die Spülwasserzuleitung eindosiert werden.

[0027] Die Spülvorrichtung kann derart ausgebildet sein, dass diese in eine korrespondierende Aufnahme der Thekengrundplatte, beispielsweise eine Ausnehmung vorzugsweise passgenau und/oder selbstzentrierend einsetzbar ist. Die Spülvorrichtung kann in Einbaulage von oben vorzugsweise vertikal ausgerichtet in eine korrespondierende Aufnahme einführbar sein, wobei die Aufnahme einen Begrenzungsrand aufweisen kann, der dem Querschnitt der Spülvorrichtung am oberen Randbereich bzw. am oberen Rand entspricht. Gegebenenfalls kann zu Beginn der Einführung die Spülvorrichtung geneigt werden, um einen etwaigen Vorsprung, der am unteren Gehäusebereich einschließlich Bodenplatte angeordnet sein kann, in die Aufnahme einzuführen, und dann anschließend gegebenenfalls wieder vertikal ausgerichtet zu werden. Hierdurch ist ein besonders einfacher Einbau und/oder Abdichtung der Spülvorrichtung möglich, was durch den radial vorstehenden oberen Randbereich des Gehäuses, der konisch ausgebildet sein kann, weiter erleichtert wird. Die Befestigungs- und/oder Dichtungsmittel und/oder der obere Randbereich des Gehäuses können hierbei gegenüber allen anderen Gehäusebereichen, einschließlich dem Bodenbereich, radial nach außen mit einem Überstand vorstehen, insbesondere gegenüber allen anderen vollständig umlaufenden Bereichen der Spülvorrichtung wie z. B. Stoßrändern, Versteifungssteigen, dem Randbereich einer Bodenplatte oder dergleichen. Der radiale Überstand ist vorzugsweise derart bemessen, dass dieser eine sichere Halterung und/oder Abdichtung der Vorrichtung gegenüber ei-

nem korrespondierenden Rand der Aufnahme ermöglicht, und vorzugsweise mit inverser Gestalt und flächig anlegbar zu einem Innenrand der Aufnahme ausgebildet. Die Querschnittskonturen des radial überstehenden Randes und des Innenrandes der Aufnahme können somit übereinstimmen. Der radiale Überstand kann $\geq 1-2$ mm oder $\geq 3-5$ mm oder mehr betragen. Gegebenenfalls sind bis auf einen sich nur über eine Umfangserstreckung von $\leq 60^\circ$, $\leq 45^\circ$ oder $\leq 30^\circ$ oder lokal radial vorstehenden Vorsprung am unteren Gehäusebereich einschließlich der Bodenplatte, z. B. einem am unteren Gehäusebereich angeordneten Wasseranschluss mit einem oder mehreren Anschlussstutzen, somit vorzugsweise keine gegenüber dem oberen Gehäuserand radial vor-springenden oder sich radial bis zu diesem erstreckenden Bereiche vorgesehen. Die Vorrichtung ist hierdurch einfach montierbar und gegenüber der Grundplatte abdichtbar, und gegebenenfalls selbstzentrierend und/oder aufgrund des Eigengewichtes selbst abdichtend in der Aufnahme der Grundplatte anordenbar.

[0028] Die Erfindung betrifft ferner eine Theke oder Spüle mit einer als Einbaugerät integrierten Spülvorrichtung, die vorzugsweise wie oben beschrieben ausgeführt ist. Insbesondere kann die Spülvorrichtung passgenau, selbstzentrierend und/oder selbstabdichtend in der Aufnahme der Grundplatte von Theke oder Spüle einsetzbar sein. Die Dichtung kann jeweils an der Spülvorrichtung vormontiert sein, wobei die Spülvorrichtung gegebenenfalls auch mit an dieser montierter Dichtung frei stehend und eigenständig betreibbar ausgebildet sein kann. Gegebenenfalls kann auch eine separate Dichtung vorgesehen sein, die zwischen der Grundplatte und der Spülvorrichtung einsetzbar ist.

[0029] Vorzugsweise schließt die Spülvorrichtung in montiertem Zustand mit ihrem oberen Rand zumindest im Wesentlichen bündig mit der Oberseite der Grundplatte von Theke oder Spüle ab. Gegebenenfalls kann die Spülvorrichtung auch geringfügig von der Oberfläche der Grundplatte nach oben vorstehen oder nach unten versetzt sein, vorzugsweise um nicht mehr als den radialen Abstand der Gehäuseaußenwandung zu der Innenwandung von Vor- und/oder Nachspültopf oder $\leq 1/2$ oder $\leq 1/4$ dieses Abstandes. Auch bei geringer Dicke der Grundplatte ist hierdurch eine einfache Befestigung und Abdichtung der Spülvorrichtung gegenüber der Grundplatte möglich.

[0030] Die Aufnahme der Grundplatte von Theke oder Spüle für die Spülvorrichtung kann einen diese vollumfänglich umgebenden, von der Oberseite der Grundplatte nach oben vorstehenden Rand oder Erhebung aufweisen. Dieser Rand kann die Vorrichtung in einem geringen Abstand umgeben, wobei der Abstand kleiner/gleich dem 1-, 2- oder 3-fachen Ab-

stand der Gehäuseaußenwand von der Innenwand von Vor- und/oder Nachspültopf im Bereich der Oberseite der Spülvorrichtung sein kann. Spritzwasser von der Spülvorrichtung kann hierdurch einfach in diese überführt werden.

[0031] Vorzugsweise ist die Aufnahme für die Spülvorrichtung in der Grundplatte unmittelbar benachbart einem Spülbecken angeordnet. Hierdurch wird die Reinigung von Trinkgefäßen allgemein erleichtert, beispielsweise um Reste von Trinkflüssigkeiten aus den Gefäßen zu entfernen.

[0032] Die als Einbaugerät an der Grundplatte integrierte oder integrierbare Spülvorrichtung kann ferner eine stand- und rutschfeste Unterseite oder Bodenplatte aufweisen, die beispielsweise mit Füßen, insbesondere Saugfüßen, versehen ist, wodurch ein freistehender Einsatz der Vorrichtung erleichtert ist.

[0033] Die Erfindung wird nachfolgend beispielhaft beschrieben und anhand der Figuren beispielhaft erläutert. Es zeigen:

[0034] Fig. 1 eine perspektivische Ansicht und seitliche Ansicht sowie Draufsicht einer erfindungsgemäßen Spülvorrichtung,

[0035] Fig. 2 eine Querschnittsdarstellung der Spülvorrichtung nach Fig. 1 nach einer ersten Ausführungsform,

[0036] Fig. 3 eine Querschnittsdarstellung der Spülvorrichtung nach Fig. 2 nach einer zweiten Ausführungsform,

[0037] Fig. 4 eine in einer Theke integrierte Spülvorrichtung nach Fig. 1.

[0038] Die Fig. 1–Fig. 3 zeigen eine Spülvorrichtung 1 zum manuellen Spülen von Trinkgefäßen mit einem oben offenen Vorspültopf 2, der eine oder mehrere Spülbürsten 3 aufweisen kann. Die Trinkgefäße können zum Vorspülen manuell von oben in den Vorspültopf eingeführt und durch die Spülbürsten vorgereinigt werden. Die Spülbürsten können in bekannter Weise angeordnet sein, beispielsweise eine zentrale sowie eine diese umgebende ringförmig angeordnete Spülbürste. Weiterhin ist ein oben offener Nachspültopf 4 vorgesehen, in dem mindestens eine Spritzdüse 5 angeordnet ist. Auch hier können eine zentrale Spritzdüse zur Reinigung des Gefäßinneren und eine Spritzdüsenanordnung zur Reinigung der Außenseite des Gefäßes vorzugsweise in Form von zwei oder mehreren Spritzdüsen oder einer ringförmigen Spritzdüse vorgesehen sein, wie schematisch dargestellt. Das Trinkgefäß wird zum Nachspülen manuell von oben in den Spültopf eingeführt, um durch die Spritzdüsen nachgereinigt zu werden. Den Spritzdüsen ist ein Wasseranschluss 6' (Zulauf 6a;

Pfeilrichtung) zugeordnet. Die Spritzdüsen können manuell aktiviert werden, beispielsweise durch Absenken und Andrücken der zu reinigenden Gefäße gegen eine Anlage wie z. B. die Spülbürste. Das Spülwasser kann dem Vorspültopf durch eine getrennte Zuleitung oder auch über den Nachspültopf zugeführt werden, z. B. durch einen Überlauf des Nachspültopfes. Der Vorspültopf und/oder der Nachspültopf können einen Wasserablauf aufweisen, der jeweils unmittelbar benachbart dem Wasseranschluss vom Gerät wegführen kann.

[0039] Vorspül- und Nachspültopf weisen Wasserzulaufe 6a, 6b auf, welche von einem außerhalb des Gehäuses führenden Wasseranschluss 6' von einem Verteiler abzweigen. Es können gegebenenfalls auch separate Wasseranschlüsse für Vor- und/oder Nachspültopf vorgesehen sein. Weiterhin weisen Vor- und Nachspültopf separate Wasserabläufe 6c, 6d auf, die sich an einem Sammler vereinigen, so dass auch hier lediglich ein außerhalb des Gehäuses führender Wasserabfluss 6'' notwendig ist. Auch hier können gegebenenfalls Vor- und Nachspültopf separate nach außen führende Wasserabflüsse aufweisen. Vor- und Nachspültopf weisen hierbei jeweils einen Ablauf (Überlauf 2a, Abfluss 4a) auf, der mit dem jeweiligen Wasserablauf 6c, 6d fluidführend verbunden ist. Gegebenenfalls können Vor- und Nachspültopf auch durch einen Überlauf miteinander verbunden sein, so dass das einem der beiden Töpfe zugeführte Wasser (z. B. dem Nachspültopf) über den Überlauf dem anderen Topf zugeführt und dann anschließend über den Ablauf nach außen entfernt wird. Insgesamt kann hierdurch ein geschlossener Wasserkreislauf bereitgestellt und die Anzahl der notwendigen Wasseranschlüsse minimiert werden. Der Wasseranschluss 6'' für den Ablauf (Pfeilrichtung) kann an einem Hauptwasserablauf oder einem Wasserablauf einer anderen Einrichtung wie z. B. einer Geschirrspülmaschine angeschlossen sein. Um den Wasserablauf zu erleichtern, kann weiterhin eine Pumpe E vorgesehen sein, die zwischen den Wasserabläufen 6c, 6d von Vor- und Nachspültopf angeordnet sein kann, oder auch an einer anderen geeigneten Stelle der Wasserableitung. Das Gehäuse 7 ist nebst sämtlichen Wasserzu- und -ableitungen und einschließlich der Vor- und Nachspültöpfe wasserdicht ausgebildet, so dass ein Eindringen von Wasser in das Gehäuse ausgeschlossen ist. Gegebenenfalls kann das Gehäuse jedoch auch einen weiteren Wasserablauf (nicht dargestellt) aufweisen, der am unteren Bereich des Gehäuses, z. B. am Gehäuseboden, angeordnet ist, um etwaiges eindringendes Wasser abführen zu können.

[0040] Es können Mittel vorgesehen sein, um den Wasserzulauf zu Vor- und/oder Nachspültopf in Abhängigkeit von dem Bedarf zu steuern. So kann beispielsweise an Vor- und/oder Nachspültopf eine Schalteinrichtung (nicht dargestellt) vorgesehen sein, welche im Bedarfsfalle die Wasserzufuhr öffnet, z. B.

durch einen Sensor wie eine Lichtschranke, Drucksensor oder dergleichen, der bei Einführung oder Reinigung eines Trinkgefäßes in dem jeweiligen Topf oder bei Unterschreiten eines vorbestimmten Wasserniveaus betätigt wird.

[0041] Die Spülvorrichtung weist ferner ein diese vollumfänglich umgebenes Gehäuse **7** mit einer Bodenplatte **8** auf, die auch einen hochgezogenen Rand aufweisen kann. Die Bodenplatte **8** kann mit Füßen **9** oder einen bodenseitigen Rutschsicherung versehen sein, um eine sichere und rutschfeste freistehende Aufstellung der Spülvorrichtung auf einem Stellplatz wie z. B. einer Arbeitsplatte, Spülbecken usw. zu ermöglichen. Das Gehäuse mit Bodenplatte kann bei Bedarf spritzwassergeschützt oder zumindest im Wesentlichen wasserdicht ausgebildet sein, wodurch die Spülvorrichtung in bekannter Weise z. B. in einem Spülbecken betrieben werden kann. Die Spülvorrichtung kann sämtliche erforderlichen Einrichtungen für einen freistehenden Betrieb aufweisen, einschließlich Schnellkuppelungen für Wasserzu- und -ablauf. Gegebenenfalls kann die Spülvorrichtung jedoch auch derart ausgebildet sein, dass das Gehäuse oder Teile desselben wie z. B. die Bodenplatte leicht nachrüstbar sind, um eine freistehend zu betreibende Spülvorrichtung auszubilden. Die entsprechenden Befestigungsmittel für die weiteren Gehäuseteile können hierbei an der Spülvorrichtung bereits vorgesehen sein, beispielsweise einstückig angeformt sein.

[0042] Weiterhin weist die Spülvorrichtung eine Vor- und/oder Nachspültopf zugeordnete Reinigungsmittelzuleitung **35** auf, um im Bedarfsfalle der Reinigung eines Topfes und/oder der Unterstützung der Reinigung eines Gefäßes dem jeweiligen Topf ein geeignetes Reinigungsmittel wie z. B. ein Flüssigreinigungsmittel zuführen zu können. Die Reinigungsmittelzuleitung **35** kann hierzu ein Sperrventil **36** aufweisen, das bei Bedarf, beispielsweise durch den manuellen Betätigungsschalter **37**, geöffnet werden kann, um einem oder beiden der Töpfe Reinigungsmittel zuzuleiten. Die Reinigungsmittelzuleitung kann in die Wasserzuführleitung stromaufwärts (wie dargestellt) oder stromabwärts der Verzweigungsstelle von Wasserzufuhr **6a**, **6b** der beiden Töpfe münden. Der Reinigungsmittelreservoir **38** zugeordnet sein, welches wie in **Fig. 2** dargestellt in der Spülvorrichtung integriert oder gegebenenfalls auch außerhalb derselben angeordnet sein kann. Das Reinigungsmittelreservoir kann auch das einer anderen Einrichtung sein oder wahlweise auch einer anderen Einrichtung Reinigungsmittel zuführen, wie z. B. jeweils einer mit Lebensmitteln in Berührung kommenden (d. h. lebensmittelgerechten) Einrichtung wie einer Geschirrspülmaschine oder dergleichen. Insbesondere kann auch die Reinigungsmittelzuleitung **35** mit einer anderen Einrichtung **40**, z. B. einer Geschirrspülmaschine,

verbunden sein, um von dieser abgegebenes (evtl. gebrauchtes) Reinigungsmittel, welches auch eine Spüllauge sein kann, dem Vor- und/oder Nachspültopf zuzuführen (siehe **Fig. 3**). Das Reinigungsmittel kann über die Wasserabläufe **6c**, **6d** aus Vor- und/oder Nachspültopf entfernt werden. Es kann auch ein getrennter Reinigungsmittelablauf an Vor- und/oder Nachspültopf vorgesehen sein, um das Reinigungsmittel einer anderen Einrichtung zuzuführen, beispielsweise einer lebensmittelgerechten Vorrichtung wie einer Geschirrspülmaschine oder dergleichen. Die Wasserabläufe **6c**, **6d** können hierbei jeweils mit Sperrventilen **38**, **39** versehen sein, um einen Ablauf von Reinigungsmittel durch die Abläufe **6c**, **6d** zu verhindern. Das Sperrmittel kann auch stromabwärts der Vereinigungsstelle der Wasserabläufe **6c**, **6d** angeordnet sein. Gegebenenfalls kann das Reinigungsmittel auch seinerseits durch einen Überlauf von einem der Töpfe (z. B. Nachspültopf) zu dem anderen Topf geleitet werden, um hierdurch beide Töpfe auf einfache Weise zu reinigen. Die Spülvorrichtung kann ein deckelartiges Verschlusselement aufweisen, um Vor- und/oder Nachspültopf oberseitig zu verschließen und ein Austreten von Spülwasser oder Reinigungsmittel während des Reinigungsvorganges zu verhindern.

[0043] Um einen optimalen Arbeitsablauf an der Theke oder Spüle zu ermöglichen, kann die Spülvorrichtung als in der Grundplatte **10** von Theke oder Spüle integrierte Einbauvorrichtung ausgebildet sein. Hierzu sind an der Spülvorrichtung Befestigungsmittel und/oder Dichtungsmittel vorgesehen, die an korrespondierende Befestigungsmittel und/oder einen Dichtungsbereich der Grundplatte befestigbar oder dichtend anlegbar sind. Nach dem Ausführungsbeispiel ist hierzu der obere umlaufende Randbereich **15** der Spülvorrichtung als Dichtungsbereich ausgebildet, der sich zum oberen Rand der Vorrichtung hin nach oben konisch erweitert. Weiterhin besteht der obere Randbereich **15** aus einem Material größerer Elastizität als dem des Gehäuses **7**. Der Randbereich **15** kann hierbei eine gewisse Kompressibilität aufweisen oder im Wesentlichen inkompressibel ausgebildet sein. Der Randbereich **15** kann dauerhaft mit der Außenwand des Gehäuses verbunden sein, beispielsweise mit diesem verklebt oder einstückig angeformt sein wie z. B. in einem Spritzgussverfahren. Der aus dem Dichtungsmaterial ausgebildete Randbereich erstreckt sich hierbei bis zu dem oberen Rand **16** der Spülvorrichtung bzw. des Gehäuses **7**, so dass auch der oberste Rand der Außenwandung des Gehäuses **7** abdichtend gegen den Dichtungsbereich der Grundplatte **10** anlegbar ist. Die Befestigung des Dichtungsbereichs ist derart ausgebildet, dass diese die Spülvorrichtung auch bei den bei bestimmungsgemäßem Betrieb einwirkenden Kräften sicher und zuverlässig an der Grundplatte halten kann. Die Dichtungsmittel der Spülvorrichtung können, um einen geeigneten Abschluss auszubilden,

auch die obere Stirnseite der Gehäusewand übergreifen.

[0044] Der obere Randbereich des Gehäuses kann gleichzeitig als Befestigungsbereich zur Festlegung der Spülvorrichtung an der Thekengrundplatte ausgebildet sein. Durch die konische Ausbildung des Randbereiches **15** kann die Spülvorrichtung besonders einfach und selbstzentrierend in eine Aufnahme **12**, z. B. eine Ausnehmung der Grundplatte **10**, eingesetzt werden. Die Aufnahme **12** kann einen sich nach unten verjüngenden Bereich aufweisen, beispielsweise in Form eines Gegenkonus oder eines komplementär abgestuften Stufenabsatzes, an welchen der Randbereich **15** vorzugsweise passgenau und wasserdicht anlegbar sein kann. Die die Aufnahme **12** begrenzende Stirnseite **10a** der Platte bildet somit die korrespondierenden Befestigungsmittel und zugleich den Dichtungsbereich der Grundplatte, wobei auch getrennt Mittel bereitgestellt werden können. Der obere Randbereich **15** dient somit gleichzeitig als Befestigungs- und Dichtungsmittel gegenüber der Grundplatte **10**. Hierzu kann sich allgemein der obere Randbereich **15** über eine ausreichende Höhe des Gehäuses **7**, beispielsweise über mehrere Millimeter, z. B. mehr als 5 bis 10 mm, vorzugsweise über die Dicke der zugeordneten Grundplatte (oder $\geq 1/4$ oder $\geq 1/2$ derselben) erstrecken und liegt vorzugsweise vollflächig über diesen Bereich an der Grundplatte an. Die an der Vorrichtung angeordneten Befestigungsmittel für die Grundplatte bilden somit vorzugsweise keine von dem Gehäuse **7** radial/oder axial vorstehenden Vorsprünge, insbesondere lokale Vorsprünge, Hinterschneidungen und/oder Vertiefungen des Gehäuses aus. Nach dem Ausführungsbeispiel erstreckt sich die umlaufende Gehäusewandung von dem oberen Randbereich **16** der Gehäuseußenwandung konisch bis zur Bodenplatte **8** hin.

[0045] Vor- und/oder Nachspültopf **2**, **4** sind doppelwandig ausgeführt, wobei die Innenwandung **18a**, b spülwasserbeaufschlagt ist und die Außenwandung hier durch die Gehäuseußenwand **19** gebildet wird, wodurch sich eine hohe Stabilität der Vorrichtung ergibt. Vor- und Nachspültopf sind durch eine um beide Töpfe umlaufende einheitliche Gehäusewandung umgeben, so dass die Spülvorrichtung leicht zu reinigen ist und der zwischen Gehäusewand und Innenwandung der Spültöpfe vorhandene Zwischenraum **7a** zur Aufnahme weiterer Einrichtungen **22** wie z. B. Thermostaten, Schalter und/oder dergleichen dienen kann. Der Querschnitt von Vor- und/oder Nachspültopf erweitert sich ferner von dem einander zugewandten Bereich, dem mittleren Bereich **1a** der Vorrichtung, hin mit zunehmendem Abstand voneinander, wozu beide Töpfe hier einen runden Querschnitt aufweisen. In dem dadurch entstehenden Zwischenbereich von Vor- und Nachspültopf können entsprechend die genannten Einrichtungen angeordnet sein. Es können jedoch auch Vor- und Nachspültopf ge-

trennte Außengehäuse aufweisen.

[0046] Die Spülvorrichtung ist derart ausgeführt, dass diese von oben in eine korrespondierende Ausnehmung der Grundplatte von Theke oder Spüle einsetzbar ist, wobei der obere Rand **16** des Gehäuses oder der Vorrichtung vorzugsweise bündig mit der Oberseite **11** der Grundplatte abschließen oder geringfügig zu dieser in der Höhe versetzt sein kann. Das Einsetzen von der Oberseite der Grundplatte her wird durch die konische Ausgestaltung des oberen Häuserandes oder des Gehäuses über dessen gesamte Höhe erleichtert, wobei jedoch auch andere Gehäuseausgestaltungen möglich sind. Bis auf den Wasseranschluss **6** oder gegebenenfalls auch einen etwaigen anderen sich nur über einen Teilumfang des Gehäuses oder lokal erstreckenden Vorsprung (der nach Ausführungsbeispiel jedoch nicht vorgesehen ist) ist somit kein Teilbereich des Gehäuses einschließlich der Bodenplatte vorgesehen, der radial über den Gehäusequerschnitt vorsteht oder sich radial bis zu diesem erstreckt, welcher an dem untersten Bereich der Thekengrundplatte und/oder der Oberseite **11** der Grundplatte befestigt ist und/oder anliegt. Der Vorsprung (hier Wasseranschluß) kann somit durch Verkanten der Spülvorrichtung in die Aufnahme eingefädelt werden, wonach die Spülvorrichtung vertikal in ihre Sollposition abgesenkt werden kann. Die Anschlüsse der Wasserzu- und/oder -ableitungen sind mit Schnellkupplungen versehen.

[0047] Die Befestigungsmittel der Grundplatte können ferner die Befestigungsmittel der Spülvorrichtung, die insbesondere an dem Gehäuse bzw. dessen oberen Randbereich angeordnet sein können, untergreifen, so dass die Befestigungsmittel des Gehäuses auf die Befestigungsmittel der Grundplatte aufgesetzt werden können. Die Befestigungsmittel der Grundplatte unterstützen somit die Befestigungsmittel des Gehäuses. Die Befestigungsmittel des Gehäuses und/oder der Grundplatte können hierbei als nur teilumfänglich radial einwärts oder auswärts ausgeführte Vorsprünge oder, unabhängig voneinander, als umlaufender Rand ausgebildet sein.

[0048] Die Befestigungsmittel und/oder die Dichtmittel von Spülvorrichtung und die jeweils korrespondierenden Mittel bzw. Dichtbereiche der Grundplatte sind derart ausgebildet, dass die Spülvorrichtung zentriert und passgenau in der Ausnehmung der Grundplatte einsetzbar ist. Die Dichtungsmittel der Spülvorrichtung sind derart ausgebildet, dass bereits durch das Eigengewicht der in die Grundplatte eingesetzten Spülvorrichtung eine ausreichende Dichtigkeit bzw. ein wasserdichter Abschluss erzeugt wird.

[0049] Insgesamt liegt somit eine als Einbaugerät in der Grundplatte von Theke oder Spüle integrierte oder integrierbare Spülvorrichtung vor. Diese ist vorzugsweise in demontiertem Zustand unmittelbar oder

nach geringfügiger Ergänzung, z. B. der Gehäusewandung einschließlich der Bodenplatte, zu einer freistehend betreibbaren Vorrichtung ergänzbar.

[0050] Wie in Fig. 4 dargestellt ist, können der obere Randbereich des Gehäuses und/oder die an der Grundplatte anliegenden Dichtungsmittel der Spülvorrichtung zumindest im Wesentlichen bündig mit der Oberseite **11** der Grundplatte **10** abschließen. Der vorzugsweise fugenlose Übergang von der Grundplatte zur Spülvorrichtung ist hierdurch besonders leicht zu reinigen.

[0051] Ferner weist die Grundplatte **10** eine die Spülvorrichtung **1** vollumfänglich umgebende, nach oben vorstehende Erhebung **27** auf, die in Art eines umlaufenden Wulstes ausgebildet sein kann. Die Geometrie der Erhebung **27** kann von der der Oberseite der Spülvorrichtung **1** abweichen, sie ist nach dem Ausführungsbeispiel rechteckig ausgeführt. Der Abstand der Erhebung **27** von der Spülvorrichtung **1** bzw. von den Innenwandungen **18a**, **18b** von Vor- und Nachspültopf **2**, **4** kann kleiner/gleich dem 1-, 2- oder 3-fachen Abstand des oberen Häuserandes von der Innenwandung von Vor- und Nachspültopf liegen. Hierdurch kann etwaiges Spritzwasser leicht der Spülvorrichtung wieder zugeführt werden, um die Theke oder Spüle von unerwünschtem Spritzwasser zu befreien. Die Oberseite **21** der Spülvorrichtung kann von dem Außenrand derselben in Richtung auf Vor- und/oder Nachspültopf geneigt ausgebildet sein, um Spritzwasser leichter in den Vor- oder Nachspültopf zurück überführen zu können.

[0052] Weiterhin ist die Spülvorrichtung **1** unmittelbar benachbart an dem Spülbecken **30** angeordnet, wodurch die Arbeitsvorgänge an der Theke oder Spüle optimiert werden können. Der Abstand der Spülvorrichtung von dem Spülbecken kann kleiner/gleich der einfachen oder $\leq 1/2$ oder $\leq 1/3$ der Breite der Spülvorrichtung betragen.

[0053] Es versteht sich, dass die Spülvorrichtung auch auf andere Weise an der Grundplatte von Theke oder Spüle befestigbar ist. So können an der Unterseite der Grundplatte Befestigungsmittel vorgesehen sein, die an der Außenseite der Spülvorrichtung und/oder bodenseitig an dieser angreifen. Beispielsweise kann ein die Spülvorrichtung überbrückender Bügel oder Aufhängelasche vorgesehen sein, welcher die Spülvorrichtung unterstützt.

[0054] Ferner versteht es sich, dass die die Spülvorrichtung gegenüber der Grundplatte abdichtende Dichtung auch als separates Bauteil ausgeführt sein kann. Dieses kann an der Spülvorrichtung und/oder der Grundplatte vormontierbar sein, gegebenenfalls kann diese Dichtung auch erst nach Vormontierung der Spülvorrichtung zwischen dieser und der Grundplatte abdichtend eingepresst werden.

Bezugszeichenliste

1	Spülvorrichtung
2	Vorspültopf
2a	Überlauf
3	Spülbürste
4	Nachspültopf
4a	Überlauf
5	Spritzdüse
6', 6"	Wasseranschluss
6a, 6b	Wasserzulauf
6c, 6d	Wasserablauf
7	Gehäuse
8	Bodenplatte
9	Füße
10	Grundplatte
10a	Stirnseite
11	Oberseite
12	Aufnahme
15	Randbereich
16	oberer Rand
18a, b	Innenwandung
19	Gehäuseaußenwand
21	Oberseite
22	Einrichtung
27	Erhebung
30	Spülbecken

Schutzansprüche

1. Vorrichtung zum manuellen Spülen von Trinkgefäßen mit einem oben offenen Vorspültopf mit vorzugsweise mindestens einer Spülbürste und einem daneben angeordneten oben offenen Nachspültopf mit mindestens einer innerhalb desselben angeordneten Spritzdüse und einem dieser zugeordneten Wasseranschluss, um in diesem ein zu reinigendes Trinkgefäß mit Spülwasser zu beaufschlagen, **dadurch gekennzeichnet**, dass die Spülvorrichtung Befestigungsmittel (**15**) und/oder Dichtungsmittel (**15**) aufweist, die an korrespondierende Befestigungsmittel und/oder einen Dichtungsbereich (**10a**) einer Grundplatte (**10**) einer Theke oder einer Spüle angepasst sind, um an der Grundplatte (**10**) befestigt und/oder an dem Dichtbereich derselben abdichtend angelegt zu werden.

2. Vorrichtung nach Anspruch 1, dadurch gekennzeichnet, dass die Vorrichtung, gegebenenfalls durch Ergänzung von Gehäuseteilen, zum Betrieb als eigenständige, frei stehende Vorrichtung ausgebildet ist.

3. Vorrichtung nach Anspruch 1 oder 2, dadurch gekennzeichnet, dass die Befestigungsmittel und/oder Dichtungsmittel (**15**) an der Spülvorrichtung baulich integriert sind.

4. Vorrichtung nach einem der Ansprüche 1 bis 3, dadurch gekennzeichnet, dass die Befestigungsmittel

tel (5) als Formschlussmittel ausgeführt sind.

5. Vorrichtung nach einem der Ansprüche 1 bis 4, dadurch gekennzeichnet, dass die Befestigungsmittel und/oder die Dichtungsmittel (15) als radial vorspringende Bereiche der Vorrichtung, die mit den korrespondierenden Befestigungsmitteln und/oder Dichtungsmitteln der Grundplatte zusammenwirken, ausgebildet sind.

6. Vorrichtung nach Anspruch 5, dadurch gekennzeichnet, dass die radial vorspringenden Bereiche der Vorrichtung als umlaufender Rand des Gehäuses (7) ausgebildet sind, der vorzugsweise den oberen Randbereich (15) oder den oberen Rand (16) des Gehäuses bildet.

7. Vorrichtung nach Anspruch 5 oder 6, dadurch gekennzeichnet, dass die radial vorspringenden Bereiche konisch, sich zum oberen Rand (16) der Vorrichtung hin erweiternd und sich vorzugsweise bis zum oberen Rand der Vorrichtung erstreckend, ausgebildet sind.

8. Vorrichtung nach einem der Ansprüche 1 bis 7, dadurch gekennzeichnet, dass die Dichtungsmittel an dem oberen Randbereich (15) der Vorrichtung angeordnet sind und eine größere Elastizität aufweisen, als das Material des Gehäuses der Vorrichtung.

9. Vorrichtung nach einem der Ansprüche 1 bis 8, dadurch gekennzeichnet, dass die Dichtungsmittel (15) als in axialer Richtung der Vorrichtung verschiebungssicher und lastabtragend an der Vorrichtung oder dem Gehäuse derselben befestigter, vorzugsweise radial vorstehender, Randbereich ausgebildet sind.

10. Vorrichtung nach einem der Ansprüche 1 bis 9, dadurch gekennzeichnet, dass die Befestigungsmittel zugleich als Dichtungsmittel ausgebildet sind.

11. Vorrichtung nach einem der Ansprüche 1 bis 10, dadurch gekennzeichnet, dass Vorspültopf (2) und/oder Nachspültopf (4) doppelwandig mit beabstandeter Innen- und Außenwandung (18a, b; 19) ausgeführt sind und dass die Außenwandung von Vor- und Nachspültopf als vollumfänglich um die Vorrichtung umlaufende, Vor- und Nachspültopf umgebende Gehäusewandung (19) ausgeführt sind.

12. Vorrichtung nach Anspruch 11, dadurch gekennzeichnet, dass die umlaufende Gehäusewandung (19) zumindest an ihrem oberen Randbereich (15) oder zumindest im Wesentlichen über ihre gesamte Höhe konisch ausgeführt ist.

13. Vorrichtung nach einem der Ansprüche 1 bis 12, dadurch gekennzeichnet, dass die Vorrichtung derart ausgeführt ist, dass sie von oben in eine korre-

spondierende Ausnehmung der Grundplatte (10) von Theke oder Spüle, vorzugsweise passgenau, einsetzbar ist, vorzugsweise unter der Maßgabe, dass die Ausnehmung die Querschnittsgestalt des Gehäuses auf einer bestimmten Höhe desselben aufweist.

14. Vorrichtung nach einem der Ansprüche 1 bis 13, dadurch gekennzeichnet, dass, gegebenenfalls bis auf einen Wasseranschluss (25), keine gegenüber dem oberen Gehäuserand radial vorspringenden Bereiche vorgesehen sind.

15. Vorrichtung nach einem der Ansprüche 1 bis 14, dadurch gekennzeichnet, dass die Oberseite (21) der Vorrichtung von der Innenwandung (18a, b) von Vor- und Nachspültopf bis zur Gehäuseaußenwand (19) geschlossen ausgeführt ist.

16. Vorrichtung nach einem der Ansprüche 1 bis 15, dadurch gekennzeichnet, dass die Oberseite (21) der Vorrichtung zwischen äußerer Gehäusewand (19) und Innenwand (18a, b) von Vorspül- und/oder Nachspültopf jeweils zum Topf hin leicht abfällt.

17. Vorrichtung zum manuellen Spülen von Trinkgefäßen, wahlweise nach einem der Ansprüche 1 bis 16, mit einem oben offenen Vorspültopf (2) mit vorzugsweise mindestens einer Spülbürste (3) und einem daneben angeordneten oben offenen Nachspültopf (4) mit mindestens einer innerhalb desselben angeordneten Spritzdüse (5) und einem dieser zugeordneten Wasseranschluss (6), um in diesem ein zu reinigendes Trinkgefäß mit Spülwasser zu beaufschlagen, dadurch gekennzeichnet, dass Vor- und Nachspültopf von einem beide Töpfe umfassenden Gehäuse (9) umgeben sind, dessen oberer umlaufender Randbereich (15) konisch, sich nach radial außen erweiternd und vorzugsweise sich bis zum oberen Rand (16) erstreckend ausgeführt ist.

18. Vorrichtung zum manuellen Spülen von Trinkgefäßen, wahlweise nach einem der Ansprüche 1 bis 17, mit einem oben offenen Vorspültopf (2) mit vorzugsweise mindestens einer Spülbürste (3) und einem daneben angeordneten oben offenen Nachspültopf (4) mit mindestens einer innerhalb desselben angeordneten Spritzdüse (5) und einem dieser zugeordneten Wasseranschluss (6), um in diesem ein zu reinigendes Trinkgefäß mit Spülwasser zu beaufschlagen, dadurch gekennzeichnet, dass Vor- und Nachspültopf Wasserzulaufe (6a, 6b) aufweisen, die mit zumindest einem außerhalb des Gehäuses führenden Wasseranschluss (6') verbunden sind, und Wasserabläufe (6c, 6d), die mit mindestens einem außerhalb des Gehäuses führenden Wasseranschluss (6'') zum Abführen des Wassers verbunden sind, und dass hierdurch bis auf die Wasserführung in Vor- und/oder Nachspültopf und gegebenenfalls einem Überlauf zwischen diesen ein geschlossener Wasserkreislauf ausgebildet wird.

19. Vorrichtung zum manuellen Spülen von Trinkgefäßen, wahlweise nach einem der Ansprüche 1 bis 18, mit einem oben offenen Vorspültopf (2) mit vorzugsweise mindestens einer Spülbürste (3) und einem daneben angeordneten oben offenen Nachspültopf (4) mit mindestens einer innerhalb desselben angeordneten Spritzdüse (5) und einem dieser zugeordneten Wasseranschluss (6), um in diesem ein zu reinigendes Trinkgefäß mit Spülwasser zu beaufschlagen, dadurch gekennzeichnet, dass Vor- und/oder Nachspültopf eine Reinigungsmittelzuleitung (35) aufweisen, die mit dem anderen Ende mit einem Reinigungsmittelreservoir oder mit einer anderen Einrichtung wie beispielsweise einer Geschirrspülmaschine verbunden ist, durch die Reinigungsmittel der Spülvorrichtung zuführbar oder an die andere Einrichtung abführbar ist.

20. Theke oder Spüle mit einer Grundplatte, dadurch gekennzeichnet, dass in der Grundplatte (10) eine Vorrichtung (1) zum manuellen Spülen von Trinkgefäßen mit einem oben offenen Vorspültopf (2) mit vorzugsweise mindestens einer Spülbürste (3) und einem daneben angeordneten oben offenen Nachspültopf (4) mit mindestens einer innerhalb desselben angeordneten Spritzdüse (5) und einem dieser zugeordneten Wasseranschluss (6), um in diesem ein zu reinigendes Trinkgefäß mit Spülwasser zu beaufschlagen, zum bestimmungsgemäßen Betrieb integriert ist.

21. Theke oder Spüle nach Anspruch 20, dadurch gekennzeichnet, dass eine Vorrichtung (1) nach einem der Ansprüche 1 bis 19 integriert ist.

22. Theke oder Spüle nach Anspruch 20 oder 21, dadurch gekennzeichnet, dass die Spülvorrichtung (1) gegenüber der Grundplatte (10) abdichtend in dieser integriert ist.

23. Theke oder Spüle nach einem der Ansprüche 20 bis 22, dadurch gekennzeichnet, dass die Vorrichtung mit ihrem oberen Rand (16) in der Höhe geringfügig vorstehend oder zumindest im Wesentlichen bündig mit der Oberseite der Grundplatte (10) der Theke oder Spüle abschließt.

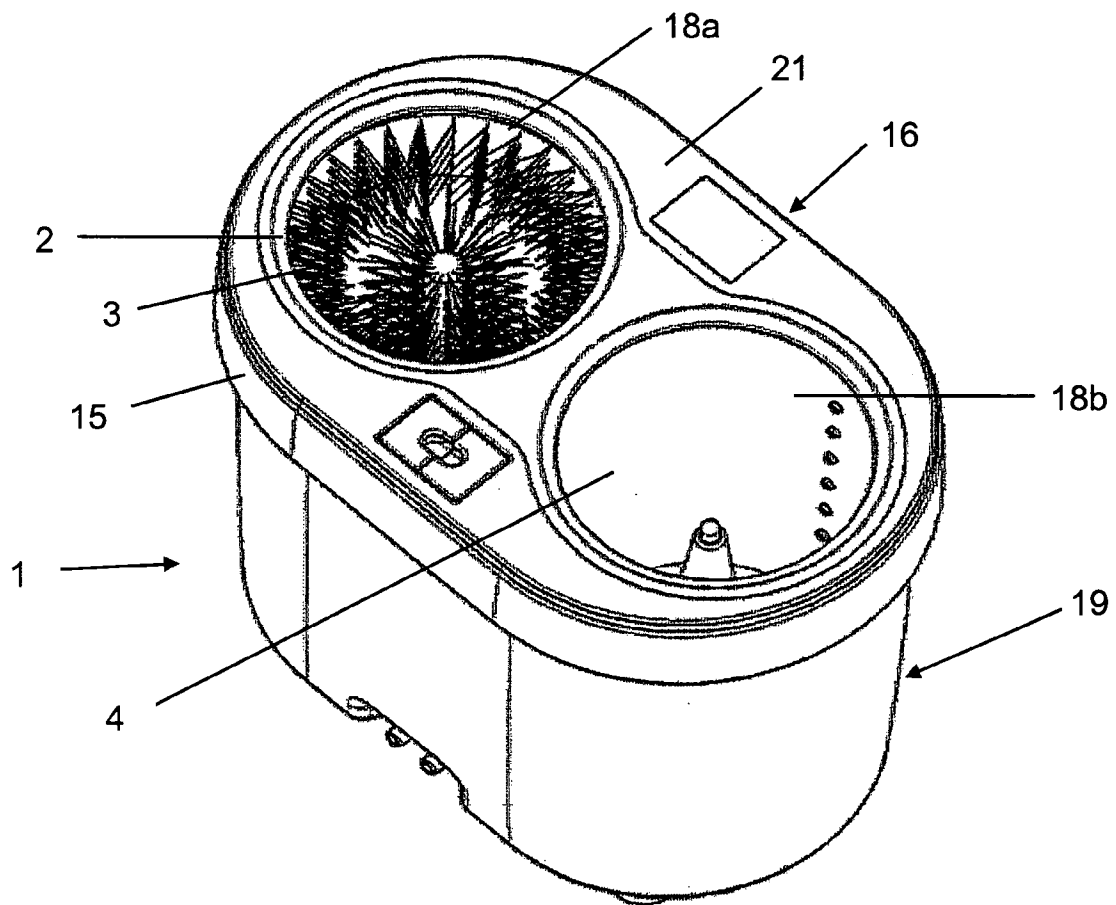
24. Theke oder Spüle nach einem der Ansprüche 20 bis 23, dadurch gekennzeichnet, dass die Vorrichtung durch Einsetzen in die korrespondierende Ausnehmung der Grundplatte an dieser bestimmungsgemäß befestigt und/oder vollumfänglich abdichtend an dieser festlegbar ist.

25. Theke oder Spüle nach einem der Ansprüche 20 bis 24, dadurch gekennzeichnet, dass die Aufnahme der Grundplatte (10) von Theke oder Spüle für die Vorrichtung eine die Spülvorrichtung vollumfänglich umgebende, von der Oberseite (11) der Grundplatte nach oben vorstehende Erhebung (27) aufweist.

26. Theke oder Spüle nach einem der Ansprüche 20 bis 25, dadurch gekennzeichnet, dass die Theke oder Spüle unmittelbar benachbart der Aufnahme (12) für die Spülvorrichtung ein Spülbecken aufweist.

Es folgen 5 Blatt Zeichnungen

Fig. 1a



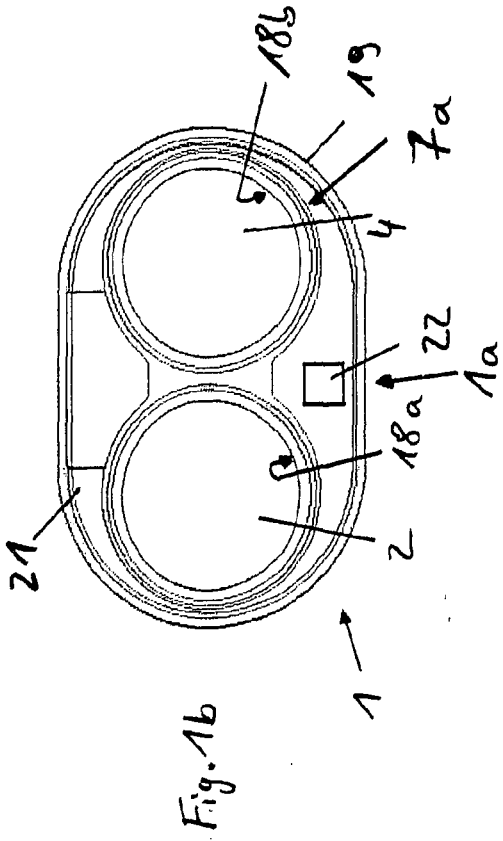
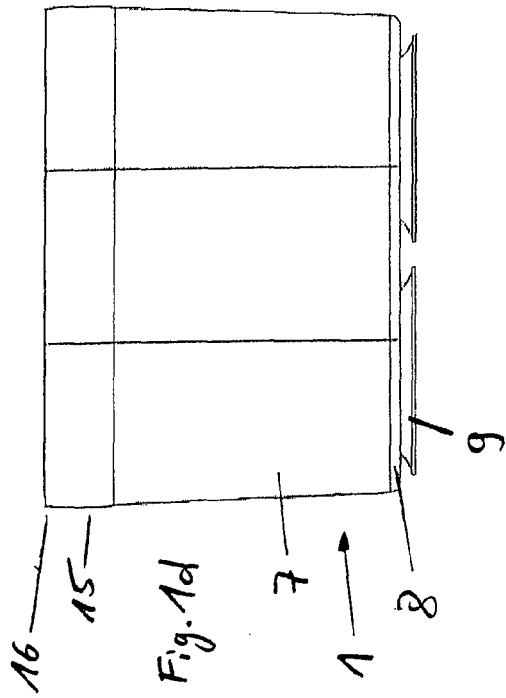
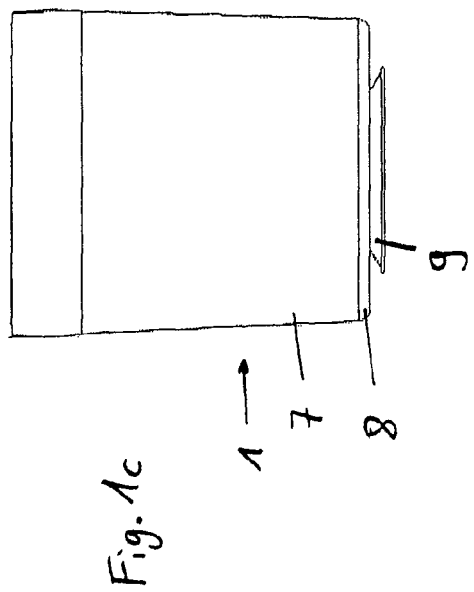


Fig. 2

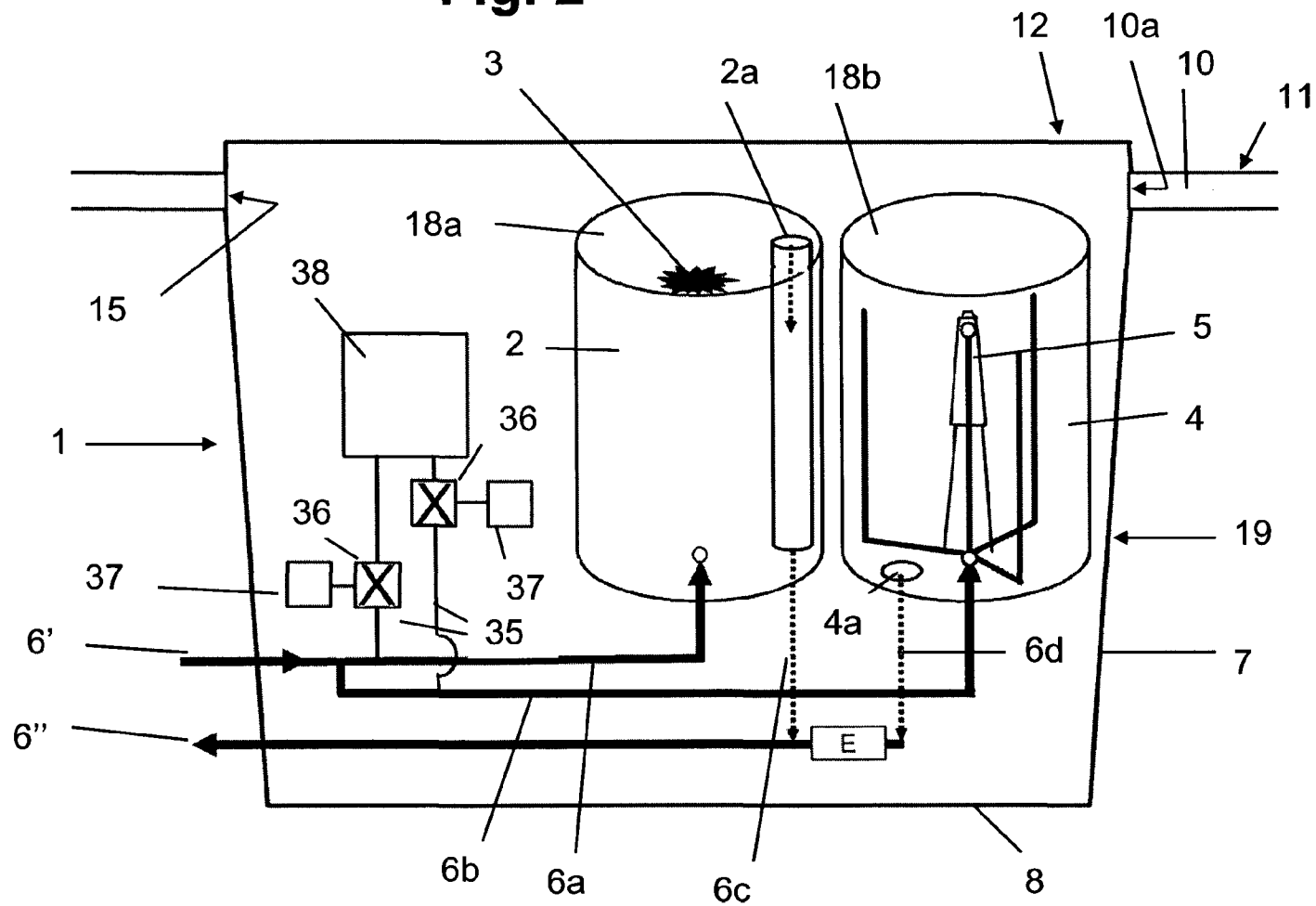


Fig. 3

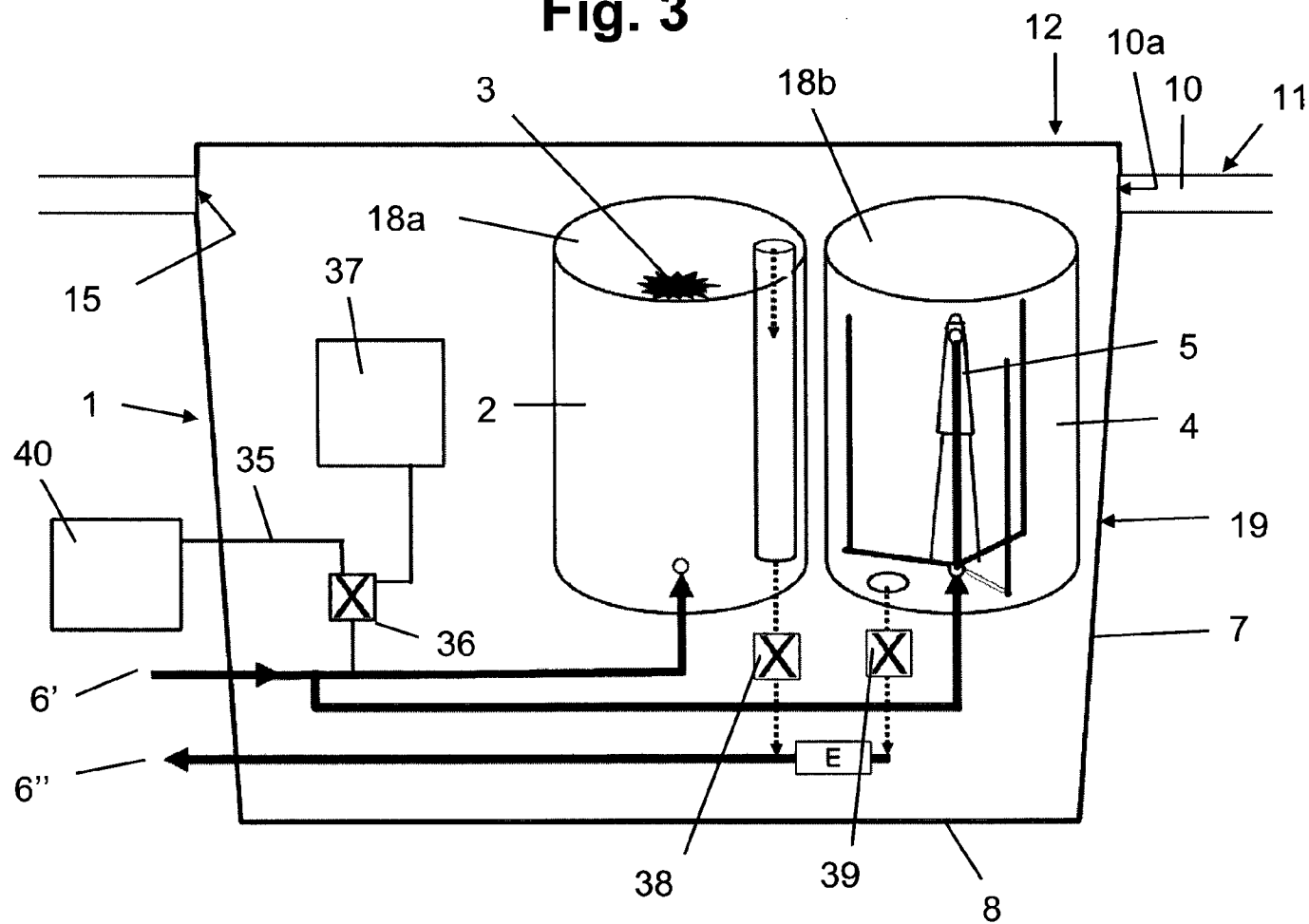
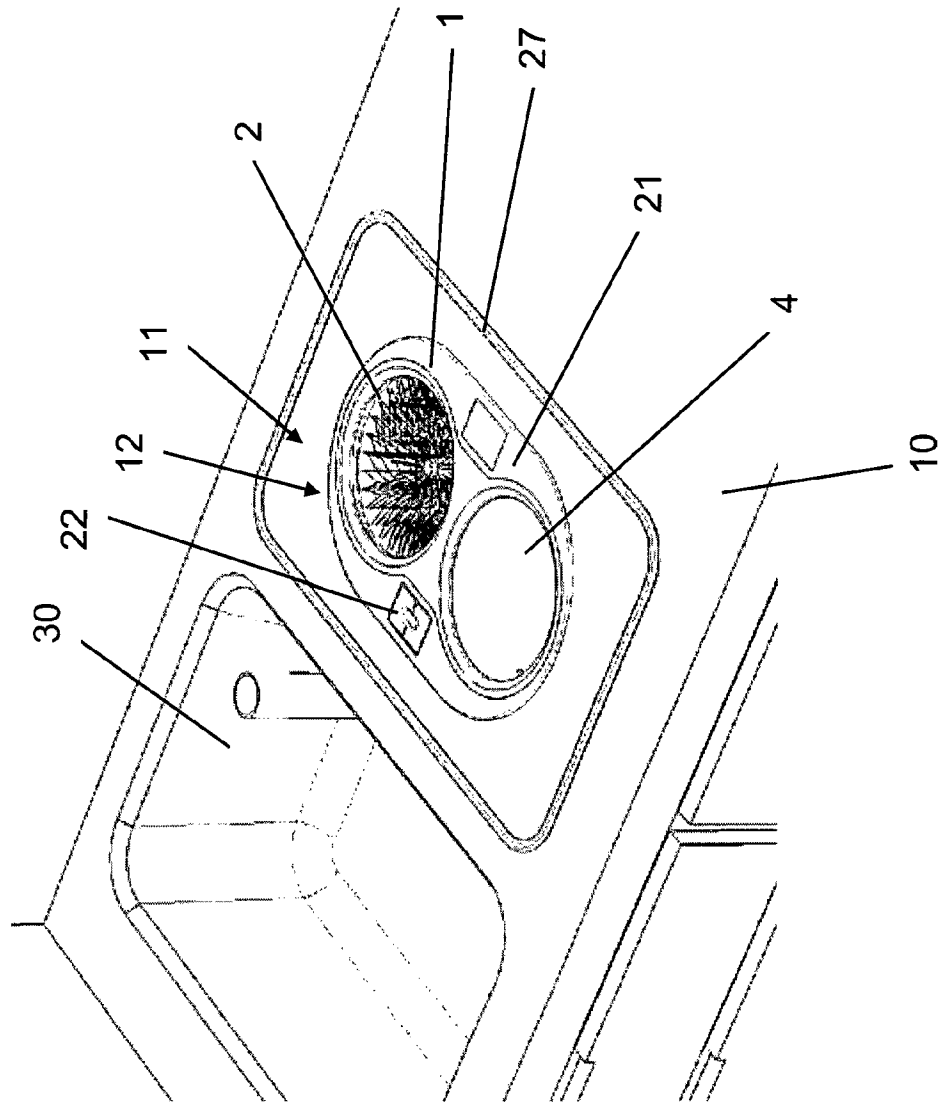


Fig. 4

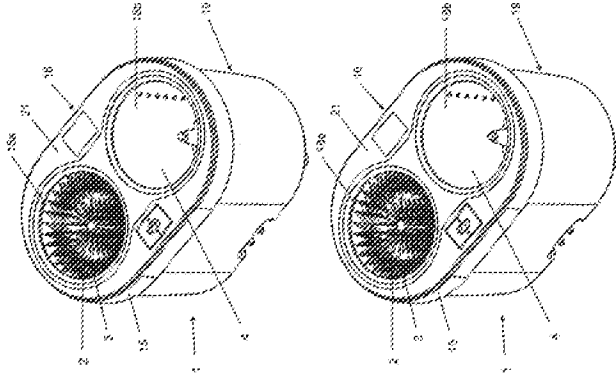


Device for manual rinsing of drinking vessels

Abstract

translated from German

contraption for manual rinsing of drinking vessels with a top open Verspülkopf preferably with at least one dishwashing brush and an adjacently arranged open topcupping pot with at least one nozzle disposed within the same and a this esecrated water connection to clean in this one Drinking vessel with rinse water zuzuschlagen, characterized in that the flushing device having fastening means (15) and / or sealing means (15), the corresponding fasteners and / or a sealing area (10a) adapted to a base plate (10) of a counter or a sink are attached to the base plate (10) and / or to the sealing area the same sealing to be applied.



Classifications

AA7L17/02 Basins

View 1 more classifications

Claims (26)

Device for manually rinsing drinking vessels with an open-topped Verspülkopf preferably having at least one dishwashing brush and an adjacent open Nachspülkopf with at least one arranged within the same spray nozzle and a water connection associated therewith to act in this to be cleaned a drinking vessel with rinse water, characterized in that the flushing device has fastening means (15) and / or sealants (15), which are connected to corresponding fastening means and / or a sealing area (10a) a base plate (10) of a counter or a sink are adapted to be attached to the base plate (10) and / or sealing applied to the sealing area thereof. Device according to claim 1, characterized in that that the device, if necessary by supplementing housing parts, to operate as a separate, free-standing device is formed. Apparatus according to claim 1 or 2, characterized in that the Befestigungsmittel fastening means and / or sealing means (15) are structurally integrated on the flushing device. Device according to one of claims 1 to 4, characterized in that the fastening means and / or the sealing means (15) are formed as fasteners and / or sealants with the corresponding fastening means and / or sealing means of the base plate are formed. Apparatus according to claim 5, characterized in that the radially projecting portions of the device as a peripheral edge of the housing (7) are formed, which preferably the upper edge region (15) or the upper edge (15) of the housing forms. Apparatus according to claim 5 or 6, characterized in that the radially projecting portions extend to the upper edge (16) extending towards the device and preferably extending to the upper edge of the device are formed. Device according to one of claims 1 to 7, characterized in that the sealing means at the upper edge region (15) are arranged and have a greater elasticity than the material of the housing of the device. Device according to one of claims 1 to 8, characterized in that the sealing means (15) as in the axial direction of the device against displacement and lead transfer to the device or the housing of the same fixed, preferably radially projecting edge region are formed. Device according to one of claims 1 to 9, characterized in that the fastening means at the same time designed as a sealant are. Device according to one of claims 1 to 10, characterized in that Verspülkopf (2) and / or Nachspülkopf (4) double-walled with spaced inner and outer walls (18a, b; 19) are executed and that the outer wall of pre- and Nachspülkopf as fully circumferentially around the device surrounding, pre- and Nachspülkopf surrounding housing (19) are executed. Apparatus according to claim 11, characterized in that the circumferential housing wall (19) at least at its upper edge region (15) or at least substantially circular over its entire height. Device according to one of claims 1 to 12, characterized in that the device is designed such that it from above into a corresponding recess of the base plate (10) of the counter or sink, preferably fit, can be used, preferably with the proviso that the recess has the cross-sectional shape of the housing at a certain height thereof. Device according to one of claims 1 to 13, characterized in that, optionally up to a water connection (25), no relative to the upper edge of the housing radially projecting areas are vorgesehen. Device according to one of claims 1 to 14, characterized in that the upper side (21) of the device from the inner wall (18a, b) from prewash and final three pot to the outside wall of the housing (19) is executed closed. Device according to one of claims 1 to 15, characterized in that the upper side (21) of the device between outer housing wall (19) and inner wall (18a, b) drops slightly from the

1888 Dependent ^ translated from German

pre-rinsing and / or rinsing pot towards the pot. Device for manual rinsing of drinking vessels, optionally according to one of claims 1 to 16, with an open-topped pre-rinsing pot (2) with preferably at least one dishwashing brush (3) and an adjacently open Nachspültopf (4) with at least one injection nozzle (5) and one of these associated water connection (6), in order to apply in this a to be cleaned drinking vessel with rinsing water, characterized in that pre-and Nachspültopf of a two pots comprising housing (9) are surrounded, whose upper peripheral edge region (15) conically widening radially outward and preferably extending to the upper edge (16) is carried out extending. Device for manual rinsing of drinking vessels, optionally according to one of claims 1 to 17, with an open-topped pre-rinsing pot (2) with preferably at least one dishwashing brush (3) and an adjacently open Nachspültopf (4) with at least one injection nozzle (5) and one of these associated water connection (6), in order to apply a rinsing water in this to be cleaned a drinking vessel, characterized in that pre-and Nachspültopf water supplies (6a, 6b) having at least one outside of the housing leading water connection (6') and water courses (6c, 6d) connected to at least one water connection (outside the housing) 6'' are connected to the discharge of the water, and that thereby a closed water cycle is formed except for the water supply in pre-and / or Nachspültopf and optionally an overflow between them. Device for manual rinsing of drinking vessels, optionally according to one of claims 1 to 18, with an open-topped pre-rinsing pot (2) with preferably at least one dishwashing brush (3) and an adjacently open Nachspültopf (4) with at least one injection nozzle (5) and one of these associated water connection (6), in order to apply a rinsing water in this a drinking vessel to be cleaned, characterized in that pre-and / or Nachspültopf a detergent feed line (35), which is connected at the other end to a detergent reservoir or to another device such as a dishwasher, can be supplied to the rinsing device by the cleaning agent or can be discharged to the other device. Counter or sink with a base plate, characterized in that in the base plate (10) a device (1) for manual rinsing of drinking vessels with an open-topped pre-rinsing pot (2) with preferably at least one dishwashing brush (3) and an adjacently open Nachspültopf (4) with at least one injection nozzle (5) and one of these associated water connection (6), in order to apply a rinsing water to be cleaned in this drinking vessel, is integrated for normal operation. Counter or sink according to claim 20, characterized in that a device (1) is integrated according to one of claims 1 to 19. Counter or sink according to claim 20 or 21, characterized in that the flushing device (1) in relation to the base plate (10) is sealingly integrated in this. Counter or sink according to one of claims 20 to 22, characterized in that the device with its upper edge (16) in height slightly protruding or at least substantially flush with the top of the base plate (10) the counter or sink completes. Counter or sink according to one of claims 20 to 23, characterized in that the device by insertion in the corresponding recesses of the base plate attached to this intended and / or in full is sealingly attached to this. Counter or sink according to one of claims 20 to 24, characterized in that the receptacle of the base plate (10) of the counter or sink for the device, surrounding the rinsing device completely, from the top (11) of the base plate projecting upwards elevation (27) having. Counter or sink according to one of claims 20 to 25, characterized in that the counter or sink immediately adjacent to the receptacle (12) has a sink for the flushing device.

Description

translated from German

The The invention relates to a device for manual rinsing of Drinking vessels with a top open Vorsepültopf with preferably at least one dishwashing brush and an adjacent top open rinse pot with at least one nozzle disposed within the same and a this associated water connection to in the Nachspültopf to be cleaned drinking vessel with rinse water to act on.

such Devices for manual rinsing become from drinking vessels often placed in an existing sink of a sink, to be used there. As a result, the flushing process is carried out in the same place, at which otherwise a usual hand flushing he follows. Furthermore This is usually a simple water supply through a in in close proximity to arranged faucet possible. However, this mode of operation requires that the sink no longer otherwise is usable, for example, to rinse other objects.

alternative becomes generic devices as independent and freestanding devices operated, for example the work surface a counter are arranged. However, this requires that area the counter is not otherwise usable and also the other Handlings at the counter hampered by the erected device which usually has a considerable height, as they usually do also for rinsing high glasses like 1-liter beer glasses, Beer mugs and the like is designed.

Of the invention is based on the object, a generic device in such a way that the above-mentioned problems are solved, in particular, the handling of the device optimized and vereinfacht is.

These The object is achieved by a device according to the independent claim 1 solved. Furthermore, this object is achieved by a device according to the independent claims 17 to 19 as well as by a counter or sink according to the independent claim 20 solved.

The inventive flushing device can thus be used as a built-in device in a counter or sink be used or used, for example in their base plate, to which the device is particularly adapted. The flushing device For this purpose, appropriately adapted fasteners and / or Have sealant, the corresponding fasteners and / or a corresponding sealing region of the base plate of Counter or sink are adapted to attached to this and / or sealing applied to become. It is understood that in each case also optionally intermediate element or fitting such as an intermediate ring between flushing device and base plate may be provided, although preferably the flushing device attached directly to the base plate and / or against this is sealed. A seal in the context of the invention may in particular a splash-proof or at least substantially waterproof Be sealing. The device can in this case permanently or preferably be removably attached to the base plate or be fastened, making the device for maintenance or repair purposes is removable. Due to the integration of the invention to the base plate can the flushing device independent of other facilities such. B. a sink, wherein the limited working space at sink or counter is optimally exploitable.

Of the For the sake of simplicity, reference will be made below to the counter, including always sink and / or counter are to be understood.

Preferably, the flushing device integrated on the base plate or suitable for integration on a base plate specially adapted for this purpose is designed for operation as an independent, free-standing device. The flushing device can either be integrated as a built-in device in the base plate or, if necessary, can be used as a free-standing device at the sink or counter or at another desired location. For this purpose, the flushing device preferably has a complete housing with a complete circumferential outer wall and, if appropriate, a complete bottom plate, wherein the housing, preferably including the bottom area, can be splash-proof or at least substantially watertight. Optionally, can be dispensed with a freestanding use of the device on a bottom plate. The flushing device can thus already have all the connections for an independent, free-standing operation thereof, so that corresponding couplings and / or shut-off valves, in particular quick-release couplings, for the attachment of water pipes (inlet and / or outlet) can already be provided. The flushing device can thus be used in a conventional manner in a sink used if necessary. Optionally, the flushing device can also be designed such that a self-contained and free-standing operable device can be formed by supplementing partial areas or substantially the entire housing outer wall and / or the bottom plate. The housing part to be supplemented to form a watertight device, optionally including the bottom area, may be made in one piece. The corresponding fastening means can already do this on the device provided or integrally formed on this. Thus, the attachable to the sink device may be designed so that it is only to be used in a housing shell, which may be made splash-proof or generally waterproof including the bottom plate to form a freestanding device operable. The possibility to be supplemented housing parts are in this case preferably formed or provided independently of the fastening and / or sealing means for the arrangement of the device on the base plate of the sink and / or counter.

Preferably are the fixing and / or sealing means, with the corresponding Agents of the base plate act together, structurally to the flushing device integrated, preferably insoluble attached or in one piece formed on this, so that this without affecting the handling of flushing even with freestanding operation of the same can remain at this. Possibly can However, the attachment and / or sealant as a separate components accomplished be.

The Fastener of the flushing device for the base plate can designed as positive locking means be, preferably as radially projecting portions of the device or the housing, the at the top of the flushing device can be considered in particular in the form of a circumferential, projecting edge, the across from projecting outwards from all other parts of the housing can, preferably at most except for the water connections of the Supply and / or discharge. The fasteners can with corresponding positive locking

means of the base plate directly or cooperate by means of intermediate structures. Such intermediate structures can partially or completely be mounted below the base plate. The positive locking means can each be designed such that these by inserting the flushing in the corresponding recording of the base plate to each other interaction come to the flushing device pre-assemble on the base plate and / or mount as intended, to allow operation thereof. Preferably the fasteners to flushing device and base plate formed such that only in that these are brought to the cooperation, in particular only by inserting the flushing device in the corresponding receptacle of the base plate, the device as intended against the base plate is seated. The contact force of the corresponding Attachment and / or sealant to each other here can in essentially or exclusively by the weight of the flushing device be determined. It is understood that further detection and / or Securing means may be provided, for. B. to the device secure in target position on the base plate and / or these against the To brace base plate, z. B. to the tightness of the seal and / or to increase the holding force of the fastening means.

The Fastening and / or sealing means of the flushing device for cooperation with the base plate can for example, form-fitting and / or by permanently acting adhesive such as adhesives or one-piece Molding on the flushing device, especially on the housing of the same, to be appropriate. The attachment can always be unsolvable. The attachment is preferably such that these means are axially secure against displacement and attached to the device or the housing load-bearing are and preferably the weight of the flushing device also under consideration the at normal operation acting forces, withstand. The attachment can be made such that the attachment and / or Sealant against forces acting in the vertical direction, the necessary for mounting or dismantling of these means on the device are, in addition secured in their position.

The radially projecting fastening means and / or the sealing means the flushing device to interact with those of the base plate can each be considered peripheral Edge of the device or the housing of the device formed be. The housing this can pre-and / or Nachspültopf outside completely and full surrounded, at least at the upper edge of the same. The housing can formed at a radial distance to the wall of pre-and / or Nachspültopf be.

Possibly can the fastening and / or sealing means of the flushing device be designed as identical means that take both functions simultaneously can, which is especially true when training the funds as a peripheral edge can be given.

The radially projecting regions, in particular in the form of a radially encircling edge, can widen conically towards the upper edge region of the rinsing device and optionally extend conically widening to the upper edge of the rinsing device or the housing thereof. The cone can preferably protrude outwardly from all other areas of the housing, preferably at most except locally projecting area at the bottom of the housing, for example, at the bottom 1/3 of the housing, such. As the connections of Wasserzu- and / or -ableitungen. The cone may have a constant slope over its height or may be concave or convex. This is in the Overall given a simple design, at the same time with the top of the counter base plate attachment and secure sealing is possible. The cone angle to the longitudinal axis of the device may be $\geq 1-2^\circ$ or $\geq 3-5^\circ$, for example $\geq 10-15^\circ$. The cone angle can be $\leq 30-45^\circ$ or $\leq 20-25^\circ$, if necessary also $\leq 10-15^\circ$. Optionally, the upper edge region of the flushing device can also be designed in each case as a stepped shoulder or in another suitable manner.

Of the radially projecting and z. B. conically shaped edge region the flushing device, which may be formed as a fastening and / or sealing means can, can in the height only in each case over the upper edge region of the flushing device extend. Optionally, the entire outer wall can also the flushing device be conical. The conical edge can also be in height at least essentially about the entire thickness of the base plate or vertically below or above it extend beyond $\geq 1/2$ or $\geq 1/4$ of the height thereof. The same can also be said for the height apply to a mounting plate provided on the base plate, its vertical extent greater than Thickness of the base plate is. Such a fastening edge can z. B. as flanged Edge be formed.

The sealing means arranged at the upper edge region of the device preferably have a greater elasticity than the material of the purging pot and / or the housing. Preferably, the sealing material is non-porous. The sealing material can one piece on the outside wall of the housing be formed, for example by suitable multi-component injection molding. The sealing means are preferably designed to be with the top of the corresponding receptacle, in particular the surface the base plate of sink or counter, an at least substantially closed and seamless Surface form. The seal may also be at least substantially flush with the surface complete the base plate.

Preferably are the pre-and / or Nachspültopf double-walled with spaced inner and outer walls.

The flushing is preferably designed such that it is optionally free-standing or as a built-in device is usable. Under "freestanding" is here in general an arrangement in the non-mounted in a counter state and preferably independently from a sink a sink, which as a water catch for from the flushing device discharged water, understood. The flushing device can also be here instead of a stand space on a bracket such. B. a wall or a lateral support hanging be.

In front-and / or Nachspültopf can each have a separate water inlet and / or outlet to to supply this water or derive from these, including connections for corresponding inlets and outlets such as B. corresponding couplings can be provided, the Pre-and / or final rinse pot, preferably the Nachspültopf, may be assigned a water connection, the water optionally over the each other pot can be supplied to the water outlet. Possibly can Water supply and drain also separately or for the flushing device be arranged in total on the same pot. Excess wastewater in particular the Nachspültöpfen can also be fed directly to a derivative of the respective pot. Furthermore, a procedure for Anything in the flushing device penetrated spray water be provided, preferably is a such drain arranged at the bottom of the flushing device.

The outer wall of pre-and / or Nachspültopf can generally be considered complete circumferential housing wall accomplished be, which pre-and Nachspültopf surrounded by forming an integral device. Generally can but also pre-rinsing and Nachspültopf separately be formed and optionally in separate recordings of Counter base plate may be arranged, although this is not preferred is. Through the pre-and Nachspültopf surrounding encircling housing can Furthermore, in a simple way, the attachment and / or sealant the housing full be formed surrounding or z. B. several around the housing circumference be arranged distributed fasteners provided. Possibly can for before- and Nachspültopf also be separate recordings in the base plate before being seen, wherein the two pots connected together to form a unitary device could be, z. B. by a common bottom plate.

Surrounds the housing pre- and Nachspültopf full, preferably with a certain distance from the inner wall of pre-and / or Nachspültopf, so can save space in the space between the housing wall and the wall of the respective pot and / or in the transition region between pre-and Nachspültopf be arranged further devices of the flushing device, for example Wasserzu- and / or -abführungen, heaters, thermostats, switches or the like. This is especially true when pre-and / or Nachspültopf have a cross-sectional shape which widens from the central region of the device to the respective ends, for example, a round cross-sectional shape, a in essential triangular or square cross-sectional shape with opposite corner areas, without being limited to these basic forms.

Of the top area of the device between the outer edge of the housing and the inner wall of pre-and / or Nachspültopf can easily fall to the inside of the pot, causing any splashing supplied to the interior of the pot becomes. This slope may extend at least approximately to the outer edge of the housing, if necessary except for a certain edge area, the z. B. formed horizontally can be.

The flushing may have a closed water supply and / or removal Clutch elements that are watertight to an external water supply and / or -Discharge connectable are. It can thereby, if necessary, except for the above open Pre and / or Nachspültöpfe and if necessary, an overflow between them, a closed water system, whereby a separate water intake such as a sink dispensable and an uncontrolled water leakage at the flushing device can be avoided. The water supply and removal are preferred immediately adjacent to each other on the device. Preferably are water supply and removal at one point of the flushing device arranged with the mounted flushing device above or below a counter or sink base plate can be arranged, particularly preferably in the lower region of the flushing device, at the bottom or at the bottom of the flushing device. Pre- and / or Nachspültopf can each having a separate Wasserzu- and / or removal, preferably this is associated with a common water supply and discharge, the may have a distributor. The water drain can be on an outside provided the flushing device Main water outlet connected or connectable, z. B. at a main water outlet another water-consuming device such as a manual one Sink, Dishwasher, Washing machine or the like. It can thus, for example, a closed water inlet to the

pre-and / or Nachspültopf, preferably to the latter, be provided, the water then z. B. by a preferably closed overflow the other pot, in particular the Vorspültopf, supplied will and then over the closed water drain one main water drain another Device or the installation room is derived in the flushing device. It can also pre-and Nachspültopf each a separate overflow exhibit. The water drains of pre-and Nachspültopf may be performed separately from the housing, preferably lead these inside the case in a collector, leaving the flushing device a common water drain for Pre-and Nachspültopf having.

Farther can the flushing device connections for one Have detergent supply and / or discharge, by means of which a cleaning agent, preferably a suitable liquid cleaner, the pre-and / or Nachspültopf be added and / or removed can. This is the cleaning of the built-in flushing device much easier. It can For this purpose, the cleaning medium supply and / or -ableitungen with appropriate Blocking means such as stopcocks be provided to the detergent only when needed, the flushing device supply. If necessary, you can this blocking means also automatically, z. B. due to a given Line pressure of the cleaning agent (eg in the inlet) or one Open or close the detergent flow (eg in the drain). Before opening the Detergent supply line can be used in pre- and / or Nachspültopf existing rinse water be removed, for. B. manually or automatically, including a corresponding controllable pump may be provided or discontinuous or continuously operable metering device. The pump control can with the blocking agents of the detergent supply and / or discharge be coupled, so that at the intended opening of the detergent feed line first the pump for operated a suitable period is to pre and / or Nachspültopf to empty. Furthermore, the Blocking means of the cleaning agent supply to other means of blocking fluid-carrying Coupled to and / or derivatives, z. B. the water supply and / or -flow of pre-and / or Nachspültopf, so that when opening, for example the detergent feed the blocking means of other Zu- and / or Close discharges. This may happen at the same time or delayed respectively.

Furthermore, the flushing device may have a cleaning agent supply line, which may be connected at the other end to a cleaning agent reservoir, which may be associated exclusively with the flushing device. Alternatively or additionally, the cleaning agent reservoir can also be assigned to another device which is connected to the flushing device by a corresponding detergent feed line. Such a device can be, for example, a dishwasher or another cleaning device, preferably provided in the area of the counter, which preferably serves for the cleaning of objects coming into contact with food. If appropriate, the detergent feed line can also be connected in a fluid-conducting manner to another device which emits a cleaning agent, for example to the detergent outlet of a dishwashing machine or to another cleaning device for articles coming into contact with food, wherein the cleaning agent can also be fresh or used flushing eye of the respective other device. The detergent consumption can thereby total be lowered, wherein already used otherwise cleaning agent of the flushing device can be supplied. Alternatively or additionally, the detergent outlet of the flushing device may be connected to the inlet of another device to reuse the cleaning agent, for example to clean the other preferably food-contacting device or objects therein, such as e.g. As a dishwasher or the like. An additional pump for supplying the cleaning agent from the other device to the flushing device may be unnecessary here.

Preferably the detergent is the pre-and / or Nachspültopf am supplied to the upper edge region thereof, where one or more optionally lockable Detergent discharge openings can be provided. At the bottom area of pre-and / or Nachspültopf may be a cleaning agent drain be provided, which may be identical to the water outlet. The However, cleaning agent can also below the usual water level in the respective purging pot, the z. B. by an overflow the same is defined, or fed in the ground area or it can into the rinse water supply be metered.

The flushing may be formed such that these in a corresponding Receiving the counter base plate, for example, a recess preferably can be used accurately and / or self-centering. The flushing device can be vertically aligned in the installed position from above a corresponding receptacle be inserted, the recording may have a boundary edge, which is the cross section of the flushing device corresponds to the upper edge region or at the upper edge. possibly can at the beginning of the introduction the flushing device be inclined to any protrusion on the lower housing area including bottom plate can be arranged to insert into the receptacle, and then afterwards if necessary, to be vertically aligned again. hereby a particularly simple installation and / or sealing of the flushing device is possible, what by the radially projecting upper edge region of the housing, the can be contact, is further facilitated. The attachment and / or Sealant and / or the upper edge region of the housing can hereby across from all other housing areas, including the bottom area, radially outward with a supernatant protrude, especially opposite completely complete circumferential areas of the flushing device such as B. impact edges, stiffening webs, the edge region of a bottom plate or the like. The radial projection is preferably dimensioned such that this secure mounting and / or Sealing of the device opposite a corresponding edge of the recording allows, and preferably with inverse shape and flat can be applied to an inner edge of the receptacle. The cross-sectional contours of the radially protruding Edge and the inner edge of the recording can thus match. The radial projection can be 1-2 mm or 2-5 mm or more be. Optionally, except for one only one Circumferential extension of $\pm 60^\circ$, $\pm 45^\circ$ or $\pm 30^\circ$ or local radially projecting projection on the lower housing area including the bottom plate, z. B. a arranged on the lower housing portion water connection with one or more connecting pieces, thus preferably none across from the upper edge of the case radially projecting or extending radially to this Areas provided. The device is thereby easy to install and opposite the base plate sealable, and optionally self-centering and / or due to the Eigengewicht tes self-sealing in the recording the base plate can be arranged.

The The invention further relates to a counter or sink with a built-in appliance flushing, which is preferably carried out as described above. In particular, can the flushing device accurately fitting, self-centering and / or self-sealing in the receptacle the base plate of counter or sink can be used. The seal can each be on the flushing device be pre-assembled, with the flushing device if necessary, also free standing with this seal mounted and independently can be designed operable. Optionally, also a Separate gasket may be provided between the base plate and the flushing device can be used.

Preferably includes the flushing device in the assembled state with its upper edge at least substantially flush with the top of the base of counter or sink off. Possibly can the flushing device also slightly from the surface the base plate project upwards or be offset downwards, preferably not more than the radial distance of the Gehäuseaußenwandung to the inner wall of pre and / or Nachspültopf or $\leq 1/2$ or $\leq 1/4$ this distance. Even with a small thickness of the base plate is thereby a simple attachment and sealing of the flushing device against the Base plate possible.

The inclusion of the base plate of the counter or sink for the flushing device may have a fully surrounding this, from the top of the base plate upwardly projecting edge or elevation. This edge can surround the device in a small distance, wherein the distance is less than / equal to 1, 2 or 3 times Ab stand the housing outer wall of the inner wall of pre- and / or Nachspültopf may be in the region of the top of the flushing device. Splashing water from the flushing device can thereby be easily transferred into this.

Preferably in the recording for the flushing device in the base plate immediately adjacent to a strik arranged. This will make the cleaning of drinking vessels common facilitates, for example, to remove residues of drinking fluids from the vessels.

The as a built-in device integrated or integrable flushing device on the base plate can also have a stable and non-slip bottom or bottom plate have, for example, provided with feet, in particular suction feet is, thereby facilitating a free-standing use of the device is.

The invention will be described below by way of example and with reference to the Figures exemplified. Show it:

- 1 a perspective view and side view and top view of a flushing device according to the invention,
- 2 a cross-sectional view of the flushing device according to 1 according to a first embodiment,
- 3 a cross-sectional view of the flushing device according to 2 according to a second embodiment,
- 4 a rinsing device integrated in a counter 1.

The 1-3 show a flushing device 1 for manual rinsing of drinking vessels with an open-top pre-rinsing pot 2 containing one or more dishwashing brushes 3 can have. The drinking vessels can be manually inserted from above into the pre-rinsing pot for pre-rinsing and pre-cleaned by the rinsing brushes. The dishwashing brushes can be arranged in a known manner, for example a central and a circularly arranged dishwashing brush surrounding them. Furthermore, a top open Nachspültopf 4 provided in the at least one spray nozzle 5 is arranged. Again, a central spray nozzle for cleaning the vessel interior and a spray nozzle assembly for cleaning the outside of the vessel may be provided preferably in the form of two or more spray nozzles or an annular spray nozzle, as shown schematically. The drinking vessel is manually inserted from the top of the rinsing pot for rinsing to be cleaned by the spray nozzles. The spray nozzles is a water connection 6' (Intake 6a; Arrow direction). The spray nozzles can be activated manually, for example by lowering and pressing the vessels to be cleaned against a system such. B. the dishwashing brush. The rinse water can be fed to the Vorspültopf by a separate supply line or via the Nachspültopf, z. B. by an overflow of Nachspültopfes. The Vorspültopf and / or the Nachspültopf may have a water outlet, which can lead away from the device immediately adjacent each of the water connection.

Pre-rinsing and Nachspültopf have water supplies 6a, 6b on which of a water connection leading outside the housing 6' branch off from a distributor. It may optionally also be provided separate water connections for pre-and / or Nachspültopf. Furthermore, pre- and Nachspültopf separate water drains 6c, 6d on, which unite at a collector, so that also here only a leading outside of the housing drain 6" necessary is. Again, optionally pre-and Nachspültopf may have separate leading to the outside water drains. Pre- and Nachspültopf each have a drain (overflow 2a, Drain 4a), with the respective water drain 6c, 6d fluid carrying connected. Optionally, pre-rinsing and Nachspültopf may also be connected to each other by an overflow, so that the one of the two pots supplied water (eg the Nachspültopf) via the overflow to the other pot is fed and then removed at closing on the flow to the outside. Overall, this can provide a closed water cycle and minimize the number of necessary water connections. The water connection 6" for the sequence (arrow) can be at a main water outlet or a water drain of another device such. B. a dishwasher connected. In order to facilitate the drainage, a pump E may further be provided between the water drains 6c, 6d may be arranged by pre-and Nachspültopf, or at another suitable point of water discharge. The housing 7 in addition to all water supply and drainage and including the pre-and Nachspültöpfe is waterproof, so that penetration of water into the housing is excluded. Optionally, however, the housing may also have a further water outlet (not shown), which at the bottom of the housing, for. B. on the housing bottom, is arranged to dissipate any penetrating water can.

Means may be provided for controlling the water supply to the pre-and / or final rinse pot depending on the need. Thus, for example, pre-and / or Nachspültopf a switching device (not shown) may be provided which opens the water supply in case of need, z. B. by a sensor such as a light barrier, pressure sensor or the like, which is actuated when introducing or cleaning a drinking vessel in the respective pot or falls below a predetermined water level.

The flushing device further has a housing completely surrounded this 7 with a bottom plate 8th on, which can also have a raised edge. The bottom plate 8th can with feet 9 or provide a bottom-side anti-slip device to ensure a safe and non-slip freestanding installation of the flushing device on a parking space such. As a countertop, sink, etc. to allow. The housing with bottom plate can be spritzwassergeschützt if necessary or at least substantially waterproof, whereby the flushing device in a known manner z. B. can be operated in a sink. The flushing device may have all the necessary facilities for freestanding operation, including quick couplings for water inlet and outlet. Optionally, however, the flushing device may also be designed such that the housing or parts thereof such. B. the bottom plate are easy to retrofit to form a freestanding flushing device to be operated. The corresponding fastening means for the further housing parts may in this case already be provided on the flushing device, for example integrally formed.

Furthermore, the flushing device has a pre-and / or Nachspültopf associated cleaning agent supply line 35 in order, if necessary, the cleaning of a pot and / or the support of the cleaning of a vessel the respective pot a suitable cleaning agent such. B. to be able to supply a liquid cleaning agent. The detergent feed line 35 this can be a check valve 36 if necessary, for example by the manual operation switch 37, can be opened to provide detergent to one or both of the pots. The detergent feed line may be in the water feed line upstream (as shown) or downstream of the branch point of water feed 6a, 6b the two pots open. The detergent feed line 35 can be a separate detergent reservoir 38 be assigned, which as in 2 shown integrated in the flushing device or may optionally be arranged outside thereof. The detergent reservoir can also be that of another device or optionally also supply cleaning means to another device, such as, for example, B. in each case one coming into contact with food (ie food-compatible) device such as a dishwasher or the like. In particular, the detergent feed line can also 35 with another device 40, z. As a dishwasher, to be supplied from this dispensed (possibly used) detergent, which may also be a rinse, the pre-and / or Nachspültopf (see 3). The detergent can be over the water drains 6c, 6d be removed from pre-and / or Nachspültopf. It can also be provided a separate detergent flow to pre- and / or Nachspültopf to supply the detergent to another device, such as a food-compatible device such as a dishwasher or the like. The water courses 6c, 6d can in each case with shut-off valves 38, 39 be provided with a drain of detergent through the drains 6c, 6d to prevent. The blocking agent may also be downstream of the junction of the water drains 6c, 6d be arranged. Optionally, the cleaning agent may in turn be passed through an overflow from one of the pots (eg, rinse pot) to the other pot to thereby easily clean both pots. The flushing device may have a cover-like closure element to close the front and / or Nachspültopf upper side and prevent leakage of rinse water or detergent during the cleaning process.

In order to allow an optimal work flow at the counter or sink, the flushing device can be used as in the base plate 10 be formed by counter or sink integrated mounting device. For this purpose, fastening means and / or sealing means are provided on the flushing device, which can be fastened or sealingly applied to corresponding fastening means and / or a sealing region of the base plate. According to the embodiment, this is the upper peripheral edge region 15 the rinsing device formed as a sealing region, which widens conically towards the upper edge of the device. Furthermore, there is the upper edge area 15 made of a material of greater elasticity than that of the housing 7. The border area 15 This may have a certain compressibility or may be substantially incompressible. The border area 15 may be permanently connected to the outer wall of the housing, for example glued to this or be integrally formed such. B. in an injection molding process. The edge region formed from the sealing material in this case extends up to the upper edge 16 the flushing device or the housing 7, so that also the top edge of the outer wall of the housing 7 sealing against the sealing area of the base plate 10 can be applied. The attachment of the sealing region is designed such that it can hold the flushing device safely and reliably to the base plate even when acting under normal operation forces. The sealing means of the flushing device may, to form a suitable closure, also overlap the upper end side of the housing wall.

The upper edge region of the housing can simultaneously be designed as a fastening region for fixing the flushing device to the counter base plate. Due to the conical design of the edge area 15 The flushing device can be particularly simple and self-centering in a recording 12, z. B. a recess of the base plate 10, are used. The recording 12 may have a downwardly tapering region, for example in the form of a counter-cone or a complementary stepped shoulder, to which the edge region 15 preferably can be applied accurately and waterproof. The recording 12 limiting frontal 10a The plate thus forms the corresponding fastening means and at the same time the sealing region of the base plate, wherein also means can be provided separately. The upper edge area 15 thus serves at the same time as a fastening and sealing means against the base plate 10. This can generally be the upper edge area 15 over a sufficient height of the housing 7. For example, over several millimeters, z. B. more than 5 to 10 mm, preferably over the thickness of the associated base plate (or $\geq 1/4$ or $\geq 1/2$ of the same) extend and lies preference, over the entire surface of this area on the base plate. The arranged on the device fixing means for the base plate thus preferably form none of the housing 7 radially / or axially projecting projections, in particular local projections, undercuts and / or depressions of the housing. According to the embodiment, the circumferential housing wall extends from the upper edge region 16 the housing outer wall conical up to the bottom plate 8th out.

Pre and / or Nachspültopf 2, 4 are double-walled, with the inner wall 18a, b rinsing water is loaded and the outer wall here through the housing outer wall 19 is formed, resulting in a high stability of the device. Pre- and Nachspültopf are surrounded by a circumferential around both pots uniform housing wall, so that the flushing device is easy to clean and between housing wall and inner wall of the purging pots existing space 7a to accommodate further facilities 22 such as B. Thermostats, switches and / or the like can serve. The cross section of pre-and / or Nachspültopf further extends from the facing area, the central area 1a the device, with increasing distance from

each other, including both pots here have a round cross section in the resulting intermediate region of pre- and Nachschüßkopf separate outer casing. However, it can also have pre- and Nachschüßkopf separate outer casing.

The flushing device is designed such that it can be inserted from above into a corresponding recess of the base plate of the counter or sink, wherein the upper edge 16 of the housing or device preferably flush with the top 11 complete the base plate or slightly offset from it in height. The insertion of the top of the base plate is facilitated by the circular configuration of the upper edge of the housing or the housing over its entire height, but other housing designs are possible. Except for the water connection 5 or possibly also any other projection extending over only a partial circumference of the housing or locally (which is not provided according to the exemplary embodiment), however, no subregion of the housing including the base plate is provided which projects radially beyond the housing cross section or extends radially up to this, which at the bottom of the counter base plate and / or the top 11 the base plate is attached and / or rests. The projection (here water connection) can thus be threaded by fitting the flushing device in the recording, after which the flushing device can be lowered vertically to its desired position. The connections of the water supply and / or discharge are provided with quick coupling.

The fasteners of the base plate may further include the attachment means the flushing device, in particular on the housing or whose upper edge region can be arranged, engage under, so that the fastening means of the housing can be placed on the fastening means of the base plate. The fasteners of the base plate thus support the fasteners of the housing. The fastening means of the housing and / or the base plate here as only partial radially inward or abroad executed projections or, independently from each other, be designed as a peripheral edge.

The fastener and / or the seat of flushing device and the respective corresponding means or sealing areas of base plate are formed such that the flushing device centered and fits exactly in the recess of the base plate can be used. The seat of the flushing device are formed such that already by the weight of the sufficient in the base plate flushing device tightness or a watertight closure is generated.

Overall, there is thus a built-in device in the base plate of counter or sink integrated or integrable flushing device. This is preferably in the disassembled state directly or after minor addition, i. B. the housing well including the bottom plate, can be supplemented to a freestanding device possible.

As in 4 is shown, the upper edge region of the housing and / or applied to the base plate sealing means of the flushing device, at least substantially flush with the top 11 the base plate 10 to lock. The preferably seamless transition from the base plate to the flushing device to thereby particularly easy to clean.

Furthermore, the base plate 10 a the flushing device 1 fully surrounding, upwardly projecting survey 27 on, which may be formed in the manner of a circumferential bead. The geometry of the survey 27 can from that of the top of the flushing device 1 derive, it is executed rectangular according to the embodiment. The distance of the survey 27 from the flushing device 1 or from the inner walls 18a, 18b of pre- and Nachschüßkopf 2, 4 can be less than / equal to 1, 2 or 3 times the distance of the upper edge of the housing from the inner wall of the pre- and final rinsing pot. As a result, any spray water can easily be returned to the flushing device to free the counter or sink of unwanted spray water. The top 27 The flushing device may be formed inclined from the outer edge of the same in the direction of pre- and / or Nachschüßkopf to more easily transfer spray into the pre- or Nachschüßkopf back.

Furthermore, the flushing device 1 immediately adjacent to the sink 30 arranged, whereby the operations can be optimized at the counter or sink. The distance of the flushing device from the sink may be less than or equal to the single or $\frac{1}{2}$ or $\frac{1}{3}$ of the width of the flushing device.

It is understood that the flushing device too otherwise attachable to the base of the counter or sink is. So can provided on the underside of the base plate fastening means be that on the outside the flushing device and / or on the bottom side of this attack. For example, a flushing device bridging strap or hanger be provided, which is the flushing device supported.

Further it is understood that the the flushing device against the base plate sealing seal can also be designed as a separate component. This may be due to the flushing device and / or the base plate can be pre-assembled, if necessary this seal also after pre-assembly of the flushing device be pressed sealingly between this and the base plate.

1 flushing

2 Vorwülstkopf

2a overflow

3 stop

4 Nachschüßkopf

4a overflow

5 nozzle

5', 5''

6a, 6b mains water supply

6c, 6d water supply

7 water drain

8 casting

8a, 8b baseplate

9 feet

10 baseplate

10a front

11 top

12 admission
 15 border area
 16 upper edge
 18a, b inner wall
 19 Housing outer wall
 21 top
 22 Facility
 27 survey
 30 Sink

Patent Citations (4)

Publication number	Priority date	Publication date	Assignee	Title
Family To Family Citations				
GB659913A *	1949-03-09	1951-10-31	Staines Kitchen Equipment Comp	Apparatus for washing tumblers and like drinking vessels
US3838473A *	1972-04-07	1974-10-01	H Remih	Apparatus for cleaning glasses or like vessels
GB2012119B *	1977-10-18	1982-05-06	Bowman A	Fluid-tight drives
GB2246511B *	1990-08-03	1993-11-24	Clenaglass Electric Ltd	Glass cleaning assembly

* Cited by examiner, † Cited by third party

Cited By (1)

Publication number	Priority date	Publication date	Assignee	Title
NL2003145C2 *	2009-07-07	2011-01-10	Aquafox Holding B V	Cleaning device.
Family To Family Citations				

* Cited by examiner, † Cited by third party, ‡ Family to family citation

Similar Documents

Publication	Publication Date	Title
DE60315751T2	2008-01-24	in a sink built-in dishwasher with a self-aligning Flüssigkeitszuführvorrichtung
DE69825641T2	2005-08-11	dishwasher
DE102018208212B3	2016-09-15	Vending machine with screening device
EP1801300A2	2007-06-27	Trough-like floor drain with maintenance opening
EP2985787A1	2016-02-24	Toilet with personal shower integrated into flushing water distributor
EP1209275A2	2002-05-29	Device for pumping out washing water in a washing machine
DE202008004826U1	2009-08-20	Drain fitting for bath or shower trays with bottom inlet
DE102012102929B4	2021-12-30	Sanitary arrangement
DE102005058262A1	2006-06-08	Dishwasher and sump assembly construction of such
EP2083125B1	2012-02-29	Drain fittings, in particular for showers or bathtubs
DE202014100156U1	2015-01-19	Dishwasher for device for manual rinsing of drinking vessels
DE102012216428B4	2017-09-28	Sanitary washbasin or sink outlet fitting
EP3684233A1	2020-07-29	Apparatus for preparing foodstuffs with steam

CH698992B1	2009-12-31	Apparatus and method for the purification of water-bearing basins and cleaning agents for the said process.
EP1335076B1	2005-06-01	Outlet fitting for a sanitary device, in particular a urinal
DE202007015486U1	2009-03-26	Device for manual rinsing of drinking vessels
DE102010044940B4	2022-01-27	Sewage drain with odor trap
EP2219508B1	2013-07-03	Water-carrying household appliance
DE102006044205B3	2008-01-03	Washing/rinsing station at a bar, to clean the drinks supply pipes and taps, has a water feed pipe and an outflow pipe opening into a wash basin part of a washing machine
EP3927223A1	2021-12-29	Dishwasher basket for cleaning cavities in articles to be cleaned
DE102004061306A1	2006-06-22	Detergent dispensing
DE102010038477B4	2018-05-09	dishwasher
DE102010042578A1	2012-04-19	Dishwasher with at least one spraying device
WO2020038555A1	2020-02-27	Citrus fruit juicing device having cleaning mode
EP2640251B1	2016-10-19	Floor cleaning device

Priority And Related Applications

Priority Applications (1)

Application	Priority date	Filing date	Title
DE200720015486	2007-11-05	2007-11-05	Device for manual rinsing of drinking vessels

Applications Claiming Priority (2)

Application	Filing date	Title
DE200720015486	2007-11-05	Device for manual rinsing of drinking vessels
EP08168410.2A	2008-11-05	Device for manually washing drink containers

Legal Events

Date	Code	Title	Description
2009-04-30	R207	Utility model specification	Effective date: 20090430
2011-04-14	R150	Term of protection extended to 6 years	Effective date: 20110203
2014-03-13	R151	Term of protection extended to 8 years	Effective date: 20140130
2016-02-03	R152	Term of protection extended to 10 years	
2016-02-16	R081	Change of applicant/patentee	Owner name: SCHAEFER PRODUKTE GMBH, DE Free format text: FORMER OWNER: SCHICKER & SCHAEFER GMBH, 42327 WUPPERTAL, DE
2016-02-16	R082	Change of representative	Representative's name: PATENTANWALTE LIPPERT, STACHOW & PARTNER, DE Representative's name: LIPPERT STACHOW PATENTANWALTE RECHTSANWALTE, DE
2017-11-30	R071	Expiry of right	

Concepts

machine-extracted

Download Filter table

Name	Image	Sections	Count	Query match
drinking		title,claims,abstract,description	22	0.000
drinking		title,claims,abstract,description	22	0.000

☛ feeding behavior	title,claims,abstract,description	22	0.000
☛ flushing procedure	claims,abstract,description	130	0.000
☛ water	claims,abstract,description	94	0.000
☛ sealing	claims,abstract,description	40	0.000
☛ corresponding	claims,abstract,description	27	0.000
☛ cleaning	claims,abstract,description	25	0.000
☛ dishwashing	claims,abstract,description	12	0.000
☛ detergent	claims,description	29	0.000
☛ cleaning agent	claims,description	18	0.000
☛ spray	claims,description	13	0.000
☛ sealant	claims,description	10	0.000
☛ peripheral	claims,description	6	0.000
☛ rinsing water	claims,description	5	0.000
☛ material	claims,description	3	0.000
☛ displacement reaction	claims,description	2	0.000
☛ insertion	claims,description	2	0.000
☛ supplementation	claims,description	2	0.000
☛ injection	claims	4	0.000
☛ injection	claims	4	0.000
☛ fastener	abstract,description	11	0.000
Show all concepts from the description section			

Data provided by IFI CLAIMS Patent Services



(12)发明专利申请

(10)申请公布号 CN 106572780 A

(43)申请公布日 2017.04.19

(21)申请号 201580041208.0

(74)专利代理机构 广州嘉权专利商标事务所有
限公司 44205

(22)申请日 2015.06.01

代理人 赵东明

(30)优先权数据

102014107679.6 2014.05.31 DE

102015105626.7 2015.04.13 DE

(51)Int. Cl.

A47L 17/00(2006.01)

A61L 2/22(2006.01)

A61L 2/18(2006.01)

(85)PCT国际申请进入国家阶段日

2017.01.24

(86)PCT国际申请的申请数据

PCT/DE2015/100217 2015.06.01

(87)PCT国际申请的公布数据

WO2015/180710 DE 2015.12.03

(71)申请人 穆尔蒂施蒂克有限责任公司

地址 德国梅滕海姆

(72)发明人 S·索科拉

J·L·络伦斯·加西亚

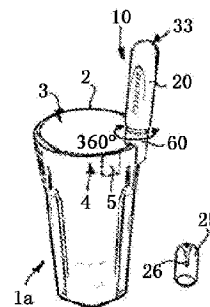
权利要求书2页 说明书8页 附图6页

(54)发明名称

与嘴接触的餐具嘴缘的清洁和/或消毒装置

(57)摘要

本发明涉及一种与嘴接触的餐具(1)嘴缘(2)的清洁和/或消毒装置(10),尤其是酒馆用的容器(1a)、杯子(1b)、汤盘(1c)、刀叉(1d)、饮料罐(1e)或者饮料瓶(1f),至少包含:用于容纳清洁和/或消毒液(99)的容器(20);操作装置(30),用于将容器(20)中的液体(99)输出至一个出口(50);和与出口(50)有效连接的分配管头(60),包括两个彼此相对的支脚(61),支脚之间构成了一个具有插入口(71)的空隙(70),使得餐具(1)要清洁和/或消毒的与嘴接触的嘴缘(2)的某一片段(5)可以通过插入口(71)插入空隙(70)。这样设计的分配管头的优点是,附着在餐具(1)嘴缘(2)上影响美观的污物和/或病原体在嘴缘(2)插入支脚(61)构成的空隙(70)后,将被逐段清洁和/或消毒,从而恢复美观和/或降低消费者接触嘴缘(2)时发生危害健康的感染风险。因此本发明特别适合作便携可装入口袋的笔式装置。



1. 与嘴接触的餐具 (1) 嘴缘 (2) 的清洁和/或消毒装置 (10), 尤其是用于酒类容器 (1a)、杯子 (1b)、汤盘 (1c)、刀叉 (1d)、饮料罐 (1e) 或者饮料瓶 (1f), 至少包含:

用于容纳具有清洁和/或消毒效果的液体 (99) 的容器 (20);

操作装置 (30), 用于将容器 (20) 中的液体 (99) 输出至出口 (50); 和

与出口 (50) 有效连接的分配管头 (60);

包括两个彼此相对的支脚 (61);

其中, 支脚之间构成了一具有插入口 (71) 的空隙 (70), 餐具 (1) 需要清洁和/或消毒的与嘴接触的嘴缘 (2) 的某一片段 (5) 可以通过插入口 (71) 插入空隙 (70)。

2. 根据权利要求1所述的清洁和/或消毒装置 (10), 其特征在于, 空隙 (70) 内部的与插入口 (71) 相对的底部 (72) 为完全或者部分倒圆。

3. 根据权利要求1或2所述的清洁和/或消毒装置 (10), 其特征在于, 空隙 (70) 从其插入口 (71) 至其内底部 (72) 的这一段在宽度上保持恒定, 或者逐渐变得尖细。

4. 根据权利要求1至3之一所述的清洁和/或消毒装置 (10), 其特征在于, 构成空隙 (70) 的支脚 (61) 侧壁 (62) 具有一定的结构和/或不同的长度。

5. 根据上述权利要求之一所述的清洁和/或消毒装置 (10), 其特征在于, 优先选择让较长的支脚 (61a) 与装置 (10) 的纵轴 (L) 平行或倾斜一个最多 5° 的角度 α , 而另一个支脚, 最好是较短的支脚 (61b) 同样与纵轴 (L) 平行或者与另一个支脚, 最好是较长的支脚 (61a) 倾斜一个处于 5° 至 50° 之间的角度 β 。

6. 根据上述权利要求之一所述的清洁和/或消毒装置 (10), 其特征在于, 支脚 (61, 61a, 61b) 的侧壁 (62) 至少在连接至空隙 (70) 的这一段由开孔材料制成, 尤其是泡沫材料。

7. 根据上述权利要求之一所述的清洁和/或消毒装置 (10), 其特征在于, 指向空隙 (70) 的支脚 (61) 侧壁 (62) 表面 (65) 完全或者部分覆盖了天然的或者人造的皮革或者类似的毛皮和/或纤维材料 (66)。

8. 根据上述权利要求之一所述的清洁和/或消毒装置 (10), 其特征在于, 与分配管头 (60) 有效连接的出口 (50) 在与空隙 (70) 的底部 (72) 相邻的位置结束。

9. 根据上述权利要求之一所述的清洁和/或消毒装置 (10), 其特征在于, 与分配管头 (60) 有效连接的出口 (50) 包含喷射雾化器 (51) 和/或插入式喷头 (52), 这里的优选设计方式是, 从出口 (50)、喷射雾化器 (51) 和/或插入式喷头 (52) 排出的液体 (99) 在往空隙 (70) 的底部 (72) 逐渐尖细的分配腔 (80) 中排出。

10. 根据上述权利要求之一所述的清洁和/或消毒装置 (10), 其特征在于, 操作装置 (30) 包含 (例如与液体泵 (40) 有效相连的) 按钮 (31) 或者纵向或者横向对准装置 (10) 纵轴 (L) 的压力波纹管 (33)。

11. 根据上述权利要求之一所述的清洁和/或消毒装置 (10), 其特征在于, 按钮 (31) 与保护盖 (21) 相连和/或在容器 (20) 上设计有支架 (24), 例如螺纹段, 供密封帽 (25) 使用, 使其可将分配管头 (60) 遮盖住和/或将插入式喷头 (52) 的排出开口 (53) 封闭。

12. 根据上述权利要求之一所述的清洁和/或消毒装置 (10), 其特征在于, 空隙 (70) 和插入口 (71) 另一端的支脚 (61) 完全或者部分被外壳侧壁 (63) 包围和/或可在空隙 (70) 方向上进行压缩。

13. 根据上述权利要求之一所述的清洁和/或消毒装置 (10), 其特征在于, 分配管头

(60) 可以围绕装置 (10) 的纵轴 (1) 转动, 最好是可以无限地进行 360° 转动, 特别是围绕容器 (20) 外壳中的环形槽 (23) 和/或围绕插入式喷头 (52) 上形成的凸缘 (54) 转动。

14. 根据上述权利要求之一所述的清洁和/或消毒装置 (10), 其特征在于, 液体 (99) 添加了防腐剂或者含有植物性乙醇的杀菌剂。

15. 将根据上述权利要求之一所述的清洁和/或消毒装置 (10) 用作便携可装入口袋的笔式装置, 用于根据需求清洁和/或消毒餐具 (1) 的嘴缘 (2), 尤其是酒类容器 (1a)、杯子 (1b)、汤盘 (1c)、刀叉 (1d)、饮料罐 (1e) 或者饮料瓶 (1f)。

与嘴接触的餐具嘴缘的清洁和/或消毒装置

[0001] 本发明涉及一种与嘴接触的餐具嘴缘的清洁和/或消毒装置,尤其是酒馆用的容器、杯子、汤盘或者刀叉。

[0002] 水污染和缺少卫生是造成大部分传染病的主要原因。这一问题不仅限于发展中国家或者新工业化国家。例如,在西方国家,流动的节日帐篷和啤酒帐篷餐饮或者顾客繁多的餐饮店,由于可用的餐具数量通常有限,因此特别是专门用于售卖酒精饮料的容器,例如玻璃杯,使用频率增加,在很多情况下,这将导致此类酒类容器无法在洗碗机或者类似的设备中进行清洁和消毒。

[0003] 污染,例如餐饮业中酒类容器中存在的污染主要由饮料残余以及使用痕迹(尤其是唾液、血迹唇膏等)构成,这些物质在使用的过程中可能会留在容器上或者进入容器中。同样应考虑到酒类容器可能会被改作它途,例如用作烟灰缸或者用于放置垃圾。因此,餐饮业酒类容器的细致清洁与消毒不仅在美观方面,而且在卫生方面也有重要意义。

[0004] 卫生问题的重要性,从不久之前肠出血性大肠杆菌Escherichiacoli (EHEC) 在人群中的快速传播即可看出。病原体的传播方式多种多样,主要为口腔的直接或者间接吸入,在这种方式中不到100个细菌即可造成感染。

[0005] 和其它冲洗器具一样,酒类容器也要通过清洁、消毒、再冲洗和干燥处理达到无卫生缺陷的状态。

[0006] 人们对清洁的理解是,完全去除器具上的污染物。这里所需的清洁剂由一种或者多种基本化学物质构成,在一定的浓度内可以实现安全的清洁,不会伤害人的健康或者给材料造成损伤。

[0007] 消毒的含义是,杀灭有害的致病因素,降低其密度,使其满足卫生要求。消毒剂适用于清洁剂相同的规定。

[0008] 致病因素,医学上也成为病原体,是会在其它有机体内引发有害流程的物质或者有机体。致病因素可能是藻类、细菌、寄生虫、真菌、朊病毒、原生生物、病毒或者类病毒。在医学上它们被赋予致病性的特性。狭义上,病原体的致病性指的是,因病原体夺取资源给宿主造成损害。

[0009] 病原体(致病因素)可通过不同的途径传播,这取决于病原体的类型及其适宜的传染地。传播媒介会影响疾病的接触传染性,从而影响其传播速度。

[0010] 感染途径或者简称感染,指的是致病生物(例如细菌、原生动物、真菌和寄生虫)或者致病分子(例如病毒、类病毒、转座子和朊病毒)主动或者被动侵入、停留在有机体内并增殖,通常指宿主内的具体致病因素。人们将病原体引起的疾病称为传染病。

[0011] 清洁和消毒后的器具表面或者体积必须彻底用冷水进行再次冲洗。只有这样才能保证将被杀灭的病原体和将化学残余清除。

[0012] 最后一步干燥的意义是,只有干燥的器皿才能防止在使用间歇期间病原体再次生长。

[0013] 例如,US 3 205 527 A就公开了一种用于已知清洁装置的饮料容器的擦洗和清洁工具。已知US 3934 300 A也是一种饮料容器清洁器。已知GB 666 031 A是一种用于清洁饮

用器具和类似器具的工具的改进装置。与此相对,WO 97/19 615 A1公开了一种婴儿奶瓶刷。此外,US 3 230 563 A公开了一种外部-内部-冲洗头刷子。已知DE 20 2005 015 103 U1是一种容器清洁装置,例如用于清洁玻璃杯和/或饭店用的杯子;最后,DE37 28 290 A1也公开了一种玻璃杯清洁装置,主要用于餐饮行业。

[0014] 流行的酒类容器清洁方法是,在洗涤槽中防止一个清洁装置,用它对酒类容器进行机械清洁。这里最简单的方法是,在洗涤槽底部固定一个带有吸盘的刷子。然后吧台服务员将酒类容器中刷子上来回移动,以机械的方式去除附着的污物,以此清洁酒类容器的内表面。这里可利用的一点是,酒类容器通常只需清除残余的液体,也就是说无需借助外力清除强力附着的污物。同样也有用于酒类容器外侧的刷子,在酒类容器的往复运动过程中清洁其外侧。也可以使用带有驱动装置的刷子来取代固定式的刷子,即使吧台服务员的清洁动作不足,也能让酒类容器取得较好的清洁效果。但是这种清洁方法经常未按照规定使用流水清洁。在此,人们更多地是使用一次或多或少固定的洗涤槽水,经过长或短的时间,水中将积聚饮料残余。由于洗涤水通常都是温热的,是病原体的理想温床。

[0015] 为了降低这种风险,常用的做法有用喷嘴取代或者补充刷子,将加压的水或者其它冲洗液对准酒类容器的内外表面,这样不仅可以实现机械清洁效果,同时饮料残余还将随冲洗液一同被排出。但是这种清洁方式经常会在水中进行,就是说洗涤槽至少装了部分水或者洗涤液,因此无法令人满意地消除积聚的病原体。

[0016] 由于冲洗之后,通常都没有用手巾擦干酒类容器,而是在下次使用之前直接让其滴干,因此尤其是酒类容器的嘴缘将存在产生污水渍等影响美观的污染的风险,另外也会积聚病原体或者在剩余的水分那里重新形成病原体积聚现象,如果消费者饮用时嘴唇与酒类容器的嘴缘接触,摄入了病原体,将可能有感染的风险。

[0017] 咖啡馆或者茶室中的情况也与此类似,里面的咖啡杯或者玻璃茶杯都必须重复地、尽可能快速地清洁。因此,可以理解,之前利用酒类容器说明的问题也经常会出现其它餐具的嘴缘上,尤其是杯子、汤盘或者诸如刀、叉或者汤匙之类的餐具。

[0018] 以此为出发点,本发明的基本任务是,提供一种餐具嘴缘的清洁和/或消毒装置,尤其是用于酒类容器、杯子、汤盘或者刀叉,并且要适合作为便携的可装入口袋的笔式装置。

[0019] 这一任务将通过具备权利要求1所述特征的清洁和/或消毒装置解决。

[0020] 根据本发明要求的与嘴接触的餐具嘴缘的清洁和/或消毒装置,尤其是酒类容器、杯子、汤盘或者刀叉的清洁和/或消毒装置,至少包含以下部分:

[0021] 用于容纳清洁和/或消毒液的容器;

[0022] 操作装置,用于将容器中的液体输出至一个出口;和

[0023] 与出口有效连接的分配管头;

[0024] 包括两个彼此相对的支脚;

[0025] 支脚之间构成了一个具有插入口的空隙,餐具要清洁和/或消毒的与嘴接触的嘴缘的某一片段可以通过插入口插入空隙。

[0026] 这样设计的分配管头的优点是,附着在餐具嘴缘上影响美观的污物和/或病原体在嘴缘插入支脚构成的空隙后,将被逐段清洁和/或消毒,从而恢复美观和/或降低消费者接触嘴缘时发生危害健康的感染风险。

[0027] 要预先说明的是,当前的“消毒”这个概念并不能进行严格的“技术性”理解,尤其是将病原体数量减少至少10⁻⁵个因数的这种理解,而是应该根据当前发明,将其理解为每个可减少餐具嘴缘病原体数量的措施,无论在具体情况中这种减少是以什么样的数量级进行的。

[0028] 可单独应用或者彼此组合后应用的有利的构造和改进是从属权利要求的主题。

[0029] 本发明特别适合采用便携式结构,作为每个人都可使用的可装入口袋的清洁和/消毒笔。

[0030] 下面将利用优选的清洁和/或消毒装置的结构示例,结合随附的图纸对更多的细节和本发明的其它优点进行说明。

[0031] 图纸示出的内容为:

[0032] 图1a至1d不同的餐具;

[0033] 图2根据发明要求的清洁和/或消毒装置的第一个结构示例;

[0034] 图3在图1a所示酒类容器的嘴缘上使用图2所示的清洁和/或消毒装置;

[0035] 图4根据发明要求的清洁和/或消毒装置的第二个结构示例的透视分解图;

[0036] 图5图4所示清洁和/或消毒装置组装后的侧剖视图;

[0037] 图6a图5所示清洁和/或消毒装置使用之前的后部透视图;

[0038] 图6b图5所示清洁和/或消毒装置使用之前的后部透视图,其压力波纹管的取向与图6a相对;

[0039] 图7根据发明要求的清洁和/或消毒装置的第三个结构示例的透视分解图;

[0040] 图8所示清洁和/或消毒装置组装后的侧剖视图;

[0041] 图9所示清洁和/或消毒装置使用之前的后部透视图;

[0042] 图10a在图1a所示酒类容器的嘴缘上使用图6a或图9所示的清洁和/或消毒装置;

[0043] 图10b在类似于图1d的刀叉套件的刀具嘴缘上使用图6a或图9所示的清洁和/或消毒装置;

[0044] 图10c在饮料罐的嘴缘上使用图6a或图9所示的清洁和/或消毒装置;

[0045] 图10d在饮料瓶的嘴缘上使用图6a或图9所示的清洁和/或消毒装置。

[0046] 下面对本发明的优选结构形式进行介绍时,对相同或者类似的构件采用相同的附图标记。

[0047] 图1a至1d示例性地显示了不同的餐具。图1a是市售的酒类容器1a;图1b是市售的杯子1b;图1c是市售的汤盘1c,图1d是市售的成套餐具1d,即一叉、一刀和一汤匙。图1a至1d用2标记餐具1a、1b、1c、1d的嘴缘,用3标记其内侧,4标记外侧。

[0048] 图2显示的是第一个结构示例,图4以及图7以透视分解图的形式显示用于餐具1嘴缘2清洁和/或消毒的装置10的第二或第三结构示例,这里的餐具尤其指的是酒类容器1a、杯子1b、汤盘1c或者成套餐具1d。图示的清洁和/或消毒装置10明显至少包含:

[0049] 一个用于容纳清洁和/或消毒液99的容器20;

[0050] 一个操作装置30,用于将容器20中的液体99输出至一个出口50;和

[0051] 一个与出口50有效连接的分配管头60;

[0052] 包括两个彼此相对的支脚61;

[0053] 支脚之间构成了一个具有插入口71的空隙70,餐具1要清洁和/或消毒的嘴缘2的

某一片段5可以通过插入口71插入空隙70。

[0054] 此外,图2还明显显示了分配管头50的侧透视图和其余部件20、30、40、50...的普通侧剖面图。此外,图5还显示了组装后的图4清洁和/或消毒装置10的普通侧视图,图8显示了组装后的图7清洁和/或消毒装置10的普通侧视图。

[0055] 本发明的一个设计结构表明,空隙70的与插入口71相对的内底部72作为整体-如图2或者图4和5的第一和第二结构示例所示-或者分成几部分-如图8第三结构示例(较短)支脚61b所示-完全或者局部倒圆,可改善支脚61、61a和/或61b在餐具1需要清洁和/或消毒的嘴缘2片段5中的均匀贴合性,包括内表面3和外表面4以及嘴缘2本身。

[0056] 此外,也可以选择单独或者累加性地(如图4及之后的图纸的第二种结构示例所示)让空隙70从其插入口71至其内底部72的这一段在宽度上保持恒定(尤其是当支脚61a和61b的长度不一样时),或者逐渐变得尖细(尤其是当支脚61的长度一样时),这样做可以帮助支脚61在餐具1需要清洁和/或消毒的嘴缘2片段5中贴合,贴合范围为嘴缘2至空隙70底部72中的内表面3和外表面4。

[0057] 在本发明的一个改进方案中,优选的方法可以是,让构成空隙70的支脚61、61a和/或62b的侧壁62结构化,即具有某种构造,例如疙瘩状或者变化的隆起和/或凹陷(图上未显示),这可改善支脚61在餐具1需要清洁和/或消毒的嘴缘2片段5中的机械清洁效果。

[0058] 在本发明的一个改进方案(如图4至6所示第二结构示例,或者图7至9所示第三结构示例)中,优先选择让构成空隙70的支脚61的侧壁62具有不同的长度,令较长支脚61a可以覆盖餐具1外表面4上需要清洁和/或消毒的嘴缘2片段5,并且较短支脚61b不会浸入餐具1所含的食品中。

[0059] 对此,本发明的一个改进方案(如图4及以下图片所示的第二结构示例)表明以下设计是可行的:让一个支脚,最好是较长的61a与装置10的纵轴L平行或者倾斜一个最多 5° 的角度 α ,而另一个支脚,最好是较短的61b,与较长的支脚61a倾斜一个处于 5° 至 50° 之间的角度 β 。此处的可选方案还有,出于支承方面的考虑(如图7及以下图片所示的第三结构示例),本发明的一个改进方案优先选择让较长的支脚61a整体上与装置10的纵轴L平行,另一个较短的支脚61b同样在整体上与纵轴L平行。

[0060] 本发明的一个改进方案的优选设计方法是:让支脚61、61a和/或61b的侧壁62至少在连接至空隙70的这一段由开孔材料制成,例如泡沫材料。开孔泡沫材料在此的优势是,其孔壁是非封闭的,因此可以吸收液体并在压力下再次将液体放出,这可改善消毒液99的清洁效果。

[0061] 本发明的一个改进方案采用以下优选设计方法:让支脚61指向空隙70的侧壁62表面65完全或者部分覆盖上天然或者人造皮革,或者覆盖上类似的毛皮和/或纤维材料66。带有皮革、毛皮和/或纤维材料66的开孔材料覆盖层优点是,可实现无残留的清洁。开孔泡沫材料以及毛皮和/或纤维材料66可以分别单独作为冲裁件,或者以预制的复合材料的形式做成冲裁件。

[0062] 在本发明的一个改进方案中,将液体99一滴滴地输送到支脚61基本上就足够了,在该方案中,与分配管头60形成有效连接的出口50在与空隙70的底部72相邻的位置处终结。

[0063] 在此,本发明的一个优选改进方案(如图4和5所示的第二结构示例,或者如图7和8

所示的第三结构示例所示),表明以下设计是可行的:与分配管头60形成有效连接的出口50还包括一个将容器20(最好是在注入液体99之后)的出口50封闭的插入式喷头52。利用将容器20(最好是在注入液体99之后)的出口50封闭的插入式喷头52还可为液体的注入留下足够大的出口50,可以对加注过程进行有效的的设计。

[0064] 可选的,或者必要时可以累加的设计方法是:在本发明的一个改进方案(如图2第一个结构示例所示)中,为了喷射分布液体99,在与分配管头60形成有效连接的出口50上设计了一个喷射雾化器51,实现比单纯的逐滴输送更大的覆盖面积。

[0065] 本发明的另一个优选设计结构(如图2第二结构示例所示)证实,从出口50、喷射雾化器51或者插入式喷头52排出的液体99在一个往空隙70的底部72逐渐变细的分配腔80中排出,有利于保证液体99往嘴缘2的输送。

[0066] 本发明的另一个可能的设计方法(如图2第一个结构示例所示)证实,出口50可以与一个液体泵40有效连接,这样尤其有利于使用时在清洁和/或消毒的过程中实现液体99的再次配给。在这里,泵40优先选择通过一个吸管41将液体99从容器20吸出,并且主要根据按钮31的操作状态将其输送到一个为出口50供应液体的排出管42中。在这里,容器20通过密封圈32或者43,对从端面穿透容器20直至其中的液体泵40处的按钮31实现密封,以及对相对端面上穿透的排出管42实现密封。

[0067] 本发明的另一个优选设计(如图2第一个结构示例所示)证实,可以给操作装置30配备一个按钮31,让其根据要求输出确定数量的液体99。为了保护按钮31,例如使其不会在运输过程中在裤袋中被意外使用,可以将按钮31与将其31环绕的保护盖21相连,例如通过粘接点22粘住,保护盖21最好是有选择地附着到容器20的顶端。

[0068] 本发明的一个可选设计结构(如图4及以下图片或者图7及以下图片的第二或者第三结构示例所示)证实,操作装置30可以有一个纵向或者横向对准装置10纵轴L的压力波纹管33,用它可以可靠地逐滴将液体99输送到支脚61上。图6a和图9显示的是图5或图8中的清洁和/或消毒装置10使用前的后透视图,其压力波纹管33纵向对准装置10的纵轴L;图6b显示了图5中的清洁和/或消毒装置10使用后的后透视图,其压力波纹管33的取向与图6a不同,横向于装置10的纵轴L。

[0069] 本发明的一个优选设计结构(如图4及以下图片或者图7及以下图片的第二或者第三结构示例所示)证实,操作装置30可以有一个纵向或者横向对准装置10纵轴L的压力波纹管33,该波纹管可以根据要求输出确定数量的液体99。为了保护分配管头60,例如使其不会在运输过程中在裤袋中被意外使用,可以用密封帽25将其60包封,密封帽25最好有选择地固定到与容器20的出口相邻的支架24上(如图8第三个结构示例所示),例如螺纹段27,最好同时可以让插入式喷头52的一个排出开口53通过设置于密封帽25内部的,例如被喷射的密封销26封闭。为了便于将密封销26插入开孔材料62中,可以在其端面构造一个凹口67,以利于密封销26往排出开口53定心(如图7至9的第三结构示例所示)。可选的,或者必要时可以累加的设计方法是:为了便于密封销26穿过开孔材料62(如图7至9第三个结构示例所示),可在其背面构造一个槽68或者类似的空隙,例如采用冲裁的方式,让密封销26所推开的材料62可以通过它排出。在开孔材料背面设计一个空隙还可避免触碰毛皮和/或纤维材料66。

[0070] 本发明的一个优选设计结构证实,空隙70和插入口71另一面的支脚61、61a和/或61b可以完全或者部分地被外壳侧壁63包围,这有利于对泡沫材料构成的侧壁62提供支撑

和保持其形状。外壳侧壁63以及分配管头60的其它部分可以设计成一体式的塑料压注件,并且最好拥有足够大的粘接面,用于粘接泡沫材料或者类似的材料。

[0071] 在本发明的一个改进方案(图片未显示)中可能优先采用这样的设计:让支脚61在空隙70的方向上(例如)具有灵活的铰接方式或者可以压缩,从而进一步支持支脚61在餐具1需要清洁和/或消毒的嘴缘2片段5中可靠地贴合。

[0072] 本发明的一个优选设计结构证实,可以让分配管头60可围绕装置10的纵轴L转动,尤其是围绕插入式喷头52上面形成的一个凸缘54(如图4和5或者图7和8的第二或者第三结构示例所示)转动,至少有一个分配管头60上形成的凸起64嵌入到凸缘后面。或者也可以选择(如图2的第一个结构示例所示)在容器20的外壳中,在与外壳穿透排出管42的端面相邻的位置上设计一个环形槽23,至少有一个分配管头60上形成的凸起64嵌入到这个槽中。由于这样可实现无限的任意360°的可转动性,因此对嘴缘2的清洁和/或消毒操作(包括酒类容器1a已装满的情况)也变得简单了。

[0073] 本发明的一个优选设计结构证实,可往液体99添加防腐剂和/或(最好是)含有植物性乙醇的杀菌剂。众所周知,杀菌剂被用于减少活组织上的病原体数量,但这需要以良好的皮肤和粘膜相容性为前提。这里仅示例性地指出,申请人的“Glase11o”液就根据这个要求,这是一种以联邦风险评估所(BfR)物品编号N-59904进行过登记的杀菌剂产品。而防腐剂的例子有,德国Schülke&Mayr GmbH公司的octenisept®。

[0074] 图3以及图10a至10d仅显示了,根据本发明制造的装置10作为便携的可装入口袋的笔式装置如何适合用于按需求清洁和/或消毒餐具1的嘴缘2,尤其适合酒类容器1a(参见图3或者10a)、杯子1b(未展示)、汤盘1c(未展示)或者成套餐具1d(参见图10b)甚至可用于饮料罐甚至可用于饮料罐1e(参见图10c)或者饮料瓶1f(参见图10d),并且其功能操作简单。

[0075] (如图2的第一结构示例所示)按下布置在一个端面上的按钮31后,容器20(例如铝或者塑料制成的容器)中具有清洁和/或消毒作用的液体99将沿着分配管头60的支脚61分布。

[0076] 或者也可以(如图4及以下图片或者图7及以下图片所示)按下布置于容器20端面或者长侧面上的压力波纹管33后,具有清洁和/或消毒作用的液体99将通过插入式喷头52及其排出开口53(优选采用毛细管状的开口),从塑料制成的容器20(例如作为吹出装置)流出沿着61a或者分配管头60的支脚61或61a和61b分布。最后,也就是液体99往支脚61或61a和61b的分布,图2或者图4和5中的第一和第二结构示例都进行了展示。首先,也就是液体99仅往一个支脚61a的开孔材料分布这种情况,图7和8的第三结构示例进行了介绍。从图中可以看出,排出开口53和开孔(海绵)材料彼此的布置方式,使得移除密封帽25并通过密封销26开通排出开口53后,液体99便可以直接且仅仅被分配到较长支脚61a的开孔(海绵)材料中,而较短的支脚62a不带有任何海绵材料或类似材料,因为在第三结构示例中它仅承担较长支脚61a的定位和/或引导功能。

[0077] 在上面所述的所有三个结构示例中,支脚61或61a和61b都构成了一个带有插入口71的空隙71,用于让餐具1要清洁和/或消毒的嘴缘2片段5插入。

[0078] 插入时,可以直接将装置10的分配管头60套放餐具1的嘴缘2上,尤其是当对象为(如图3或者10a所示)酒类容器1a时。套上之后,可以将装置10沿着嘴缘2移动,从而一段段5

地清洁和/或消毒。在这里,清洁和/或支承功能可以均匀地(如图2的第一结构示例所示)或者程度不一地(如图4及以下图片或者图7及以下图片的第二和第三结构示例所示)分配到支脚61a和61b上。如果分配管头60直接安置在容器20的筒状外壳上,并且可以360°无限转动,则沿着嘴缘2滑动的动作将变得容易。这样尤其可以在酒类容器1a本身保持不动的情况下完成清洁和/或消毒。甚至在装置套上之后,也可以随时根据需求,简单地按下按钮31或者压力波纹管33输出或者喷出一或多滴的液体99用于清洁和/或消毒。

[0079] 空隙70最好设计成可以适应不同厚度的嘴缘2。尤其是该空隙70可以具有倒圆的底部72、圆锥状的侧壁和/或灵活安装的和/或长度不一的支脚61、61a和/或61b。例如,给支脚61的内侧壁62加上开孔材料(例如泡沫材料)衬层后,结构化的表面和/或完全或者局部的天然或人造皮革或类似的毛皮和/或纤维材料66覆盖层同样可提升清洁效果。

[0080] 本发明特别适合作为便携可装入口袋的笔式装置。该笔式装置经过合理设计,每个人都可随时随地有效地使用,不受其它清洁方式的限制,也无需清洁设备、溶液或者液体等其它辅助手段。确切地说,所有这些都是当前发明的整体组成部分。

[0081] 附图标记列表:

[0082] 1 餐具(“place cover articles”),尤其是:

[0083] 1a 酒类容器1a(“bar vessels”)

[0084] 1b 杯子1b(“cups”)

[0085] 1c 汤盘1c(“soup plates”)或者

[0086] 1d 成套餐具(“sets of cutlery”)例如刀、叉和汤匙

[0087] 1e 饮料罐

[0088] 1f 瓶子

[0089] 2 餐具的嘴缘

[0090] 3 餐具的内表面

[0091] 4 餐具的外表面

[0092] 5 嘴缘2的表面片段

[0093] 10 清洁和/或消毒装置

[0094] 20 容器

[0095] 21 保护盖

[0096] 22 粘接点

[0097] 23 环形槽

[0098] 24 密封帽25的支架

[0099] 25 密封帽

[0100] 26 密封销

[0101] 27 螺纹

[0102] 30 操作装置

[0103] 31 按钮

[0104] 32 密封圈

[0105] 33 压力波纹管

[0106] 40 液体泵

- [0107] 41 吸管
- [0108] 42 至出口50的排出管
- [0109] 43 密封圈
- [0110] 50 出口
- [0111] 51 喷射雾化器
- [0112] 52 插入式喷头
- [0113] 53 插入式喷头的排出开口(尤其是毛细管状的)
- [0114] 54 插入式喷头52上形成的凸缘
- [0115] 60 分配管头
- [0116] 61 支脚
- [0117] 61a 长支脚
- [0118] 61b 短支脚
- [0119] 62 开孔材料(尤其是泡沫材料)制成的侧壁
- [0120] 63 外壳侧壁
- [0121] 64 凸起
- [0122] 65 指向空隙70的侧壁62表面,最好完全或者部分覆盖皮革66
- [0123] 66 天然的和/或人造的皮革
- [0124] 67 凹口
- [0125] 68 槽
- [0126] 70 空隙
- [0127] 71 空隙70的插入口
- [0128] 72 空隙70的底部
- [0129] 80 分配腔
- [0130] 99 具有清洁和/或消毒效果的液体,尤其是含有植物性乙醇的杀菌剂
- [0131] L 装置10的纵轴

图1a

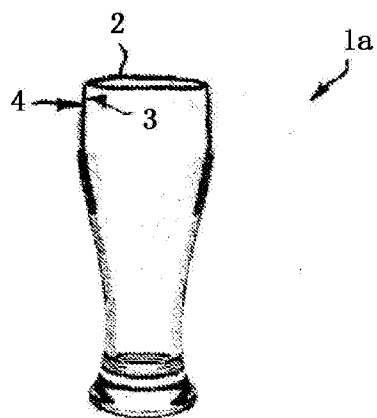


图1b

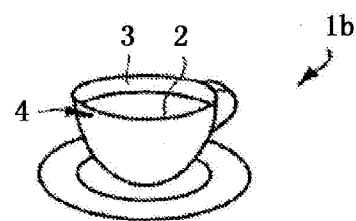


图1c

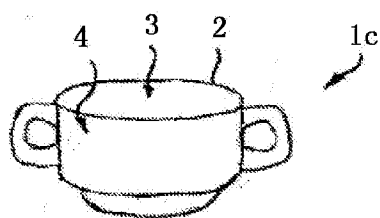
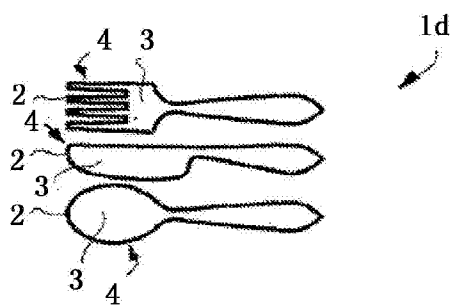


图1d



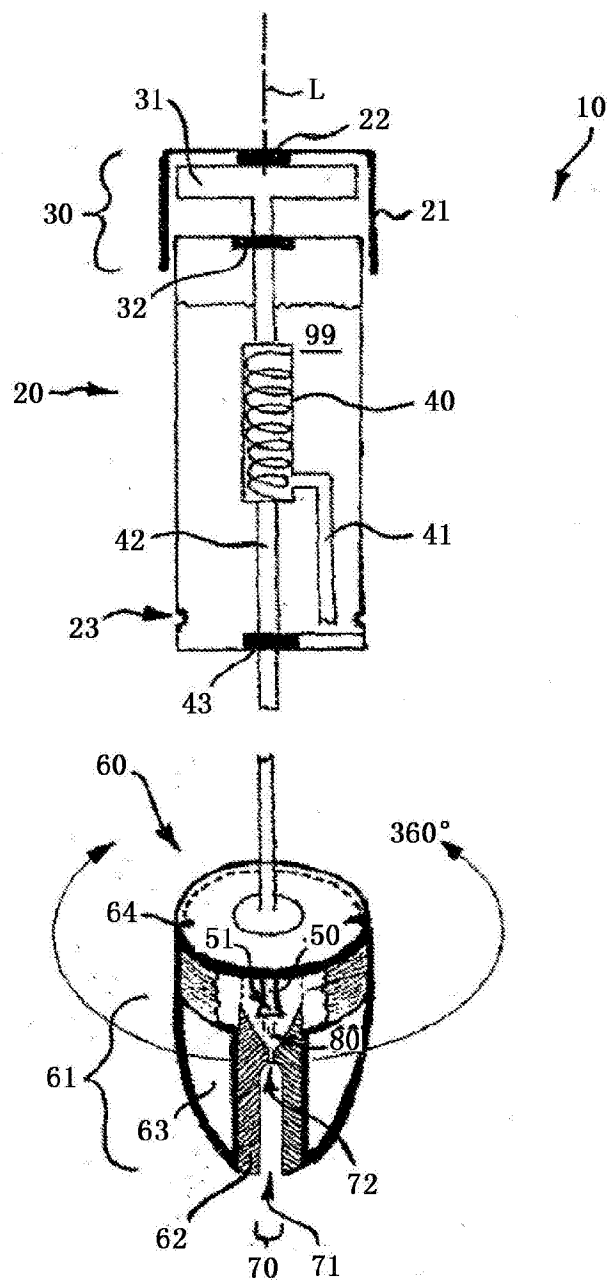


图2

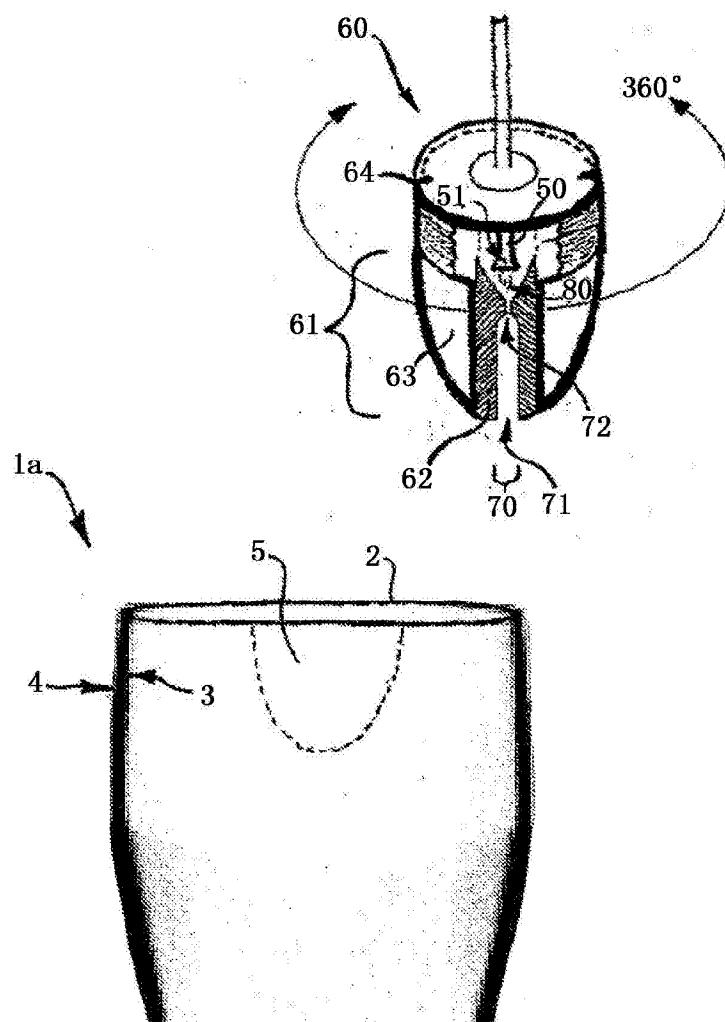


图3

图4

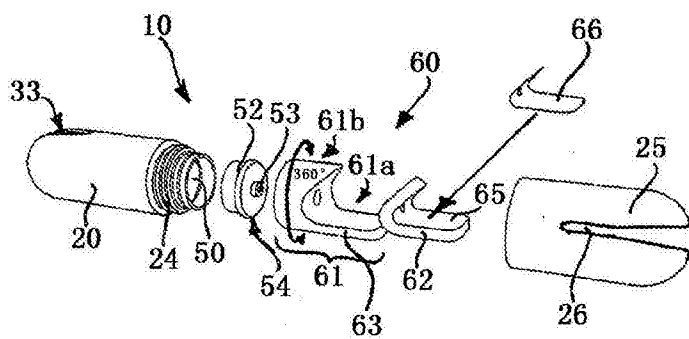


图5

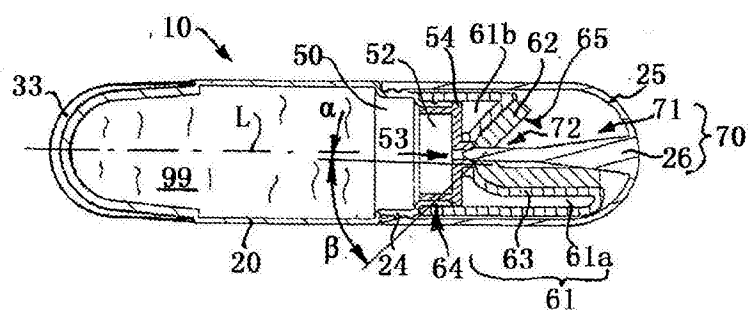


图6a

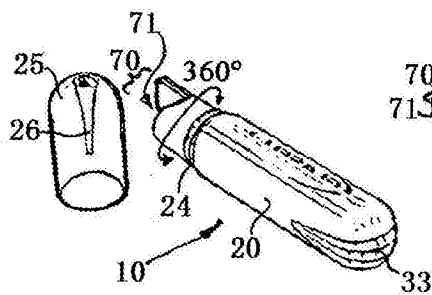


图6b

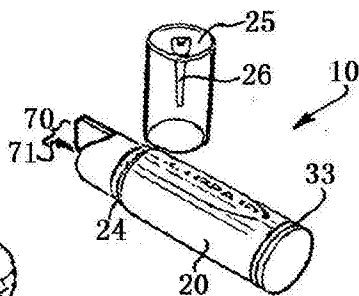


图7

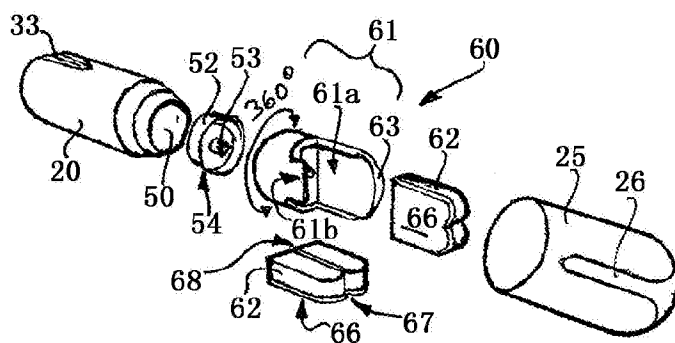


图8

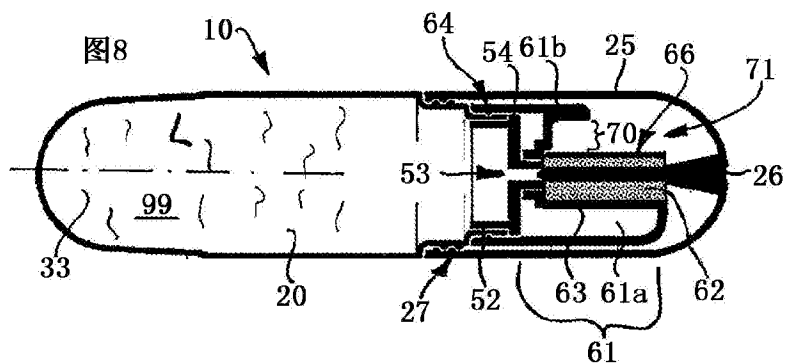


图9

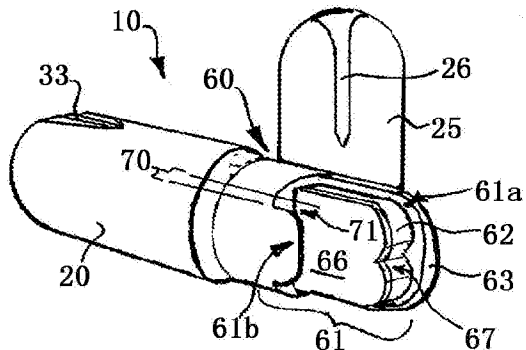


图10a

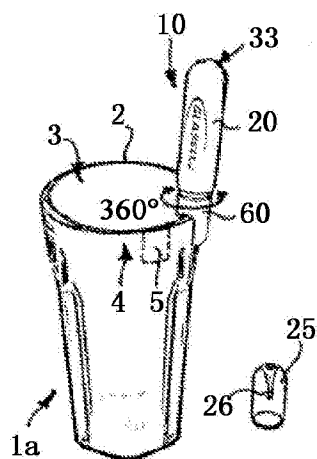


图10b

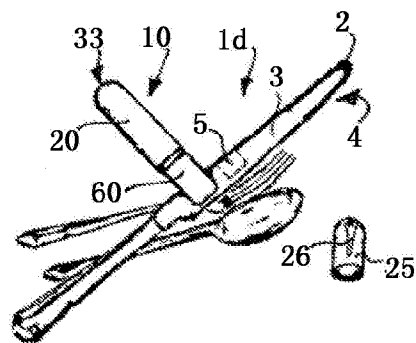


图10c

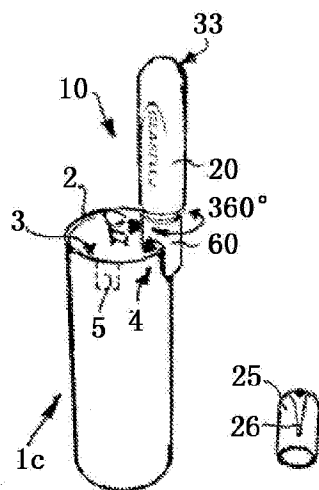
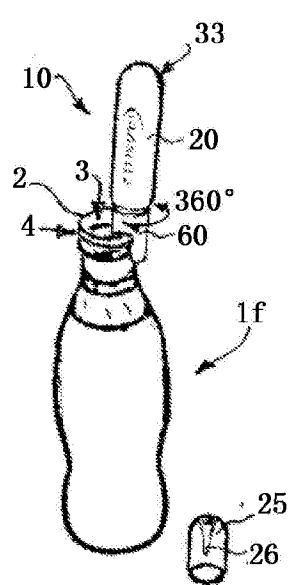


图10d



Cleaning and/or disinfecting device for the rim or part of a piece of tableware that comes in contact with a consumer's mouth

Abstract

The invention relates to a device (10) for cleaning and/or disinfecting the rim (2) or part of a piece of tableware (1) that comes into contact with a consumer's mouth, for example of a dispensing receptacle (1a), cup (1b), soup plate (1c), piece of cutlery (1d), beverage can (1e) or beverage bottle (1f), at least comprising: a container (20) for holding a cleaning and/or disinfectant liquid (99); an operating mechanism (30) for dispensing the liquid (99) from the container (20) to an outlet (50), and a distributing attachment (60) which is effectively connected to the outlet (50) and comprises two opposite legs (61) that delimit a gap (70) having an insertion opening (71) therebetween in such a way that a portion (5) of a rim (2) or part of a piece of tableware (1) that comes in contact with the consumer's mouth and is to be cleaned and/or disinfected can be introduced into the gap (70) via the insertion opening (71). A distributing attachment (60) designed in said manner has the advantage that esthetically unappealing impurities and/or pathogen loads sticking to the rim (2) or to the part of a piece of tableware (1) that comes in contact with the consumer's mouth are cleaned and/or disinfected section by section by means of the legs (61) once the rim (2) or part coming in contact with the consumer's mouth has been introduced into the gap (70) so that aesthetic expectations can once again be met and/or the risk of pathogenic infections can be reduced for consumers whose mouths come in contact with the rim (2). The invention is thus particularly suitable as a mobile pocket-size pencil.

Classifications

■ A47L17/00 Apparatus or implements used in manual washing or cleaning of crockery, tableware, cooking-ware or the like

[View 3 more classifications](#)

Claims (15)

[Hide Dependent](#)

1. the cleaning and/or chlorination equipment (10) of tableware (1) the mouth edge (2) for contacting with mouth, in particular for alcohol beverage container (1a), Cup (1b), soup plate (1c), knife and fork (1d), beverage can (1e) or beverage bottle (1f), include at least:

For accommodating the container (20) of the liquid (99) with cleaning and/or Disinfection Effect;

Operation device (30), for the liquid (99) in container (20) to be exported to outlet (50); With

With the distribution tube head (60) of outlet (50) effectively connection;

Including two legs (61) relative to each other;

Wherein, a space (70) with insert port (71) is constituted between leg, tableware (1) needs what is cleaned and/or sterilize The a certain fragment (5) of the mouth edge (2) contacted with mouth can insert space (70) by insert port (71).

2. cleaning according to claim 1 and/or chlorination equipment (10), it is characterised in that space (70) it is internal with insert The relative bottom (72) of entrance (71) is completely or partially rounding.

3. It is according to claim 1 and 2 to clean and/or chlorination equipment (10), it is characterised in that space (70) insert from it Mouth (71) keeps constant to this section of its inner bottom part (72) on width, or gradually becomes tapering.

4. the cleaning and/or chlorination equipment (10) according to one of claims 1 to 3, it is characterised in that constitute space (70) Leg (61) side wall (62) with certain structure and/or different length.

5. the cleaning and/or chlorination equipment (10) according to one of the claims, it is characterised in that prioritizing selection allow compared with Long leg (61a) is parallel with the longitudinal axis (L) of device (10) or inclines most angle [alpha] of 5°, and another leg is best be shorter leg (61b) it is equally parallel with the longitudinal axis (L) or with another leg, preferably longer leg (61a) inclines One angle beta between 5° to 50°.

6. the cleaning and/or chlorination equipment (10) according to one of the claims, it is characterised in that leg (61, 61a, Side wall (62) 61b) is at least made up in this section for being connected to space (70) of open-cell material, especially foamed material.

CN106572780A

China

[Download PDF](#)

[Find Prior Art](#)

[Similar](#)

Other languages: Chinese

Inventor: 莫科拉, J-L. 路伦斯-加西亚

Current Assignee: Moore Tisch Dick LLC

Worldwide applications

2015 EP WO CN DE

Application CN201580041208.0A events ⓘ

2014-05-31 Priority to DE102014107679.6

2014-05-31 Priority to DE102014107679.6A

2015-04-13 Priority to DE102015105626

2015-04-13 Priority to DE102015105626.7

2015-06-01 Application filed by Moore Tisch Dick LLC

2015-06-01 Priority to PCT/DE2015/100217

2017-04-19 Publication of CN106572780A

Status Pending

Info: Patent citations (13), Cited by (2), Legal events, Similar documents, Priority and Related Applications

External links: Espacenet, Global Dossier, Discuss

7. the cleaning and/or chlorination equipment (10) according to one of the claims, it is characterised in that point to space (70) Leg (61) side wall (62) surface (63) completely or partially cover natural either artificial leather or similar hair Skin and/or fibrous material (66).
8. the cleaning and/or chlorination equipment (10) according to one of the claims, it is characterised in that with distribution tube head (60) outlet (66) of the effectively connection position adjacent in the bottom (72) with space (70) is terminated.
9. the cleaning and/or chlorination equipment (10) according to one of the claims, it is characterised in that with distribution tube head (60) outlet (66) of effectively connection includes blast atomizer (51) and/or plug-in type shower nozzle (52), decision design side here Formula is that the liquid (99) from the discharge of outlet (66), blast atomizer (51) and/or plug-in type shower nozzle (52) is forward space (70) Discharge in the gradually tapering distribution cavity (50) in bottom (72).
10. the cleaning and/or chlorination equipment (10) according to one of the claims, it is characterised in that operation device (30) either longitudinal direction or it is laterally aligned to device (10) longitudinal axis comprising (such as being effectively connected with liquid pump (40)) button (31) (1) pressure nipple pipe (33).
11. cleanings and/or chlorination equipment (10) according to one of the claims, it is characterised in that button (31) with Protection cap (21) is connected and/or support (24) is designed with container (20), and such as thread segment is used for seal cap (25), made Distribution tube head (60) can be covered in and/or close the outlet opening (53) of plug-in type shower nozzle (52) by it.
12. cleanings and/or chlorination equipment (10) according to one of the claims, it is characterised in that space (70) and The leg (61) of insert part (71) other end is completely or partially surrounded by side wall of outer shell (63) and/or can be in space (70) direction On be compressed.
13. cleanings and/or chlorination equipment (10) according to one of the claims, it is characterised in that distribution tube head (60) longitudinal axis (L) that can surround device (10) is rotated, and 360 ° of rotations preferably can be ad infinitum carried out, especially around container (20) cannellure (23) in shell and/or the flange (54) formed on plug-in type shower nozzle (52) are rotated.
14. cleanings and/or chlorination equipment (10) according to one of the claims, it is characterised in that liquid (99) adds Preservative or the bactericide containing vegetables ethanol are added.
15. by cleaning and/or chlorination equipment (10) according to one of the claims as the portable pocket that loads Pen device, for clean according to demand and/or sterilizing dinnerware (1) mouth edge (2), especially alcohol beverage container (1a), cup (1b), soup plate (1c), knife and fork (1d), beverage can (1e) or beverage bottle (1f).

Description

The cleaning and/or chlorination equipment of the tableware mouth edge contacted with mouth

The present invention relates to the cleaning and/or the appearance in chlorination equipment, especially public house of a kind of tableware mouth edge contacted with mouth device, cup, soup plate or knife and fork.

Water pollution and to lack health be to cause the main cause of most of infectious disease. This problem is not limited only to developing china Family or NIC For example, in western countries, the red-letter day tent of flowing and the food and drink of beer tent or customer are various Eating and drinking establishment, due to available tableware quantity it is generally limited, therefore particularly dedicated for selling the container of alcoholic beverage, such as glass Glass cup, usage frequency increases, and under many circumstances, this will cause such alcohol beverage container cannot be in dish-washing machine or similar equipment in be cleaned and sterilize.

Pollution, such as pollute present in alcohol beverage container in catering trade mainly by drink residues and using vestige (especially it is alive, bloodstain lipstick etc.) constitute, these materials may be stayed on container or in container during use. Equally should be taken into account that alcohol beverage container may be transformed into its way be used for example as ashtray or for placing rubbish. Therefore, food and drink The careful cleaning of industry alcohol beverage container is not only in aesthetic and also significant in terms of health with sterilization.

The importance of hygienic issues, from EHED Fachrichtsicht (EHED) very recently in people Fast propagation in group can be seen that. The circulation way of pathogen is varied, predominantly the directly or indirectly suction in oral cavity, infection can be caused less than 100 bacteriums in this fashion.

As other flushing utensils, alcohol beverage container also will by cleaning, sterilization, reuse again and dried process is reached without defending The state of raw defect.

People are to remove the pollutant on utensil completely to the understanding cleaned. Here required cleaning agent by a kind of or Various basic chemical substances are constituted, and safe cleaning can be realized in certain concentration, will not harm people health or give Material causes to damage.

Sterilization is meant that the harmful pathogenic factor of killing reduces its density so as to meet hygienic requirements. Disinfectant is fitted for cleaning agent identical regulation.

Pathogenic factor, medically also becomes pathogen, be can in other organic internal materials for causing harmful flow process or Organism Pathogenic factor is probably algae, bacterium, parasite, fungi, prion, protist, virus or viroid. Medically they are endowed pathogenic characteristic in the narrow sense, the pathogenic of pathogen is referred to because pathogen captures resource to place Master causes damage.

Pathogen (pathogenic factor) can be propagated by different approach, and this depends on the type and its suitable biography of pathogen Dye ground Communication media can affect the contagiousness of disease, so as to effect its spread speed.

Route of infection referred to as infecta, refer to pathogenic organisms (such as bacterium, protozoan, fungi and parasite) or Person causes a disease molecule (such as virus, viroid, transposons and prion) actively or passively invades, rest on and organic in vivo and increase Grow, the concrete pathogenic factor being often referred in host. The disease that pathogen causes is referred to as infectious disease by people.

Tool face or volume after cleaning and sterilization must be rinsed thoroughly again with cold water. Only in this way could Guarantee is removed by the pathogen being killed and by chemical residual.

The meaning that final step is dried is that only dry vessel just can be prevented secondary again using tempus intermalare pathogen it is long.

For example, the A of US 3 205 527 disclose a kind of scouring and the cleaning of container for drink for known cleaning device instrument. The A of known US 3 924 310 are also a kind of container for drink cleaner. The A of known GB 646 031 are a kind of for cleaning drink With utensil and the improvement device of the instrument of similar appliances. On the other hand, the A of WO 97/19 615 disclose a kind of baby bottles Brush. Additionally, the A of US 3 230 563 disclose a kind of inner-outer-

syringe pipe brush. Known DE 20 2,005 015 U1 is a kind of vessel cleaning device, such as cleaning the cup of glass and/or restaurant; Finally, the AI of DE37 28 290 A kind of glass cup cleaning device is also disclosed that, is mainly used in catering industry.

Popular alcohol beverage container clean method is that a cleaning device is prevented in sink, and alcohol beverage container is entered with it Row mechanical cleaning. Here simplest method is to fix one with sectorial brush in washing trench bottom. Then bar desk service Member will move back and forth on brush in alcohol beverage container, mechanically remove the dirt of attachment, be cleaned in alcohol beverage container with this Surface. Here more available to be, alcohol beverage container generally need to only remove the liquid of remnants, that is to say, that clear without external force Except the dirt of strength attachment. Equally also there is the brush on the outside of for alcohol beverage container, it is clear in the reciprocatory movement of alcohol beverage container Clean its outside. Fixed brush can also be replaced using the brush with driving means, even if the cleaning of bar desk waiter Action is not enough, can also allow alcohol beverage container to obtain preferable cleaning effect. But this clean method Jing is not often used according to the rules Flowing water is cleaned. Here, people are more using once more or less fixed sink water, through long or short time, water in will gather drink residues. It is the preferable hotbed of pathogen because washings are all generally warm.

In order to reduce this risk, the useful nozzle of conventional way replaces or supplements brush, by the water of pressurization or its its flushing liquor is directed at the surfaces externally and internally of alcohol beverage container, not only can so realize mechanical cleaning performance, while drink residues will also Together it is discharged with flushing liquor. But this cleaning mode is often carried out in water, that is sink has at least filled part Water or cleaning solution, therefore unsatisfactory the pathogen for eliminating accumulation.

After due to flushing, it is usually free of and dries alcohol beverage container with towel, but directly allows it before the next use Drip-dry, therefore especially the mouth edge of alcohol beverage container there will be the risk for producing the impact such as sewage stain pollution attractive in appearance, also can in addition Accumulation pathogen re-forms pathogen accumulation phenomena in remaining moisture there, if lip and wine when consumer drinks The mouth edge contact of glass container, has taken in pathogen, it would be possible to have the risk of infection.

Situation in coffee-house or testhouse is also similar, and the coffee cup or glass teacup of the inside all have to repeat Ground, clean as quickly as possible. It is, therefore, to be understood that the problem for being illustrated using alcohol beverage container before also often occurs in it On the mouth edge of its tableware, the especially tableware of cup, soup plate either such as knife, fork or soup spoon etc.

As starting point, the basic task of the present invention is to provide the cleaning and/or chlorination equipment of a kind of tableware mouth edge, in particular for alcohol beverage container, cup, soup plate or knife and fork, and to be suitable as the pen type: dress of portable loaded pocket Put.

This task solves the cleaning by possessing feature described in claim 1 and/or chlorination equipment.

Cleaning and/or chlorination equipment, especially alcohol beverage container according to the tableware mouth edge contacted with mouth of application claims, The cleaning and/or chlorination equipment of cup, soup plate or knife and fork, including at least following part:

For accommodating the container of cleaning and/or thinnerose;

Operation device, for the liquid in container to be exported to one outlet; With

With the distribution tube head of outlet effectively connection;

Including two legs relative to each other;

A space with insert port, the mouth contacted with mouth that tableware will be cleaned and/or sterilized are constituted between leg The a certain fragment of edge can insert space by insert port.

The advantage of so distribution tube head of design is to be attached on tableware mouth edge to affect dirt attractive in appearance and/or pathogen After mouth edge inserts the space that leg is constituted, will paragraph by paragraph be cleaned and/or be sterilized, so as to recovering attractive in appearance and/or reducing consumer The infection risk of occurrence injury health during contact mouth edge.

Wanting predeclared is, current "sterilization" this concept can not carry out strict "technical" understanding, especially it is this understanding that pathogen quantity is reduced at least 10-5 factor, but should be understood as every according to present invention The individual measure for reducing tableware mouth edge pathogen quantity, no matter this reduction is grading with which type of quantity in concrete condition Capable.

Can be used alone or combination with one another after the favourable construction applied and improvement be dependent claims theme.

Present invention is especially suited for using portable construction, the cleaning of the loaded pocket that can be used as everyone and/ Disinfection pen.

The topology example of preferred cleaning and/or chlorination equipment will be utilized below, with reference to the drawing enclosed to more than The further advantage of section and the present invention is illustrated.

Content shown in drawing is:

Fig. 1 a to 1d different tablewares;

Cleaning and/or first topology example of chlorination equipment that Fig. 2 is required according to invention;

Fig. 3 is on the mouth edge of alcohol beverage container shown in Fig. 1 a using the cleaning and/or chlorination equipment shown in Fig. 2;

Cleaning and/or the perspective exploded view of second topology example of chlorination equipment that Fig. 4 is required according to invention;

Cleaning shown in Fig. 5 Fig. 4 and/or the sectional view after chlorination equipment assembling;

Cleaning shown in Fig. 6 a Fig. 5 and/or the back perspective view before chlorination equipment use;

Cleaning shown in Fig. 6 b Fig. 5 and/or the back perspective view before chlorination equipment use, the orientation of its pressure ripple pipe with Fig. 6 a are relative;

Cleaning and/or the perspective exploded view of the 3rd topology example of chlorination equipment that Fig. 7 is required according to invention;

Cleaning shown in Fig. 8 and/or the sectional view after chlorination equipment assembling;

Cleaning shown in Fig. 9 and/or the back perspective view before chlorination equipment use;

Figure 10 a are on the mouth edge of alcohol beverage container shown in Fig. 1 a using the cleaning and/or chlorination equipment shown in Fig. 6 a or Fig. 9;

Figure 11 b are on the mouth edge of alcohol beverage container shown in Fig. 1 b using the cleaning and/or chlorination equipment shown in Fig. 6 b or Fig. 9;

Figure 10 c using the cleaning shown in Fig. 6 a or Fig. 9 and/or disappear on the outer mouth edge of the knife and fork external member similar to Fig. 1 c maxious device;

Figure 10 c are on the mouth edge of beverage can using the cleaning and/or chlorination equipment shown in Fig. 6 a or Fig. 9;

Figure 10 d are on the mouth edge of beverage bottle using the cleaning and/or chlorination equipment shown in Fig. 6 a or Fig. 9.

It is attached using identical to same or like component when being introduced to the preferred constructive form of the present invention below icon is remembered.

Figure 1a to 1d exemplarily shows different tablewares. Fig. 1 a are commercially available alcohol beverage containers 1a; Fig. 1 b are commercially available Cup 1b; Fig. 1 c are commercially available soup plate 1c, and Fig. 1 d are commercially available dinner service set 1d, i.e., one fork, a knife and a soup spoon. Fig. 1 a to 1d With the mouth edge of 2 mark tableware 1a, 1b, 1c, 1d, with its inner side of 3 marks, 4 mark outsides.

Fig. 2 is shown first topology example, and Fig. 4 and Fig. 7 is shown for the mouth of tableware 1 in the form of perspective exploded view. The second of device 10 or the 3rd topology example that edge 2 is cleaned and/or sterilized, tableware here especially refer to alcohol beverage container 1a, Cup 1b, soup plate 1c or dinner service set 1d. The cleaning and/or chlorination equipment 10 of diagram is substantially included at least:

One container 20 for being used to accommodate cleaning and/or thimerosal 99;

One operation device 30, for the liquid 99 in container 20 to be exported to one outlet 50; With

One with outlet 50 effectively connections distribution tube head 60;

Including two legs 61 relative to each other;

Constitute a space 70 with insert port 71 between leg, tableware 1 will be cleaned and/or the mouth edge 2 sterilized. A certain fragment 5 can insert space 70 by insert port 71.

Additionally, side perspective views and remaining part 20, 30, 40, 50... of the Fig. 2 also evident from distribution tube head 30 is general. Logical sectional side view. Additionally, Fig. 5 also show the ordinary side view of Fig. 4 cleanings after assembling and/or chlorination equipment 10, Fig. 8 shows The ordinary side view of Fig. 7 cleanings and/or chlorination equipment 10 after assembling.

One design structure of the present invention shows, the inner bottom part 72 relative with insert port 71 in space 70 as it is overall—such as Shown in first and second topology examples of Fig. 2 either Figure 4 and 5—or mercotomize—such as the topology examples (shorter) of Fig. 8 the 3rd Shown in leg 61b—fully or partly rounding, can improve leg 61, 61a and/or 61b needs cleaning and/or disappears in tableware 1. Uniform stickiness in the fragment 5 of mouth edge 2 of poison, including inner surface 3 and outer surface 4 and mouth edge 2 itself.

In addition it is also possible to select (second topology example institute of such as Fig. 4 and drawing afterwards independent or additively Show) slow space 70 from this section of its insert port 71 to its inner bottom part 72 keep on width it is constant (especially as leg 61a and When the length of 61b is different), or gradually become tapering (especially when the length of leg 61 is the same), do so can be helped. Leg 61 is helped to need to be fitted in the fragment 5 of mouth edge 2 of cleaning and/or sterilization in tableware 1, laminating scope is mouth edge 2 to the bottom of space 70 inner surface 3 and outer surface 4 in portion 72.

The present invention an improvement project in, preferred way could is that, allow constitute space 70 leg 61, 61a and/ Or the structuring of side wall 62 of 62b, i.e., constructing with certain, the protuberance and/or depression of such as knob-like or change (do not show on figure Show), this can improve mechanical cleaning performance of the leg 61 in the fragment 5 of mouth edge 2 that tableware 1 needs cleaning and/or sterilization.

In an improvement project (second topology example, or the 3rd knot shown in Fig. 7 to 9 as shown in Figs. 4-6 of the present invention Structure example) in, prioritizing selection allows the side wall 62 of the leg 61 for constituting space 70 to have different length, and order can be compared with long foot 61a. To cover the fragment 5 of mouth edge 2 for needing to clean and/or sterilize on the outer surface 4 of tableware 1, and shorter leg 61b will not immerse tableware in food contained by 1.

In this regard, an improvement project (the second topology example as shown in Fig. 4 and following picture) of the present invention shows following Design is feasible: Allow a leg, preferably longer 61a is parallel with the longitudinal axis L of device 10 or inclines one most 5° Angle [alpha], and another leg, preferably shorter 61b inclines one between 5° to 50° with longer leg 61a Angle beta. Alternative herein also has, for supporting in terms of consideration (the 3rd structure as shown in Fig. 7 and following picture is shown Example), an improvement project prioritizing selection of the present invention makes longer leg 61a parallel with the longitudinal axis L of device 10 on the whole, another individual shorter leg 61b is equally parallel with longitudinal axis L on the whole.

The decision design method of one improvement project of the present invention is: Allow leg 61, 61a and/or 61b side wall 62 at least it is made up of open-cell material in this section for being connected to space 70, such as foamed material. Open-cell foam materials advantage in this is, its Hole wall is nonocclusive, therefore can absorb liquid and under stress again release liquid, and this can improve the clear of thimerosal 99 Clean effect.

One improvement project of the present invention adopts following decision design method: Leg 61 is allowed to point to the table of side wall 62 in space 70. Face 65 completely or partially covers natural or dermature, or fur similar on covering and/or fibrous material 66. Band The open-cell material coating advantage for having leather, fur and/or fibrous material 66 is to be capable of achieving the cleaning of noresidue. Open celled foam Material and fur and/or fibrous material 66 can be individually as blanking parts, or in the form of prefabricated composite Make blanking part.

In an improvement project of the present invention, it is sufficient that liquid 99 is transported to dropwise into leg 61 substantially. In this scenario, with distribution tube head 60 formed effectively connection outlet 50 at the adjacent position in the bottom 72 with space 70 end Knot.

Here, an advantageous modification (second topology example as shown in Figures 4 and 5, or such as Fig. 7 and 8 of the present invention Shown in the 3rd shown topology example), show that following design is feasible: With the outlet 50 that distribution tube head 60 forms effectively connection. Also include the plug-in type shower nozzle 52 of a closing of outlet 50 by container 20 (preferably after injection liquid 99). Using will hold The plug-in type shower nozzle 52 of the closing of outlet 50 of device 20 (preferably after injection liquid 99) can also be that the injection of liquid leaves foot Enough big outlets 50, can effectively be designed filling process.

Optionally, or if necessary the method for designing that can be added up is: The present invention an improvement project (such as Fig. 2 the Shown in one topology example) in, for spray distribution liquid 99, set in the outlet 50 for forming effectively connection with distribution tube head 60. A blast atomizer 51 is counted, realization dropwise conveys bigger area coverage than simple.

Another decision design structure (as shown in Fig. 2 first structure examples) of the present invention confirms, from outlet 50, injection mist Change liquid 99 that device 51 or plug-in type shower nozzle 52 discharge in the tapered distribution cavity 80 in bottom 72 toward space 70 Discharge, advantageously ensure that liquid 99 toward the conveying of mouth edge 2.

Another possible method for designing (as shown in first topology example of Fig. 2) of the present invention confirms, outlet 50 can be with With an effectively connection of liquid pump 40, liquid 99 is realized during cleaning and/or sterilization when being so particularly advantageous in using Dispensing again. Here, the prioritizing selection of pump 40 is suctioned out liquid 99 from container 20 by a suction pipe 41, and main basis The mode of operation of button 31 is transported to one end supplies in the discharge pipe 42 of liquid for outlet 50. Here, container 20 passes through Sealing ring 32 or 43, sealing is realized to penetrating container 20 from end face up to the button 31 at liquid pump therein 40, and right The discharge pipe 42 penetrated on opposing end surface realizes sealing.

Another decision design (as shown in first topology example of Fig. 2) confirmation of the present invention, can give operation device 30 A button 31 is equipped with, allows it to export the liquid of quantification 99 as requested. In order to protect button 31, for example, make it will not be accidentally used in trousers pocket in transportation, can by button 31 with its 31 circular protection cap 21 is connected, for example pass through Adhesive spots 22 are clung, and protection cap 21 is preferably selectively attached to the top of container 20.

The present invention an optional design structure (as Fig. 4 and following picture either Fig. 7 and following picture second or the Shown in three topology examples) confirm, operation device 30 can have a longitudinal direction or be laterally aligned to the pressure ripple of the longitudinal axis L of device 10 Pipe 33, reliably dropwise can be transported to liquid 99 on leg 61 with it. Fig. 5 a and Fig. 9 are shown clear in Fig. 5 or Fig. 8 Clean and/or chlorination equipment 10 uses front rear view, the longitudinal axis L of the longitudinally aligned device 10 of its pressure ripple pipe 33; Fig. 6 b show The cleaning and/or the usufructuary rear view of chlorination equipment 10 in Fig. 5 is shown, the orientation of its pressure ripple pipe 33 is with Fig. 6 a not Together, transverse to the longitudinal axis L of device 10.

The present invention a decision design structure (as Fig. 4 and following picture either Fig. 7 and following picture second or the Shown in three topology examples) confirm, operation device 30 can have a longitudinal direction or be laterally aligned to the pressure ripple of the longitudinal axis L of device 10 Pipe 33, the bellows can as requested export the liquid 99 of quantification. In order to protect distribution tube head 60, for example, make it will not be accidentally used in trousers pocket in transportation, can be with seal cap 25 by its 60 encapsulating, seal cap 25 is preferably selectively (as shown in the 3rd topology example of Fig. 8) is fixed on the support 24 adjacent with the outlet of container 20, and such as thread segment 27 is best Can allow simultaneously plug-in type shower nozzle 52 an outlet opening 53 by being arranged inside seal cap 25, such as injected is close Offset 26 is closed. For the ease of link block 26 is inserted in open-cell material 62, can be in one recess 67 of its edge face structure, with profit Feel relieved (as shown in the 3rd topology example of Fig. 7 to 9) toward outlet opening 53 in link block 26. Optionally, or if necessary can be with Cumulative method for designing is: Open-cell material 62 (as shown in the 3rd topology example of Fig. 7 to 9) is passed through for the ease of link block 26, A groove 68 or similar space can be constructed at its back side, for example with the mode of punching, the material for allowing link block 26 to be pushed open Material 62 can be discharged by it. Designing a space at the open-cell material back side can also avoid touching fur and/or fibrous material 66.

One decision design structural validation of the present invention, the leg 61, 61a of space 70 and the another side of insert port 71 and/or 61b can be surrounded completely or partially by side wall of outer shell 63, and this is conducive to providing support to the side wall 62 that foamed material is constituted With its shape of holding. The other parts of side wall of outer shell 63 and distribution tube head 60 can design integrated plastic pressure injection part, And preferably possess sufficiently large bonding plane, for bonding foamed material or similar material.

Such design may be preferentially adopted in an improvement project (picture does not show) of the present invention: Leg 61 is allowed to exist (for example) having on the direction in space 70 flexible articulated manner or can compress, so as to further support leg 61 in tableware Reliably fit in 1 fragment 5 of mouth edge 2 for needing cleaning and/or sterilization.

One decision design structural validation of the present invention, can allow the longitudinal axis L that distribution tube head 60 can surround device 10 to rotate, Formed above especially about plug-in type shower nozzle 52 a flange 54 (as Figure 4 and 5 either Fig. 7 and 8 second or the 3rd knot Shown in structure example) rotate, the projection 64 formed at least one distribution tube head 60 is embedded into behind flange. Or can also select (as shown in first topology example of Fig. 2) is selected in the shell of container 20, it is adjacent in the end face that discharge pipe 42 is penetrated with shell Position on design a cannellure 23, at least one distribution tube head 60 on formed projection 64 be embedded in this groove. By in being so capable of achieving unlimited any 360° rotatably, therefore the cleaning and/or sterilizing operation of lip-synching edge 2 is (including drinks The situation that container 1a has been filled with) also become simply.

One decision design structural validation of the present invention, can add preservative and/or (preferably) containing plant toward liquid 99 The bactericide of physical property ethanol. It is well known that bactericide be used to reduce the pathogen quantity in living tissue, but this is needed with good skin and mucous membrane compatibility premised on. Here exemplarily only point out, "Gissello" liquid of applicant just will according to this Ask, this is a kind of bactericide product for carrying out registering with federal risk assessment institute (BfR) item Number N-59904. And anti-corrosion The example of agent has, German Schülke & Mayr GmbH companies

Fig. 3 and Figure 10 a to 10d only show, and device 10 constructed in accordance is used as portable loaded pocket Pen device how to be suitable for cleaning on demand and/or sterilizing dinnerware 1 mouth edge 2, be especially suitable for alcohol beverage container 1a (referring to Fig. 3 either 10a), cup 1b (displaying), soup plate 1c (displaying) or dinner service set 1d (referring to Figure 10 b) or even can be used for Beverage can even can be used for beverage can 1e (referring to Figure 10 c) or beverage bottle 1f (referring to Figure 10 d), and its feature operation latter Just.

(as shown in the first structure example of Fig. 2) is pressed after arrangement button 31 on one face, (such as aluminium of container 20 Or container made by plastics) in have cleaning and/or disinfective action liquid 99 by along distribution tube head 60 61 points of leg Cloth.

Either can also press (as shown in Fig. 4 and following picture or Fig. 7 and following picture) and be arranged in the end face of container 20 Or after the pressure ripple pipe 33 on long side surface, the liquid 99 with cleaning and/or disinfective action will be by plug-in type shower nozzle 52 And its outlet opening 53 (preferably using the opening of capillary), from container made by plastics 20 (such as blowing out device) stream Go out the leg 61 or 61a and 61b distributions along 61a or distribution tube head 60. Finally, that is, liquid 99 is toward leg 61 or 61a With the distribution of 61b, the first and second topology examples in Fig. 2 or Figure 4 and 5 are all shown. First, that is, liquid 99 Open-cell material only toward a leg 61a is distributed such case, and the 3rd topology example of Fig. 7 and 8 is described. Can from figure To find out, outlet opening 53 and the mutual arrangement of perforate (sponge) material so that remove seal cap 25 and by link block 26 open after outlet opening 53, and liquid 99 just can directly and only be distributed only to perforate (sponge) material compared with long foot 61a in, and shorter leg 62a is without any sponge material or similar material because in the 3rd topology example it only undertake compared with The positioning and/or guiding function of long foot 61a.

In all three topology example described above, leg 61 or 61a and 61b all constitute one with insert port 71 space 71, the fragment 5 of mouth edge 2 for tableware 1 to be cleaned and/or sterilizing is inserted.

During insertion, directly 60 sets of the tube head of distribution of device 10 can be put on the mouth edge 2 of tableware 1, especially when object is During (as shown in Fig. 3 or 10a) alcohol beverage container 1a. After putting, device 10 can be moved along mouth edge 2, so as to a section 5 Ground cleaning and/or sterilization. Here, cleaning and/or supporting functions can equally (as shown in the first structure example of Fig. 2) or Person's degree differ (if Fig. 4 and following picture or Fig. 7 and following picture are second and the 3rd shown in topology example) be assigned to On leg 61a and 61b. If distribution tube head 60 is directly positioned on the cylindrical case of container 20, and can be with 360° unlimited turn Dynamic, then the action slid along mouth edge 2 will become easy. Situation about so especially can in itself remain stationary as in alcohol beverage container is Under complete to clean and/or sterilize. After use of the device, it is also possible any one

according to demand, simply press the button 31 or Person's pressure ripple pipe 33 exports or spray the liquid 99 of one or more drops to be used to clean and/or sterilize.

Space 70 is preferably devised to be adapted to the mouth edge 2 of different thickness. Especially the space 70 can have rounding Leg 61, 61a bottom 72, cone shape side wall and/or flexible installation and/or that length differs and/or 61b. For example, to The medial wall 62 of pin 61 plus after open-cell material (such as foamed material) lining, structured surface and/or fully or partly Natural or dermeline or similar fur and/or the coating of fibrous material 66 can equally lift cleaning effect.

Present invention is especially suited for as the portable pen device for loading pocket. The pen device through appropriate design, often individual can be efficiently used whenever and wherever possible, not limited by other cleaning modes, without cleaning equipment, solution or liquid Deng other supplementary means. Exactly, it is all these be all present invention integral part.

Reference numerals list:

1 tableware (" place cover articles "), especially:

1a alcohol beverage containers is (" bar vessels ")

1b cup lb (" cups ")

1c soup plate 1c (" soup plates ") or

1d dinner service sets (" sets of cutlery ") such as knife, fork and soup spoon

1e beverage cans

1f bottles

The mouth edge of 2 tablewares

The inner surface of 3 tablewares

The outer surface of 4 tablewares

The surface fragment of 5 mouth edge 2

10 cleanings and/or chlorination equipment

20 containers

21 protection caps

22 adhesive spots

23 cannellures

The support of 24 seal caps 25

25 seal caps

26 link blocks

27 screw threads

30 operation devices

31 buttons

32 sealing rings

33 pressure ripple pipes

40 liquid pumps

41 suction pipes

42 to outlet 50 discharge pipe

43 sealing rings

50 outlets

51 blast atomizers

52 plug-in type shower nozzles

The outlet opening (especially capillary) of 53 plug-in type shower nozzles

The flange formed on 54 plug-in type shower nozzles 52

60 distribution tube heads

61 legs

61a long foots

The short legs of 61b

Side wall made by 62 open-cell materials (especially foamed material)

63 side wall of outer shell

64 is raised

65 surfaces of side wall 62 for pointing to space 70, preferably completely or partially cover leather 66

66 natural and/or artificial leathers

67 recesses

68 grooves

70 spaces

The insert part in 71 spaces 70

The bottom in 72 spaces 70

80 distribution cavities

99 liquid with cleaning and/or Disinfection Effect, especially containing the bactericide of vegetatitas ethanol

The longitudinal axis of L devices 10

Patent Citations (13)

Publication number	Priority date	Publication date	Assignee	Title
US2545110A *	1947-09-03	1951-03-13	Charles H Schaar	Soap-solution producing hand brushing apparatus
DE10026885A1 *	2000-05-27	2001-11-29	Christof Schuelling	Cleaning device for individual cutlery items has top with one or more slot-shaped recesses designed so items can be at least partly inserted into them via their top openings
CN1354636A *	1999-05-17	2002-06-19	米蒂亚 舒斯特 锐亮	Manual cleaning sponge
CN2754548Y *	2004-09-28	2006-02-01	张金六	Simple cleaning block
CN200987073Y *	2006-08-29	2007-10-10	张怡	Bowl washing brush
CN202891845U *	2012-11-07	2013-04-24	青島第二实验 初级中学	Cup washer
Family To Family Citations				
GB666031A	1949-08-11	1952-02-06	Benjamin John Lewis	Improvements in or relating to means for the washing of drinking utensils and the like
US3230563A	1963-10-03	1966-01-25	Frank B Swanson	Swivel outside-inside brush
US3205527A	1964-02-28	1965-09-14	Owen A Laird	Drinking glass scrubbing and cleaning implement
US3934300A	1974-04-15	1976-01-27	The Raymond Lee Organization, Inc.	Drinking glass cleaner
DE3728290A1	1987-08-25	1989-03-16	Maria Verratta	Device for cleaning drinking glasses, especially in restaurants and bars
US5621941A	1995-11-28	1997-04-22	Liu, Chih C.	Baby bottle cleaning device including dual brushes
DE202005015103U1	2005-09-23	2006-02-09	L&Sberg, Bernd	Cleaning device for containers e.g. drinking glasses or cups has actuator situated on releasing device whereby actuator is built such that brim of container can be put on actuator areawise

* Cited by examiner; † Cited by third party

Cited By (2)

Publication number	Priority date	Publication date	Assignee	Title
Family To Family Citations				
DE102015117714B3 *	2015-10-17	2016-11-10	Multistick GmbH	Dosing device for the application of a flavoring or a cleaning and / or disinfecting agent on the mouth edge of a place setting article
WO2021073694A2 *	2019-10-14	2021-04-22	Multistick GmbH	Metering device for applying disinfectant and/or aromatic substances dissolved in liquid onto the mouth edge of a dispensing receptacle

* Cited by examiner; † Cited by third party; ‡ Family to family citation

Similar Documents

Publication	Publication Date	Title
US0509560S1	2005-09-13	Dispensing head
USD530209S1	2006-10-17	Bottle
CN106572780A	2017-04-19	Cleaning and/or disinfecting device for the rim or part of a piece of tableware that comes in contact with a consumer's mouth
USD751191S1	2016-03-08	Biological fluid container nozzle
DE102014107679B4	2016-05-12	Cleaning and / or disinfecting device for the mouth edge of a cover article
US10709302B2	2020-07-14	Sanitary wipe apparatus for use on a beverage can
WO2017063644A3	2017-09-28	Dosing device for applying a flavouring- or a cleaning- and/or disinfectant agent to a tableware rim that comes into contact with a consumer's mouth
KR20180002551U	2018-07-01	water cup
CN204970115U	2016-01-20	Tea table with glass stand
KR20190002465U	2019-10-02	Sanitary cup
EP3430943A1	2019-01-23	Portable disinfecting means for the rims of glasses, cups and implements
CN204336512U	2015-08-20	A kind of dining table articles for use storage apparatus of miniaturization
CN102273973A	2011-12-14	Impact pressing multifunctional disease epidemic prevention hand washer
US20200138213A1	2020-05-07	Systems and methods for preventing cross contamination
CN206213989U	2017-06-06	A kind of portable sterilization hand cleanser bottle
KR200424209Y1	2006-08-18	multipurpose kitchen case
CN210030532U	2020-02-07	Anti-soil structure
CN200939006Y	2007-08-29	Complete tableware for banquet
CN208639955U	2019-03-26	Hotel's special cabinet
CN201847651U	2011-06-01	Cup brush
USD529739S1	2006-10-10	Dispenser and bottle holder
KR200430846Y1	2006-11-13	Cup of water eliminating
CN104490208A	2015-04-08	Tissue box and chopstick holder combined improved structure
CN202567865U	2012-12-05	Combined catering tool
CN202942006U	2013-05-22	Toothpaste and toothbrush placing cup

Priority And Related Applications

Priority Applications (5)

Application	Priority date	Filing date	Title
DE102014107679.6		2014-05-31	
DE102014107679.6A	2014-05-31	2014-05-31	Cleaning and / or disinfecting device for the mouth edge of a cover article
DE102015105626		2015-04-13	
DE102015105626.7		2015-04-13	
PCT/DE2015/100217	2014-05-31	2015-06-01	Cleaning and/or disinfecting device for the rim or part of a piece of tableware that comes in contact with a consumer's mouth

Legal Events

Date	Code	Title	Description
------	------	-------	-------------

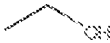
2017-04-19	P801	Publication	
2017-04-19	P801	Publication	
2017-06-27	SE01	Entry into force of request for substantive examination	
2017-06-27	SE01	Entry into force of request for substantive examination	
2019-10-18	WD01	Invention patent application deemed withdrawn after publication	Application publication date: 20170419
2019-10-18	WD01	Invention patent application deemed withdrawn after publication	

Concepts



machine-extracted

[Download](#) [Filter table](#)

Name	Image	Sections	Count	Query match
cleaning		title,claims,abstract,description	96	0.000
Mouth		title,claims,abstract,description	53	0.000
disinfective		title,claims,abstract,description	7	0.000
beverage		claims,abstract,description	41	0.000
liquid		claims,abstract,description	38	0.000
soups		claims,abstract,description	12	0.000
chlorination reaction		claims,description	40	0.000
ethanol		claims,description	35	0.000
material		claims,description	25	0.000
Head		claims,description	22	0.000
sterilising		claims,description	14	0.000
sterilization and disinfection		claims,description	13	0.000
fibrous material		claims,description	6	0.000
anti-bacterial		claims,description	5	0.000
bactericide agent		claims,description	5	0.000
effects		claims,description	5	0.000
Skin		claims,description	2	0.000
preservative		claims,description	2	0.000
preservative agent		claims,description	2	0.000
leather substitute		claims	1	0.000
pathogenic		abstract,description	23	0.000
pathogens		abstract,description	19	0.000
diseases by infectious agent		abstract,description	7	0.000
insertion		abstract,description	3	0.000
impurity		abstract	1	0.000

Show all concepts from the description section:

CERTIFICATION AND REQUEST FOR CONSIDERATION OF AN INFORMATION DISCLOSURE STATEMENT FILED AFTER PAYMENT OF THE ISSUE FEE UNDER THE QPIDS PROGRAM	
Non-Provisional Application Number: 17/167,647	Filing Date: February 4, 2021
First Named Inventor: Mark Cipriani	Title of Invention: VESSEL RINSING APPARATUS
<p>THE UNDERSIGNED HEREBY CERTIFIES AND REQUESTS THE FOLLOWING FOR THE ABOVE-IDENTIFIED APPLICATION.</p> <ol style="list-style-type: none"> 1. Consideration is requested of the information disclosure statement (IDS) submitted herewith, which is being filed after payment of the issue fee. 2. Check the box next to the appropriate selection: <ul style="list-style-type: none"> ☒ Each item of information contained in the IDS 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 IDS. See 37 CFR 1.97(e)(1). OR ☐ No item of information contained in the IDS 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 IDS was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the IDS. See 37 CFR 1.97(e)(2). OR ☐ See attached certification statement in compliance with 37 CFR 1.97(e). 3. Please charge the IDS fee set forth in 37 CFR 1.17(p) to Deposit Account No. <u>03-3223</u>. 4. A Petition to Withdraw from Issue After Payment of the Issue Fee (37 CFR 1.313(c)(2)), including the petition fee set forth in 37 CFR 1.17(h), is submitted herewith as a Web-based ePetition. WARNING: Do <u>not</u> submit the petition as a follow-on paper via EFS-Web. Submit the petition as a Web-based ePetition by signing on to EFS-Web as a registered user, selecting the radio button next to "Existing application/patent," and then selecting the radio button next to "ePetition (for automatic processing and immediate grant, if all petitions requirements are met)." Failure to use the Web-based ePetition interface will result in automatic entry of the RCE. 5. A request for continued examination (RCE) under 37 CFR 1.114 and the RCE fee under 37 CFR 1.17(e) are submitted herewith. 6. The RCE will be treated as a "conditional" RCE. In the event the examiner determines that any item of information contained in the IDS necessitates the reopening of prosecution in the application, the undersigned understands that (i) the RCE will be processed and treated as an RCE under 37 CFR 1.114 and therefore (ii) the IDS fee under 37 CFR 1.17(p) will be returned in accordance with 37 CFR 1.97(b)(4). In the event that no item of information in the IDS necessitates reopening prosecution, the undersigned understands that the RCE will not be processed and the RCE fee under 37 CFR 1.17(e) will be returned. 7. This certification and request is being filed as a Web-based ePetition and is not accompanied by an amendment to the application. Inclusion of an amendment will result in automatic entry of the RCE. 	
Signature /Douglas A. Yerkeson/	Date August 18, 2022
Name (Print/Typed) Douglas A. Yerkeson	Practitioner Registration Number (if applicable) 39,882
<p>Note: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required in accordance with 37 CFR 1.33 and 11.18. Please see 37 CFR 1.4(d) for the form of the signature. If necessary, submit multiple forms for more than one signature, see below.*</p>	
☒ *Total of <u>1</u> forms are submitted.	

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.

Electronic Patent Application Fee Transmittal

Application Number:	17167647			
Filing Date:	04-Feb-2021			
Title of Invention:	VESSEL RINSING APPARATUS			
First Named Inventor/Applicant Name:	Mark Cipriani			
Filer:	Douglas Alan Yerkeson/Patsy Fonseca			
Attorney Docket Number:	DFC-5558-01-02-US			
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
PETITION FEE- 37 CFR 1.17(H) (GROUP III)	1464	1	140	140
RCE- 1ST REQUEST	1801	1	1360	1360
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				1500



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

Decision Date : August 18, 2022

In re Application of :

Mark Cipriani

DECISION ON PETITION

UNDER CFR 1.313(c)(2)

Application No : 17167647

Filed : 04-Feb-2021

Attorney Docket No : DFC-5558-01-02-US

This is an electronic decision on the petition under 37 CFR 1.313(c)(2), filed August 18, 2022 , to withdraw the above-identified application from issue after payment of the issue fee.

The petition is **GRANTED**.

The above-identified application is withdrawn from issue for consideration of a submission under 37 CFR 1.114 (request for continued examination). See 37 CFR 1.313(c)(2).

Petitioner is advised that the issue fee paid in this application cannot be refunded. If, however, this application is again allowed, petitioner may request that it be applied towards the issue fee required by the new Notice of Allowance.

Telephone inquiries concerning this decision should be directed to the Patent Electronic Business Center (EBC) at 866-217-9197.

This application file is being referred to Technology Center AU 1711 for processing of the request for continuing examination under 37 CFR 1.114 .

Office of Petitions

Electronic Acknowledgement Receipt

EFS ID:	46440891
Application Number:	17167647
International Application Number:	
Confirmation Number:	3847
Title of Invention:	VESSEL RINSING APPARATUS
First Named Inventor/Applicant Name:	Mark Cipriani
Customer Number:	79958
Filer:	Douglas Alan Yerkeson/Patsy Fonseca
Filer Authorized By:	Douglas Alan Yerkeson
Attorney Docket Number:	DFC-5558-01-02-US
Receipt Date:	18-AUG-2022
Filing Date:	04-FEB-2021
Time Stamp:	15:58:58
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$ 1500
RAM confirmation Number	E20228HF58533218
Deposit Account	023223
Authorized User	Patsy Fonseca

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

37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	ePetition Request Form	petition-request.pdf	39656	no	2
			70e5d4c57aa958d231c2115d1d4bc76f97750444		
Warnings:					
Information:					
2	Information Disclosure Statement (IDS) Form (SB08)	20220818_DFC-5558-01-02-US_Supplemental_IDS.pdf	145460	no	2
			4bcc53fd88e75fed98eb93b01bd9b0875ff9e0c0		
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
3	Foreign Reference	20220818_DFC-5558-01-02-US_CN86102485.pdf	250213	no	7
			08da310cbe37902a8fd571df65ebc318f100c0f		
Warnings:					
Information:					
4	Foreign Reference	20220818_DFC-5558-01-02-US_Translation_of_CN86102485.pdf	1165886	no	4
			4386bc1ad44cd394275b875cdbe3af8a734699ba		
Warnings:					
Information:					
5	Foreign Reference	20220818_DFC-5558-01-02-US_DE3628724.pdf	566491	no	10
			63df57c83b77c8418f5491fbf8dc1de888f70f6d		
Warnings:					
Information:					
6	Foreign Reference	20220818_DFC-5558-01-02-US_Translation_of_DE3628724.pdf	2182855	no	6
			4e4b3a4ec169572fef17074e31f378de2e985d6f		
Warnings:					

Information:					
7	Foreign Reference	20220818_DFC-5558-01-02-US_CN101035735.pdf	763653	no	13
			ae2a0aa3c545136c7be2880774222e0f7a089463		
Warnings:					
Information:					
8	Foreign Reference	20220818_DFC-5558-01-02-US_Translation_of_CN101035735.pdf	2564897	no	7
			ca2f9202c041c71d995ecc6115bffd247922e7fd		
Warnings:					
Information:					
9	Foreign Reference	20220818_DFC-5558-01-02-US_DE202007015486.pdf	379745	no	17
			ecfa880da0029cdfbabeef38458b44919c2da82f2		
Warnings:					
Information:					
10	Foreign Reference	20220818_DFC-5558-01-02-US_Translation_of_DE202007015486.pdf	4183722	no	9
			444b2c6cd12ca3fa7784917fd3ff45cced678477		
Warnings:					
Information:					
11	Foreign Reference	20220818_DFC-5558-01-02-US_CN106572780.pdf	951211	no	17
			79383d779c91d2c3e5c8e35281729902cc19d82f		
Warnings:					
Information:					
12	Foreign Reference	20220818_DFC-5558-01-02-US_Translation_of_CN106572780.pdf	3655139	no	10
			787cbaf92c329c6c55395a4f5d24731ef4fc2741		
Warnings:					
Information:					
13	Request for Continued Examination (RCE)	20220818_DFC-5558-01-02-US_RCE.pdf	76991	no	3
			5e452c7f5d4ffe7d0638480cbab9e579c3d72bfd		
Warnings:					
This is not a USPTO supplied RCE SB30 form.					
Information:			Sanitary Ware - Ex. 1003 - Page 118		

14	Quick Path Information Disclosure Statement	20220818_DFC-5558-01-02-US_Consideration_of_IDS.pdf	168066	no	2
			50c1f1950bf8f0f82210f58f51ddf9bb7dae8daf		
Warnings:					
Information:					
15	Fee Worksheet (SB06)	fee-info.pdf	40205	no	2
			b2049dc85782b3ac0d39f965514346d5ac44cbbf		
Warnings:					
Information:					
Total Files Size (in bytes):			17134190		
<p>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.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					

Doc Code: PET.AUTO Document Description: Petition automatically granted by EFS-Web		PTO/SB/140 U.S. Patent and Trademark Office Department of Commerce
Electronic Petition Request	PETITION TO WITHDRAW AN APPLICATION FROM ISSUE AFTER PAYMENT OF THE ISSUE FEE UNDER 37 CFR 1.313(c)	
Application Number	17167647	
Filing Date	04-Feb-2021	
First Named Inventor	Mark Cipriani	
Art Unit	1711	
Examiner Name	CRISTI TATE-SIMS	
Attorney Docket Number	DFC-5558-01-02-US	
Title	VESSEL RINSING APPARATUS	
<p>An application may be withdrawn from issue for further action upon petition by the applicant. To request that the Office withdraw an application from issue, applicant must file a petition under this section including the fee set forth in § 1.17(h) and a showing of good and sufficient reasons why withdrawal of the application from issue is necessary.</p> <p>APPLICANT HEREBY PETITIONS TO WITHDRAW THIS APPLICATION FROM ISSUE UNDER 37 CFR 1.313(c).</p> <p>A grantable petition requires the following items:</p> <p>(1) Petition fee; and</p> <p>(2) One of the following reasons:</p> <p>(a) Unpatentability of one or more claims, which must be accompanied by an unequivocal statement that one or more claims are unpatentable, an amendment to such claim or claims, and an explanation as to how the amendment causes such claim or claims to be patentable;</p> <p>(b) Consideration of a request for continued examination in compliance with § 1.114 (for a utility or plant application only); or</p> <p>(c) Express abandonment of the application. Such express abandonment may be in favor of a continuing application, but not a CPA under 37 CFR 1.53(d).</p>		
Petition Fee		
<div style="border: 1px solid black; padding: 5px;"> ☐ Small Entity </div>		
<div style="border: 1px solid black; padding: 5px;"> ☐ Micro Entity </div>		
<div style="border: 1px solid black; padding: 5px;"> ☒ Regular Undiscounted </div>		
Reason for withdrawal from issue		

- ☐ One or more claims are unpatentable
- ☒ Consideration of a request for continued examination (RCE) (List of Required Documents and Fees)
- ☐ Applicant hereby expressly abandons the instant application (any attorney/agent signing for this reason must have power of attorney pursuant to 37 CFR 1.32(b)).

RCE request, submission, and fee.

- ☐ I certify, in accordance with 37 CFR 1.4(d)(4) that :
- ☐ The RCE request ,submission, and fee have already been filed in the above-identified application on
- ☒ Are attached.

THIS PORTION MUST BE COMPLETED BY THE SIGNATORY OR SIGNATORIES

I certify, in accordance with 37 CFR 1.4(d)(4) that I am:

- ☐ An attorney or agent registered to practice before the Patent and Trademark Office who has been given power of attorney in this application.
- ☒ An attorney or agent registered to practice before the Patent and Trademark Office, acting in a representative capacity.
- ☐ A sole inventor
- ☐ A joint inventor; I certify that I am authorized to sign this submission on behalf of all of the inventors as evidenced by the power of attorney in the application
- ☐ A joint inventor; all of whom are signing this e-petition

Signature	/Douglas A. Yerkeson/
Name	Douglas A. Yerkeson
Registration Number	39882



UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/167,647	08/23/2022	11421405	DFC-5558-01-02-US	3847

79958 7590 08/03/2022
Masco Corporation
Bose McKinney & Evans LLP
111 Monument Circle
Suite 2700
Indianapolis, IN 46204

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

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 Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Patents Stakeholder Experience (OPSE), Stakeholder Support Division (SSD) at (571)-272-4200.

INVENTOR(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional inventors):

Mark Cipriani, Carmel, IN;
Anthony Joseph Tentler, Windfall, IN;
Jack William Judge, Indianapolis, IN;
Thad J. Eads, Urbana, IN;
Michael Scot Rosko, Greenwood, IN;

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

Delta Faucet Company, Indianapolis, IN;

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.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

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 including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

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

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

79958 7590 04/20/2022
Masco Corporation
Bose McKinney & Evans LLP
111 Monument Circle
Suite 2700
Indianapolis, IN 46204

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 EFS-Web or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
VIA ELECTRONIC FILING
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/167,647	02/04/2021	Mark Cipriani	DFC-5558-01-02-US	3847

TITLE OF INVENTION: VESSEL RINSING APPARATUS

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	07/20/2022

EXAMINER	ART UNIT	CLASS-SUBCLASS
TATE-SIMS, CRISTI J	1711	134-104200

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 Bose McKinney & Evans LLP

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

Delta Faucet Company

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

Indianapolis, IN

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) ☐ Advance Order - # of Copies

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

☒ Electronic Payment via EFS-Web ☐ 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. 02-3223

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

☐ Applicant certifying micro entity status. See 37 CFR 1.29

☐ Applicant asserting small entity status. See 37 CFR 1.27

☐ Applicant changing to regular undiscounted fee status.

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

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

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

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

Authorized Signature /Douglas A. Yerkeson/

Date July 20, 2022

Typed or printed name Douglas A. Yerkeson

Registration No. 39,882

Electronic Patent Application Fee Transmittal

Application Number:	17167647			
Filing Date:	04-Feb-2021			
Title of Invention:	VESSEL RINSING APPARATUS			
First Named Inventor/Applicant Name:	Mark Cipriani			
Filer:	Douglas Alan Yerkeson/Patsy Fonseca			
Attorney Docket Number:	DFC-5558-01-02-US			
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
UTILITY APPL ISSUE FEE	1501	1	1200	1200

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				1200

Electronic Acknowledgement Receipt

EFS ID:	46231064
Application Number:	17167647
International Application Number:	
Confirmation Number:	3847
Title of Invention:	VESSEL RINSING APPARATUS
First Named Inventor/Applicant Name:	Mark Cipriani
Customer Number:	79958
Filer:	Douglas Alan Yerkeson/Patsy Fonseca
Filer Authorized By:	Douglas Alan Yerkeson
Attorney Docket Number:	DFC-5558-01-02-US
Receipt Date:	20-JUL-2022
Filing Date:	04-FEB-2021
Time Stamp:	13:51:01
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$ 1200
RAM confirmation Number	E20227JD51420679
Deposit Account	023223
Authorized User	Patsy Fonseca

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

37 CFR 1.20 (Post Issuance fees)

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	20220720_DFC-5558-01-02-US_Issue_Fee_Transmittal.pdf	1183390	no	1
			263125a5fd1ad23ad771ab418e3921953fb074f0		
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	37658	no	2
			5221c1a8581e6f7715df688b910f0b2871a67226		
Warnings:					
Information:					
Total Files Size (in bytes):			1221048		
<p>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.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					



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

79958 7590 04/20/2022
Masco Corporation
Bose McKinney & Evans LLP
111 Monument Circle
Suite 2700
Indianapolis, IN 46204

EXAMINER	
TATE-SIMS, CRISTI J	
ART UNIT	PAPER NUMBER

1711

DATE MAILED: 04/20/2022

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/167,647	02/04/2021	Mark Cipriani	DFC-5558-01-02-US	3847

TITLE OF INVENTION: VESSEL RINSING APPARATUS

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	07/20/2022

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

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

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

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

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 including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

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

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

79958 7590 04/20/2022
Masco Corporation
Bose McKinney & Evans LLP
111 Monument Circle
Suite 2700
Indianapolis, IN 46204

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 EFS-Web 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.
17/167,647	02/04/2021	Mark Cipriani	DFC-5558-01-02-US	3847

TITLE OF INVENTION: VESSEL RINSING APPARATUS

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	07/20/2022

EXAMINER	ART UNIT	CLASS-SUBCLASS
TATE-SIMS, CRISTI J	1711	134-104200

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,

1 _____

(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

2 _____

3 _____

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

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

(A) NAME OF ASSIGNEE

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

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

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

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

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

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

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

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

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

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

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____



UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/167,647	02/04/2021	Mark Cipriani	DFC-5558-01-02-US	3847
79958	7590	04/20/2022	EXAMINER	
Masco Corporation Bose McKinney & Evans LLP 111 Monument Circle Suite 2700 Indianapolis, IN 46204			TATE-SIMS, CRISTI J	
			ART UNIT	PAPER NUMBER
			1711	
DATE MAILED: 04/20/2022				

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

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

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

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

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

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

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

Privacy Act Statement

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

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

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 17/167,647	Applicant(s) Cipriani et al.	
	Examiner CRISTI J TATE-SIMS	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 terminal disclaimer filed March 29, 2022.
☐ 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 1-24. 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 <u>3/15/2022</u> . 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 _____.
---	--

/CRISTI J TATE-SIMS/
Primary Examiner, Art Unit 1711

DETAILED ACTION

Reasons for Allowance

1. The following is an examiner's statement of reasons for allowance: the closest prior art of record Thomas (US 2011/0061754 cited in IDS) in view of FR2543426A3 (cited in IDS Espacenet translation) fails to teach or suggest a drain channel configured to receive water from the drain bowl and discharge water above and into a sink basin support by the mounting deck.

Conclusion

2. 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."

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CRISTI J TATE-SIMS whose telephone number is (571)272-1722. The examiner can normally be reached M-F 9am-6pm.

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

Application/Control Number: 17/167,647
Art Unit: 1711

Page 3

assistance from a USPTO Customer Service Representative, call 800-786-9199 (IN USA OR CANADA)
or 571-272-1000.

CRISTI J. TATE-SIMS
Primary Examiner
Art Unit 1711

/CRISTI J TATE-SIMS/
Primary Examiner, Art Unit 1711

<i>Search Notes</i> 	Application/Control No. 17/167,647	Applicant(s)/Patent Under Reexamination Cipriani et al.
	Examiner CRISTI J TATE-SIMS	Art Unit 1711

CPC - Searched*		
Symbol	Date	Examiner
A47L 15/0065, 15/16, 15/42, 15/4278 with keywords	02/26/2022	CTS
E03C 1/0404, 1/04 with keywords	02/26/2022	CTS
B05B 12/002, 1/28 with keywords	02/26/2022	CTS
B08B 9/34 with keywords	02/26/2022	CTS
A47L 15/0065, 15/16, 15/42, 15/4278 with keywords	04/08/2022	CTS
E03C 1/0404, 1/04 with keywords	04/08/2022	CTS
B05B 12/002, 1/28 with keywords	04/08/2022	CTS
B08B 9/34 with keywords	04/08/2022	CTS

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner
134	104.2 with keywords	02/26/2022	CTS
134	104.2 with keywords	04/08/2022	CTS

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

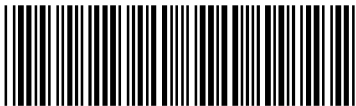
/CRISTI J TATE-SIMS/ Primary Examiner, Art Unit 1711	
---	--

<i>Search Notes</i> 	Application/Control No. 17/167,647	Applicant(s)/Patent Under Reexamination Cipriani et al.
	Examiner CRISTI J TATE-SIMS	Art Unit 1711

Search Notes		
Search Notes	Date	Examiner
EAST assignee search	02/26/2022	CTS
EAST inventor search	02/26/2022	CTS
EAST search history attached	02/26/2022	CTS
EAST search history attached	04/08/2022	CTS

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
134	104.2 with keywords	02/26/2022	CTS
A47L	15/0065, 15/16, 15/42, 15/4278 with keywords	02/26/2022	CTS
E03C	1/0404, 1/04 with keywords	02/26/2022	CTS
B05B	12/002, 1/28 with keywords	02/26/2022	CTS
B08B	9/34 with keywords	02/26/2022	CTS
134	104.2 with keywords	04/08/2022	CTS
A47L	15/0065, 15/16, 15/42, 15/4278 with keywords	04/08/2022	CTS
E3C	1/0404, 1/04 with keywords	04/08/2022	CTS
B05B	12/002, 1/28 with keywords	04/08/2022	CTS
B08B	9/34 with keywords	04/08/2022	CTS

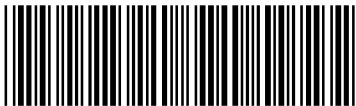
/CRISTI J TATE-SIMS/ Primary Examiner, Art Unit 1711	
---	--

Issue Classification 	Application/Control No. 17/167,647	Applicant(s)/Patent Under Reexamination Cipriani et al.
	Examiner CRISTI J TATE-SIMS	Art Unit 1711

CPC						
Symbol					Type	Version
E03C	/	1	/	0404	F	2013-01-01
B05B	/	12	/	002	A	2013-01-01
B05B	/	1	/	28	A	2013-01-01
B08B	/	9	/	34	A	2013-01-01

CPC Combination Sets				
Symbol	Type	Set	Ranking	Version
/				

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	24	
/CRISTI J TATE-SIMS/ Primary Examiner, Art Unit 1711	08 April 2022	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

Issue Classification 	Application/Control No. 17/167,647	Applicant(s)/Patent Under Reexamination Cipriani et al.
	Examiner CRISTI J TATE-SIMS	Art Unit 1711

INTERNATIONAL CLASSIFICATION			
CLAIMED			
B08B	/	9	/ 34
NON-CLAIMED			
/	/		

US ORIGINAL CLASSIFICATION	
CLASS	SUBCLASS

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

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	24	
/CRISTI J TATE-SIMS/ Primary Examiner, Art Unit 1711	08 April 2022	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

Issue Classification 	Application/Control No. 17/167,647	Applicant(s)/Patent Under Reexamination Cipriani et al.
	Examiner CRISTI J TATE-SIMS	Art Unit 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	10	19	19										
2	2	11	11	20	20										
3	3	12	12	21	21										
4	4	13	13	22	22										
5	5	14	14	23	23										
6	6	15	15	24	24										
7	7	16	16												
8	8	17	17												
9	9	18	18												

NONE (Assistant Examiner) _____ (Date) _____		Total Claims Allowed: 24	
/CRISTI J TATE-SIMS/ Primary Examiner, Art Unit 1711 (Primary Examiner) _____ (Date) 08 April 2022		O.G. Print Claim(s) 1	O.G. Print Figure 1

Doc code: IDS

PTO/SB/08a (01-22)

Doc description: Information Disclosure Statement (IDS) Filed

Approved for use through 05/31/2024. 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		17167647	
	Filing Date		2021-02-04	
	First Named Inventor	Mark Cipriani		
	Art Unit	1711		
	Examiner Name	Cristi J. Tate-Sims		
	Attorney Docket Number	DFC-5558-01-02-US		

U.S.PATENTS						
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					

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

U.S.PATENT APPLICATION PUBLICATIONS						
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	20140283877	A1	2014-09-25	Sonoda	
	2	20170162427	A1	2017-06-08	Gleissner et al.	

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

FOREIGN PATENT DOCUMENTS								
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	262372	GB		1926-12-06	Hardie		☐
	2	264756	GB		1927-01-27	George Mallor File and Hornfrays Ltd		☐

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number		17167647
Filing Date		2021-02-04
First Named Inventor	Mark Cipriani	
Art Unit	1711	
Examiner Name	Cristi J. Tate-Sims	
Attorney Docket Number	DFC-5558-01-02-US	

3	624156	FR	A	1927-07-09	Hardie	☒
4	2704782	FR	A1	1994-11-10	Montanier SA	☒
5	101765550	KR	B1	2017-08-07	Han Se Wook	☒

If you wish to add additional Foreign Patent Document citation information please click the Add button

NON-PATENT LITERATURE DOCUMENTS

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		☐

If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

Examiner Signature	/CRISTI J TATE-SIMS/	Date Considered	04/08/2022
--------------------	----------------------	-----------------	------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)

Application Number	17167647
Filing Date	2021-02-04
First Named Inventor	Mark Cipriani
Art Unit	1711
Examiner Name	Cristi J. Tate-Sims
Attorney Docket Number	DFC-5558-01-02-US

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).

☐ See attached certification statement.

☒ 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	/Douglas A. Yerkeson/	Date (YYYY-MM-DD)	2022-03-15
Name/Print	Douglas A. Yerkeson	Registration Number	39882

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.**

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.
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 inspections 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.

Bibliographic Data

Application No: 17/167,647

Foreign Priority claimed: ☐ Yes ☒ No

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

Verified and Acknowledged: /CRISTI J TATE-SIMS/

CTS

Examiner's Signature

Initials

Title: VESSEL RINSING APPARATUS

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
02/04/2021	134	1711	DFC-5558-01-02-US
RULE			

APPLICANTS

Delta Faucet Company, Indianapolis, IN,

INVENTORS

Mark Cipriani, Carmel, IN, UNITED STATES

Anthony Joseph Tentler, Windfall, IN, UNITED STATES

Jack William Judge, Indianapolis, IN, UNITED STATES

Thad J. Eads, Urbana, IN, UNITED STATES

Michael Scot Rosko, Greenwood, IN, UNITED STATES

Raoul Labrie, Shelbyville, IN, UNITED STATES

Alejandra Lazarini, Carmel, IN, UNITED STATES

Michael J. Veros, Carmel, IN, UNITED STATES

CONTINUING DATA

This application is a CON of 16131035 09/14/2018 PAT 10914056

FOREIGN APPLICATIONS

IF REQUIRED, FOREIGN LICENSE GRANTED**

02/17/2021

STATE OR COUNTRY

UNITED STATES

ADDRESS

Masco Corporation
Bose McKinney & Evans LLP
111 Monument Circle
Suite 2700
Indianapolis, IN 46204

UNITED STATES
FILING FEE RECEIVED
\$2,220

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L3	11,629	(A47L15/0065 or A47L15/16 or A47L15/42 or A47L15/4278).cpc. (E03C1/0404 or B05B12/002 or B05B1/28 or B08B9/34 or E03C1/04).cpc. 134/104.2.ccls.	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2022/04/08 21:17
L4	133	L3 and ((sink basin bowl) with (drain\$3 empty\$3) with (channel sprayer nozzle faucet))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2022/04/08 21:17
S1	1	"16131035"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/07/19 18:41
S2	2	"20200087899"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/07/19 18:43
S3	2	"20200087899"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/07/19 20:46
S4	1	("20080142095").PN.	US-PGPUB; USPAT	OR	OFF	2020/07/19 20:48
S5	3	(US-737247-\$ US-708844-\$ US-20040168711-\$ US-20180092505-\$ US-8646476-\$ US-784755-\$).DID.	US-PGPUB; USPAT	OR	OFF	2020/07/19 20:50
S6	70	"737247" "708844" "784755"	US-PGPUB; USPAT	OR	OFF	2020/07/19 20:51
S7	1	("20080142095").PN.	US-PGPUB; USPAT	OR	OFF	2020/07/19 20:53

S8	5	(US-0092505-\$ US-0168711-\$ US-20040168711-\$ US-20180092505-\$ US-8646476-\$).DID.	US-PGPUB; USPAT	OR	OFF	2020/07/19 20:53
S9	1	US adj "708844"	US-PGPUB; USPAT	OR	OFF	2020/07/19 20:54
S10	27	("0708844" "0737247" "0784755" "1075734" "1337303" "1433337" "1460094" "20100012163" "2251059" "2691986" "2723894" "3595253" "4768534" "4836230" "6092540" "6863231" "7104474").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2020/07/19 20:55
S11	640	((("DELTA") near3 ("FAUCET") near3 ("COMPANY"))).AS,AANM.	USPAT	OR	OFF	2020/07/19 20:56
S12	306	((("CIPRIANI") near3 ("Mark")) OR ((("TENTLER") near3 ("Anthony")) OR ((("JUDGE") near3 ("Jack")) OR ((("EADS") near3 ("Thad")) OR ((("ROSKO") near3 ("Michael")) OR ((("LABRIE") near3 ("Raoul")) OR ((("LAZARINI") near3 ("Alejandra")) OR ((("VEROS") near3 ("Michael")))).INV.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2020/07/19 20:56
S13	2	"20110061754"	US-PGPUB; USPAT	OR	OFF	2020/07/19 21:23
S14	14	(A47L15/0065 or A47L15/16 or A47L15/42 or A47L15/4278).cpc. and (E03C1/0404 or B05B12/002 or B05B1/28 or B08B9/34 or E03C1/04).cpc.	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2020/07/19 21:26
S15	0	S11 and S14	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2020/07/19 21:29
S16	1	S12 and S14	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2020/07/19 21:30
S17	0	((("DELTA") near3 ("FAUCET"))).AS,AANM. and (shank with nozzle with valve)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2020/07/19 21:32
S18	0	S14 and (shank with nozzle with valve)	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2020/07/19 21:33
S19	1	S14 and ((shank with nozzle) same valve)	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2020/07/19 21:34

S20	1	S14 and (shank with nozzle)	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2020/07/19 21:34
S21	9,880	(A47L15/0065 or A47L15/16 or A47L15/42 or A47L15/4278).cpc. (E03C1/0404 or B05B12/002 or B05B1/28 or B08B9/34 or E03C1/04).cpc. 134/104.2.ccls.	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2020/07/19 21:35
S22	9	S21 and ((shank with nozzle) same valve)	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2020/07/19 21:36
S23	127	(E03C1/\$.cpc. B05B\$.cpc. A47L15/\$.cpc.) and ((shank with nozzle) same valve)	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2020/07/19 21:37
S24	78	(E03C1/\$.cpc. B05B\$.cpc. A47L15/\$.cpc.) and ((shank with nozzle) with valve)	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2020/07/19 21:37
S25	1	(shank with nozzle) and tate-sims	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2020/07/19 21:38
S26	10	("20050145717" "20060156463" "20140083470" "20140209131" "3548844" "4427221" "5934298" "6581614" "9505013").PN. OR ("10575705").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2020/07/19 21:39
S27	2	"20170172369"	US-PGPUB; USPAT; USOCR	OR	OFF	2020/07/19 21:40
S28	4	("1607096").URPN.	USPAT	OR	OFF	2020/07/19 22:08
S29	25	(F16K\$.cpc.) and ((shank with nozzle) with valve)	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2020/07/19 22:16
S30	45	(F16K\$.cpc.) and ((shank with nozzle) same valve)	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2020/07/19 22:17
S31	1	escutcheon and ((shank with nozzle) same valve)	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2020/07/19 22:20

S32	2	escutcheon and (shank same (nozzle with valve))	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2020/07/19 22:21
S33	98	(F16K\$.cpc.) and (shank same (nozzle with valve))	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2020/07/19 22:22
S34	16	S21 and (shank same (nozzle with valve))	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2020/07/19 22:23
S35	99	("20020167171" "20030102256" "20040011399" "20040117906" "20060117477" "20060131228" "20080178935" "3336935" "3459207" "3520325" "3600723" "3620254" "3757824" "3796380" "3835887" "3998240" "4026328" "4076279" "4103709" "4337795" "4356574" "4387738" "4458839" "4513769" "4552171" "4577653" "4607659" "4609006" "4610429" "4626005" "4635673" "4649958" "4754993" "4760871" "4762143" "4798221" "5027851" "5073991" "5090062" "5095554" "5100565" "5131428" "5219185" "5494259" "5558128" "5566707" "5573037" "5642755" "5653868" "5669417" "5685341" "5687952" "5701926" "5725008" "5746244" "5803120" "5865473" "5871029" "5881754" "5884662" "5937892" "5944225" "5950663" "5960490" "5979489" "6023796" "6062251" "6070614" "6073972" "6079447" "6085784" "6123106" "6138296" "6202686" "6256810" "6305407" "6328059" "6609732" "6729344" "6757921" "6920892" "7000854" "7077153" "7096879" "7121303" "7216663" "7721761").PN. OR ("8646476").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2020/07/19 23:01
S36	1	(12/992442).APP.	USPAT; USOCR	OR	OFF	2020/07/20 10:55
S37	8	BE adj "896360"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	OR	OFF	2020/07/20 11:00

			DERWENT; IBM_TDB			
S38	9,880	(A47L15/0065 or A47L15/16 or A47L15/42 or A47L15/4278).cpc. (E03C1/0404 or B05B12/002 or B05B1/28 or B08B9/34 or E03C1/04).cpc. 134/104.2.ccls.	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2020/07/20 12:44
S39	333	S38 and (brush bristle)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/07/20 12:44
S40	12	S38 and ((brush bristle) with glass)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/07/20 12:44
S41	0	"16997089"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/28 10:31
S42	10,040	(A47L15/0065 or A47L15/16 or A47L15/42 or A47L15/4278).cpc. (E03C1/0404 or B05B12/002 or B05B1/28 or B08B9/34 or E03C1/04).cpc. 134/104.2.ccls.	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2020/09/28 23:08
S43	110	S42 and ((sink basin bowl) with (drain\$3 empty\$3) with (channel sprayer nozzle faucet))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/28 23:08
S44	192	S42 and ((sink basin bowl) with (drain\$3 empty\$3 discharg\$3) with (channel sprayer nozzle faucet))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/28 23:44

S45	241	(F16K\$.cpc.) and ((sink basin bowl) with (drain\$3 empty\$3 discharg\$3) with (channel sprayer nozzle faucet))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/28 23:57
S51	11,516	(A47L15/0065 or A47L15/16 or A47L15/42 or A47L15/4278).cpc. (E03C1/0404 or B05B12/002 or B05B1/28 or B08B9/34 or E03C1/04).cpc. 134/104.2.ccls.	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2022/02/26 16:10
S52	129	S51 and ((sink basin bowl) with (drain\$3 empty\$3) with (channel sprayer nozzle faucet))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2022/02/26 16:10
S53	864	((("DELTA") near3 ("FAUCET") near3 ("COMPANY"))).AS,AANM.	USPAT	OR	OFF	2022/02/26 16:10
S54	423	((("CIPRIANI") near3 ("Mark")) OR ((("TENTLER") near3 ("Anthony")) OR ((("JUDGE") near3 ("Jack")) OR ((("EADS") near3 ("Thad")) OR ((("ROSKO") near3 ("Michael")) OR ((("LABRIE") near3 ("Raoul")) OR ((("LAZARINI") near3 ("Alejandra")) OR ((("VEROS") near3 ("Michael")))).INV.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2022/02/26 16:10
S55	2	S52 and S53	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2022/02/26 16:11
S56	7	S52 and S54	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2022/02/26 16:11
S57	1	"17167647"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2022/02/26 16:27

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	5,643	(A47L15/0065 or A47L15/16 or A47L15/42 or A47L15/4278).cpc. (E03C1/0404 or B05B12/002 or B05B1/28 or B08B9/34 or E03C1/04).cpc. 134/104.2.ccls.	US-PGPUB; USPAT	OR	ON	2022/04/08 21:17
L2	26	L1 and ((sink basin bowl) with (discharg\$3) with (channel sprayer nozzle faucet)).clm.	US-PGPUB; USPAT	OR	ON	2022/04/08 21:17
S46	5,079	(A47L15/0065 or A47L15/16 or A47L15/42 or A47L15/4278).cpc. (E03C1/0404 or B05B12/002 or B05B1/28 or B08B9/34 or E03C1/04).cpc. 134/104.2.ccls.	US-PGPUB; USPAT	OR	ON	2020/09/28 23:09
S47	17	S46 and ((sink basin bowl) with (drain\$3 empty\$3) with (channel sprayer nozzle faucet)).clm.	US-PGPUB; USPAT	OR	ON	2020/09/28 23:09
S48	20	S46 and ((sink basin bowl) with (discharg\$3) with (channel sprayer nozzle faucet)).clm.	US-PGPUB; USPAT	OR	ON	2020/09/28 23:41
S49	305	((("CIPRIANI") near3 ("Mark")) OR ((("TENTLER") near3 ("Anthony")) OR ((("JUDGE") near3 ("Jack")) OR ((("EADS") near3 ("Thad")) OR ((("ROSKO") near3 ("Michael")) OR ((("LABRIE") near3 ("Raoul")) OR ((("LAZARINI") near3 ("Alejandra")) OR ((("VEROS") near3 ("Michael")))).INV.	US-PGPUB; USPAT	OR	OFF	2020/09/28 23:45
S50	38	S46 and S49	US-PGPUB; USPAT	OR	OFF	2020/09/28 23:45
S58	5,599	(A47L15/0065 or A47L15/16 or A47L15/42 or A47L15/4278).cpc. (E03C1/0404 or B05B12/002 or B05B1/28 or B08B9/34 or E03C1/04).cpc. 134/104.2.ccls.	US-PGPUB; USPAT	OR	ON	2022/02/26 16:23
S59	25	S58 and ((sink basin bowl) with (discharg\$3) with (channel sprayer nozzle faucet)).clm.	US-PGPUB; USPAT	OR	ON	2022/02/26 16:23

4/8/2022 9:21:43 PM

C:\Users\csims1\Documents\EAST\Workspaces\17167647.wsp

Application Number * 17/167,647 *	Application/Control No. 17/167,647	Applicant(s)/Patent under Reexamination Cipriani et al.	
	Examiner TATE-SIMS, CRISTI J	Art Unit 1711	
Document Code - DISQ		Internal Document - DO NOT MAIL	

TERMINAL DISCLAIMER	☒ APPROVED	☐ DISAPPROVED
Date Filed: <u>28 March 2022</u>	This patent is subject to a Terminal Disclaimer	

Approved/Disapproved by:
/FELICIA D ROBERTS/ Technology Center: <u>OPLC</u> Telephone: <u>(571)272-0550</u> <u>10,914,056</u>

**TERMINAL DISCLAIMER TO OBVIATE A DOUBLE PATENTING
REJECTION OVER A "PRIOR" PATENT**

Docket Number (Optional)

In re Application of: Mark Cipriani et al.

Application No.: 17/167,647

Filed: February 4, 2021

For: VESSEL RINSING APPARATUS

The applicant, Delta Faucet Company, owner of 100 percent interest in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of **prior patent** No. 10,914,056 as the term of said **prior patent** is presently shortened by any terminal disclaimer. The applicant hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the **prior patent** are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the applicant does not disclaim the terminal part of the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term of the **prior patent**, "as the term of said **prior patent** is presently shortened by any terminal disclaimer," in the event that said **prior patent** later:

- expires for failure to pay a maintenance fee;
- is held unenforceable;
- is found invalid by a court of competent jurisdiction;
- is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321;
- has all claims canceled by a reexamination certificate;
- is reissued; or
- is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

Check either box 1 or 2 below, if appropriate.

1. ☐ The undersigned is the applicant. If the applicant is an assignee, the undersigned is authorized to act on behalf of the assignee.

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

2. ☒ The undersigned is an attorney or agent of record. Reg. No. 39,882

/Douglas A. Yerkeson/March 28, 2022

Signature

Date

Douglas A. Yerkeson

Typed or printed name

Attorney

Title

317-684-5110

Telephone Number

- ☒ Terminal disclaimer fee under 37 CFR 1.20(d) included.

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

This collection of information is required by 37 CFR 1.321. 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 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.

Electronic Acknowledgement Receipt

EFS ID:	45332269
Application Number:	17167647
International Application Number:	
Confirmation Number:	3847
Title of Invention:	VESSEL RINSING APPARATUS
First Named Inventor/Applicant Name:	Mark Cipriani
Customer Number:	79958
Filer:	Douglas Alan Yerkeson/Patsy Fonseca
Filer Authorized By:	Douglas Alan Yerkeson
Attorney Docket Number:	DFC-5558-01-02-US
Receipt Date:	28-MAR-2022
Filing Date:	04-FEB-2021
Time Stamp:	15:01:35
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
------------------------	----

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Terminal Disclaimer Filed	20220328_DFC-5558-01-02-US_Terminal_Disclaimer.pdf	118457 42c448dfe70504b7ee1809fa78d6185c832845bb	no	1

Warnings:

Information:	
Total Files Size (in bytes):	118457
<p>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.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>	



UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
17/167,647	02/04/2021	Mark Cipriani	DFC-5558-01-02-US

CONFIRMATION NO. 3847

POA ACCEPTANCE LETTER



79958
Masco Corporation
Bose McKinney & Evans LLP
111 Monument Circle
Suite 2700
Indianapolis, IN 46204

Date Mailed: 03/28/2022

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 03/24/2022.

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.

/dtdinh/

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:

79958

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):

Delta Faucet Company



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

Date (Optional)

October 15, 2018

Name

John Sznewajs

Title

Vice President - Delta Faucet Company

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 1 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.

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: Delta Faucet CompanyApplication No./Patent No.: 17/167,647Filed/Issue Date: February 4, 2021Titled: VESSEL RINSING APPARATUSDelta Faucet Company, 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 056078, Frame 0562, 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: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

2. 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.

[Page 1 of 2]

This collection of information is required by 37 CFR 3.73(b). 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 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.**

STATEMENT UNDER 37 CFR 3.73(c)

3. 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.

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.

/Douglas A. Yerkeson/

March 24, 2022

Signature

Date

Douglas A. Yerkeson

39,882

Printed or Typed Name

Title or Registration Number

Privacy Act Statement

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

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

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Acknowledgement Receipt

EFS ID:	45309607
Application Number:	17167647
International Application Number:	
Confirmation Number:	3847
Title of Invention:	VESSEL RINSING APPARATUS
First Named Inventor/Applicant Name:	Mark Cipriani
Customer Number:	79958
Filer:	Douglas Alan Yerkeson/Patsy Fonseca
Filer Authorized By:	Douglas Alan Yerkeson
Attorney Docket Number:	DFC-5558-01-02-US
Receipt Date:	24-MAR-2022
Filing Date:	04-FEB-2021
Time Stamp:	14:46:47
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
------------------------	----

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	20220324_DFC-5558-01-02-US_Transmittal_of_POA.pdf	151128	no	1
			e38ad247ebcd3073b51c4b02630a45f0748d8db5		

Warnings:

Information:					
2	Power of Attorney	20220324_DFC-5558-01-02-US_POA.pdf	1096042	no	1
			93a5d4f9b2c30db8868ec5cdb60899b558cbb0cd		
Warnings:					
Information:					
3	Assignee showing of ownership per 37 CFR 3.73	20220324_DFC-5558-01-02-US_Statement_Under_373.pdf	110501	no	3
			e108977ed261e4feb1699fc34698cb1a870e63fa		
Warnings:					
Information:					
Total Files Size (in bytes):			1357671		
<p>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.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					

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	17/167,647
Filing Date	February 4, 2021
First Named Inventor	Mark Cipriani
Title	VESSEL RINSING APPARATUS
Art Unit	1711
Examiner Name	Cristi J. Tate-Sims
Attorney Docket Number	DFC-5558-01-02-US

SIGNATURE of Applicant or Patent Practitioner

Signature	/Douglas A. Yerkeson/	Date (Optional)	March 24, 2022
Name	Douglas A. Yerkeson	Registration Number	39,882
Title (if Applicant is a juristic entity)			
Applicant Name (if Applicant is a juristic entity)			

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 1 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.**

Application Number * 17/167,647 *	Application/Control No. 17/167,647	Applicant(s)/Patent under Reexamination Cipriani et al.	
	Examiner TATE-SIMS, CRISTI J	Art Unit 1711	
Document Code - DISQ		Internal Document - DO NOT MAIL	

TERMINAL DISCLAIMER	☐ APPROVED	☒ DISAPPROVED
Date Filed: <u>15 March 2022</u>	This patent is subject to a Terminal Disclaimer	

Approved/Disapproved by: /JEAN PROCTOR/ Technology Center: <u>OPLC</u> Telephone: <u>(571)272-1040</u> <u>The person who signed th terminal disclaimer (only for applications filed on or after September 16, 2012, is not the applicant, patentee or an attorney or agent of record. 37 CFR 1.321(a) and (b). (See FP 14.26.08) failed to state his/her capacity to sign for the juristic entity, and he/she has not been established as being authorized to act on behalf of the applicant. (See FP 14.26.09).</u> <u>(Note: PoA can be given to customer number, wherein all practitioners listed under the customer number have PoA. If PoA is given to a list of practitioners by registration number, the list may not comprise more than 10 practitioners or a separate paper signed by a 37 CFR 1.33(b) party must be in the record identifying which of the practitioners, up to 10, are recognized as having Po A. If the applicant is a juristic entity (e.g., corporation), a representative of the applicant cannot sign the TD unless it is established that the representative is a party authorized to act on behalf of the applicant.</u>

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875				Application or Docket Number 17/167,647		Filing Date 02/04/2021		☐ To be Mailed			
ENTITY: ☒ LARGE ☐ SMALL ☐ MICRO											
APPLICATION AS FILED - PART I											
		(Column 1)		(Column 2)							
FOR		NUMBER FILED		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)		(Column 2)		(Column 3)					
AMENDMENT	03/15/2022	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR		PRESENT EXTRA		RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	* 24	Minus	** 24	= 0	x \$100 =		0			
	Independent (37 CFR 1.16(h))	* 3	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)		(Column 2)		(Column 3)					
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR		PRESENT EXTRA		RATE (\$)		ADDITIONAL FEE (\$)	
	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.								LIE			
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".								/ANNIE C SINGLETON/			
*** 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.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

App. No. : 17/167,647 Confirmation No. 3847
Title : VESSEL RINSING APPARATUS
Applicant : Delta Faucet Company
File Date : February 4, 2021
Art Unit : 1711
Examiner : Cristi J. Tate-Sims
Docket No. : DFC-5558-01-02-US
Customer No. : 79958

RESPONSE TO OFFICE ACTION

MAIL STOP AMENDMENT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

In response to the Office Action of March 3, 2022 (“Office Action”), please amend the above-identified application as follows:

Amendments to the Claims begins on page 2 of this paper.

Remarks/Arguments begin on page 7 of this paper.

Amendments to the Claims

This listing of claims replaces all prior versions, and listings, of claims in the present application.

Listing of the Claims:

1. (Original) A vessel rinsing apparatus comprising:
 - a mounting member extending along a longitudinal axis, the mounting member configured to extend through a mounting aperture formed within a mounting deck;
 - a fluid discharge member including a central body supporting a plurality of nozzles and a trigger, the central body being movable relative to the mounting member;
 - a valve member operably coupled to the fluid discharge member and configured to control water flow through the central body to the plurality of nozzles in response to movement of the trigger; and
 - a drain bowl operably coupled to the mounting member, the drain bowl including a lower wall, an upwardly extending wall operably coupled to the lower wall, and a drain channel extending through the upwardly extending wall, the drain channel configured to receive water from the drain bowl and discharge water above and into a sink basin supported by the mounting deck.
2. (Original) The vessel rinsing apparatus of claim 1, wherein the mounting member comprises a mounting shank defining an opening extending along the longitudinal axis, and the central body of the fluid discharge member is received within the opening of the mounting shank and movable along the longitudinal axis.
3. (Original) The vessel rinsing apparatus of claim 2, wherein the lower wall includes an opening through which the mounting shank extends.
4. (Original) The vessel rinsing apparatus of claim 1, wherein the drain bowl is defined by an escutcheon.

5. (Original) The vessel rinsing apparatus of claim 1, wherein the drain channel slopes away from the fluid discharge member and the drain bowl.
6. (Original) The vessel rinsing apparatus of claim 1, wherein the fluid discharge member is in selective fluid communication with an outlet of a faucet mixing valve.
7. (Original) The vessel rinsing apparatus of claim 6, further comprising a diverter valve fluidly coupled intermediate the outlet of the faucet mixing valve and the fluid discharge member.
8. (Original) The vessel rinsing apparatus of claim 1, wherein the drain channel includes a channel lower wall, opposing side walls, and an undercut formed in a lower surface of the channel lower wall for preventing water flowing through the drain channel from running back toward a rear wall of the sink basin.
9. (Original) The vessel rinsing apparatus of claim 1, wherein the drain channel includes a movable tray, such that a length of the drain channel is adjustable.
10. (Original) The vessel rinsing apparatus of claim 1, wherein the trigger of the fluid discharge member includes a plurality of arms extending radially outwardly from the central body of the fluid discharge member.
11. (Original) A vessel rinsing apparatus comprising:
 - a drain bowl including a lower wall, an upwardly extending wall operably coupled to the lower wall, and a drain channel extending through the upwardly extending wall, the drain channel configured to receive water from the drain bowl and discharge water above and into a sink basin supported by a mounting deck;
 - a mounting member operably coupled to the drain bowl, the mounting member configured to couple the drain bowl to the mounting deck;

a fluid discharge member including a central body supporting a plurality of nozzles and a trigger, the central body being movable relative to the mounting member;

a valve member operably coupled to the fluid discharge member and configured to control water flow through the central body to the plurality of nozzles; and

wherein the drain channel slopes away from the fluid discharge member and the drain bowl to facilitate water drainage into the sink basin.

12. (Original) The vessel rinsing apparatus of claim 11, wherein the mounting member extends along a longitudinal axis, the mounting member configured to extend through a mounting aperture formed within the mounting deck.

13. (Original) The vessel rinsing apparatus of claim 12, wherein the mounting member comprises a mounting shank defining an opening extending along the longitudinal axis, and the central body of the fluid discharge member is received within the opening of the mounting shank and movable along the longitudinal axis.

14. (Original) The vessel rinsing apparatus of claim 11, wherein the valve member comprises a valve shaft configured to move with the trigger.

15. (Original) The vessel rinsing apparatus of claim 11, wherein the drain bowl is defined by an escutcheon.

16. (Original) The vessel rinsing apparatus of claim 11, wherein the fluid discharge member is in selective fluid communication with an outlet of a faucet mixing valve.

17. (Original) The vessel rinsing apparatus of claim 16, further comprising a diverter valve fluidly coupled intermediate the outlet of the faucet mixing valve and the fluid discharge member.

18. (Original) The vessel rinsing apparatus of claim 11, wherein the drain channel includes a channel lower wall, opposing side walls, and an undercut formed in a lower surface of the channel lower wall for preventing water flowing through the drain channel from running back toward a rear wall of the sink basin.

19. (Original) The vessel rinsing apparatus of claim 11, wherein the drain channel includes a movable tray, such that a length of the drain channel is adjustable.

20. (Original) A fluid delivery device comprising:

a vessel rinsing apparatus including:

a drain bowl including a lower wall and an upwardly extending wall, and a drain channel extending through the upwardly extending wall, the drain channel configured to receive water from the drain bowl and discharge water above and into a sink basin supported by a mounting deck;

a mounting member operably coupled to the drain bowl, the mounting member configured to couple the drain bowl to the mounting deck;

a fluid discharge member including a central body supporting a plurality of nozzles and a trigger, the central body being movable relative to the mounting member; and

a valve member operably coupled to the fluid discharge member and configured to control water flow through the central body to the plurality of nozzles; and

a faucet including:

a delivery spout having a water outlet;

a valve fluidly coupled to the delivery spout, the valve configured to control water flow to the water outlet; and

wherein the fluid discharge member of the vessel rinsing apparatus is in selective fluid communication with the valve of the faucet.

21. (Original) The fluid delivery device of claim 20, further comprising a diverter valve fluidly coupled intermediate the valve of the faucet and the fluid discharge member of the vessel rinsing apparatus.

22. (Original) The fluid delivery device of claim 20, further comprising:
a removable plate supported by the trigger of the fluid discharge member; and
wherein the removable plate comprises one of a strainer including a base and a plurality of circumferentially spaced drain openings, and an elastomeric brush including a plurality of upwardly extending cleaning projections and a plurality of drain openings positioned intermediate adjacent ones of the cleaning projections.
23. (Original) The vessel rinsing apparatus of claim 20, wherein the mounting member extends along a longitudinal axis, the mounting member configured to extend through a mounting aperture formed within the mounting deck.
24. (Original) The vessel rinsing apparatus of claim 23, wherein the mounting member comprises a mounting shank defining an opening extending along the longitudinal axis, and the central body of the fluid discharge member is received within the opening of the mounting shank and movable along the longitudinal axis.

REMARKS/ARGUMENTS

Reconsideration and reversal of the rejections presented in the Office Action dated March 3, 2022 are respectfully requested in light of the following.

Claims 1-24 are pending, wherein claims 1, 11 and 20 are presented in independent form.

Double Patenting

Claims 1-4, 8-11 and 20 have been rejected on the ground of non-statutory double patenting as being unpatentable over claims 1-3 and 8-10 of U.S. Patent No. 10,914,056.

Not in acquiescence of the Examiner's position, but in order to advance prosecution, Applicant hereby submits a Terminal Disclaimer over U.S. Patent No. 10,914,056. As such, it is respectfully submitted that the double patenting rejection has been obviated.

Information Disclosure Statement

The Examiner's kind attention is directed to the Information Disclosure Statement submitted concurrently herewith.

Conclusion

In view of the foregoing, it is respectfully submitted that all of the solicited claims are in condition for allowance. Such action is requested.

If any fees are due or extensions of time necessary to effect a timely response, Applicant petitions therefore and authorizes any additional fees due in connection with this submission to be charged to Deposit Account No. 02-3223, Bose McKinney & Evans LLP.

If any questions or comments should arise during consideration of this matter, the Examiner is invited to call the undersigned at the number provided below.

Respectfully submitted,

/Douglas A. Yerkeson/

Douglas A. Yerkeson, Reg. No. 39,882

Attorney for Applicant

Bose McKinney & Evans LLP

111 Monument Circle, Suite 2700

Indianapolis, IN 46204

Telephone: 317-684-5110

Date Submitted: March 15, 2022

**TERMINAL DISCLAIMER TO OBVIATE A DOUBLE PATENTING
REJECTION OVER A "PRIOR" PATENT**

Docket Number (Optional)

In re Application of: Mark Cipriani et al.

Application No.: 17/167,647

Filed: February 4, 2021

For: VESSEL RINSING APPARATUS

The applicant, Delta Faucet Company, owner of 100 percent interest in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of **prior patent** No. 10,914,056 as the term of said **prior patent** is presently shortened by any terminal disclaimer. The applicant hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the **prior patent** are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the applicant does not disclaim the terminal part of the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term of the **prior patent**, "as the term of said **prior patent** is presently shortened by any terminal disclaimer," in the event that said **prior patent** later:

- expires for failure to pay a maintenance fee;
- is held unenforceable;
- is found invalid by a court of competent jurisdiction;
- is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321;
- has all claims canceled by a reexamination certificate;
- is reissued; or
- is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

Check either box 1 or 2 below, if appropriate.

1. ☐ The undersigned is the applicant. If the applicant is an assignee, the undersigned is authorized to act on behalf of the assignee.

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

2. ☒ The undersigned is an attorney or agent of record. Reg. No. 39,882

/Douglas A. Yerkeson/March 15, 2022

Signature

Date

Douglas A. Yerkeson

Typed or printed name

Attorney

Title

317-684-5110

Telephone Number

- ☒ Terminal disclaimer fee under 37 CFR 1.20(d) included.

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

This collection of information is required by 37 CFR 1.321. 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 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.

Electronic Patent Application Fee Transmittal

Application Number:	17167647			
Filing Date:	04-Feb-2021			
Title of Invention:	VESSEL RINSING APPARATUS			
First Named Inventor/Applicant Name:	Mark Cipriani			
Filer:	Douglas Alan Yerkeson/Patsy Fonseca			
Attorney Docket Number:	DFC-5558-01-02-US			
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
SUBMISSION- INFORMATION DISCLOSURE STMT	1806	1	260	260
STATUTORY OR TERMINAL DISCLAIMER	1814	1	170	170
Total in USD (\$)				430

Electronic Acknowledgement Receipt

EFS ID:	45226446
Application Number:	17167647
International Application Number:	
Confirmation Number:	3847
Title of Invention:	VESSEL RINSING APPARATUS
First Named Inventor/Applicant Name:	Mark Cipriani
Customer Number:	79958
Filer:	Douglas Alan Yerkeson/Patsy Fonseca
Filer Authorized By:	Douglas Alan Yerkeson
Attorney Docket Number:	DFC-5558-01-02-US
Receipt Date:	15-MAR-2022
Filing Date:	04-FEB-2021
Time Stamp:	12:46:48
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$430
RAM confirmation Number	E20223EC47153932
Deposit Account	023223
Authorized User	Patsy Fonseca

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:
37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	20220315_DFC-5558-01-02-US_IDS.pdf	81549	no	4
			16564e42fea79fab984e0e36788b597b77d78cf3		
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
2	Foreign Reference	20220315_DFC-5558-01-02-US_GB262372.pdf	237093	no	4
			b2f6df166266686964e0975fb4550f244218a177		
Warnings:					
Information:					
3	Foreign Reference	20220315_DFC-5558-01-02-US_GB264756.pdf	451332	no	6
			f10489e76dfca6dd321468673e5e58ac358bc5b6		
Warnings:					
Information:					
4	Foreign Reference	20220315_DFC-5558-01-02-US_FR624156.pdf	141596	no	3
			d974779f51cb6c99da54fd536d14358c9339c3e4		
Warnings:					
Information:					
5	Foreign Reference	20220315_DFC-5558-01-02-US_Translation_of_FR624156.pdf	260152	no	3
			83d7b589f734d2c830e5fc2b3336bfc3c1d78109		
Warnings:					
Information:					
6	Foreign Reference	20220315_DFC-5558-01-02-US_FR2704782.pdf	463156	no	15
			caa88467ba15f870cb37d61979606a9ae60ee1af		
Warnings:					

Information:					
7	Foreign Reference	20220315_DFC-5558-01-02-US_Translation_of_FR2704782.pdf	2145549	no	5
			43a27849e760a7dba62d161e385c0985e52acfd4		
Warnings:					
Information:					
8	Foreign Reference	20220315_DFC-5558-01-02-US_KR101765550.pdf	596891	no	16
			4507469723080987d8d75ffaef010e265ce7d543		
Warnings:					
Information:					
9	Foreign Reference	20220315_DFC-5558-01-02-US_Translation_of_KR101765550.pdf	4346848	no	7
			c61a5b3f40efed959f32e0ebf68fe6591cbe5e30		
Warnings:					
Information:					
10		20220315_DFC-5558-01-02-US_Response_to_Office_Action.pdf	92099	yes	8
			c989a217dbfa1302bf1c7c85552223d9945f75b4		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Amendment/Request for Reconsideration-After Non-Final Rejection		1	1	
	Claims		2	6	
	Applicant Arguments/Remarks Made in an Amendment		7	8	
Warnings:					
Information:					
11	Terminal Disclaimer Filed	20220315_DFC-5558-01-02-US_Terminal_Disclaimer.pdf	118460	no	1
			0bef8af660306dc482904136e48ad9d466835b99		
Warnings:					
Information:					
12	Fee Worksheet (SB06)	fee-info.pdf	39935	no	2
			3b38f6506e6b967539770c044e4d4c3a8a1f2d9d		

Warnings:	
Information:	
Total Files Size (in bytes):	8974660
<p>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.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		17167647
	Filing Date		2021-02-04
	First Named Inventor	Mark Cipriani	
	Art Unit	1711	
	Examiner Name	Cristi J. Tate-Sims	
	Attorney Docket Number	DFC-5558-01-02-US	

U.S.PATENTS						
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					

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

U.S.PATENT APPLICATION PUBLICATIONS						
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	20140283877	A1	2014-09-25	Sonoda	
	2	20170162427	A1	2017-06-08	Gleissner et al.	

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

FOREIGN PATENT DOCUMENTS								
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	262372	GB		1926-12-06	Hardie		☐
	2	264756	GB		1927-01-27	George Mallor File and Hornfrays Ltd		☐

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number		17167647
Filing Date		2021-02-04
First Named Inventor	Mark Cipriani	
Art Unit	1711	
Examiner Name	Cristi J. Tate-Sims	
Attorney Docket Number	DFC-5558-01-02-US	

3	624156	FR	A	1927-07-09	Hardie	☒
4	2704782	FR	A1	1994-11-10	Montanier SA	☒
5	101765550	KR	B1	2017-08-07	Han Se Wook	☒

If you wish to add additional Foreign Patent Document citation information please click the Add button

NON-PATENT LITERATURE DOCUMENTS

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		☐

If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

Examiner Signature	Date Considered
--------------------	-----------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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.

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	17167647
Filing Date	2021-02-04
First Named Inventor	Mark Cipriani
Art Unit	1711
Examiner Name	Cristi J. Tate-Sims
Attorney Docket Number	DFC-5558-01-02-US

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).

☐ See attached certification statement.

☒ 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	/Douglas A. Yerkeson/	Date (YYYY-MM-DD)	2022-03-15
Name/Print	Douglas A. Yerkeson	Registration Number	39882

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.**

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.
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 inspections 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.

PATENT SPECIFICATION



Application Date : Aug. 6, 1925.

No. 19,785/25.

262,372

Complete Left : April 16, 1926.

Complete Accepted : Dec. 6, 1926.

PROVISIONAL SPECIFICATION.

Improvements in or relating to Apparatus for Washing Glasses and like Vessels.

I, JOSEPH HENRY HARDIE, a British subject, of 10, Marine Terrace, Heysham Road, Morecambe, in the County of Lancaster, do hereby declare the nature of this invention to be as follows:—

This invention has reference to apparatus for washing glasses and like vessels, and to apparatus of the type in which the vessel is supported upon a rotatable holder and subjected to the action of jets of water or washing medium upon its interior and exterior.

The object of this invention is to provide an improved construction of apparatus of the type referred to whereby glasses and like vessels may be more expeditiously and efficiently washed than hitherto.

According to the invention in apparatus of the type referred to, the rotatable holder is mounted axially upon a supply pipe provided with tangentially-arranged turbine jets from which water or the like is adapted to impinge upon the interior of the vessel and cause the same to rotate. Additional jets may be arranged exteriorly of the holder and adapted to assist the rotation of the vessel, but it is preferred to employ spraying devices for the purpose of washing the exterior of the vessel.

One arrangement of glass washing apparatus in accordance with the invention comprises a bowl mounted by an appropriate connection at the upper end of a stand pipe provided at its lower end with suitable connections and valves for controlling the supply of water.

Within the connection aforesaid is

[Price 1/-]

arranged a supply pipe of lesser diameter which extends into the bowl and is provided with a number of tangentially-arranged turbine jets disposed at various levels and opening at different angles to the horizontal. On the supply pipe is rotatably mounted the glass holder which conveniently consists of a number of spring wire arms connected at the top to a disc or the like rotatably mounted on the supply pipe and having their lower ends bent to loosely engage in holes in the rim of a disc or the like also rotatably mounted on the pipe. The holder may be provided with rubber studs or the like upon which the glass rests.

From the connection aforesaid branch pipes lead up the outside of the bowl to sprayers or jets situated on the interior of the bowl and near the top thereof for the emission of water for rinsing the exterior of the glass. The waste water passes away from the bowl through the connection and a waste pipe leading therefrom.

The supply of water to the turbine jets and the sprayers or jets may be regulated by means of a spring closed tap or cock adapted to be opened by the operation of a foot-lever. A hand operated tap or cock may be provided for regulating the pressure or quantity of water delivered on the opening of the foot-operated tap or cock.

Dated this 5th day of August, 1925.

HEYS, SON, DAVIES & PATTISON,
51, Deansgate Arcade, Manchester,
Agents for the Applicant.

COMPLETE SPECIFICATION.

Improvements in or relating to Apparatus for Washing Glasses
and like Vessels.

I, JOSEPH HENRY HARDIE, a British subject, of 10, Marine Terrace, Heysham Road, Morecambe, in the County of Lancaster, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention has reference to apparatus for washing glasses and like vessels, and to apparatus of the kind in which the vessel is supported upon a rotatable holder and subjected to the action of jets of water or washing medium upon its interior and exterior.

In apparatus of the said kind the glass or other vessel is in some cases rotated wholly by the action of the external jets which impinge tangentially upon the outside surface of the vessel, the internal jets striking against the inside surface of the vessel radially. In other cases the rotation has been effected by the combined actions of the internal and external jets respectively striking tangentially against the inner and outer surfaces of the vessel, and the perforated pipes or nozzles through which the external jets issue have been adjustable for the purpose of varying the direction of the external jets in order to suit vessels of various shapes and sizes. In each case considerable splashing of the washing medium is caused by the external jets impinging tangentially against the outer surface of the vessel, and the object of this invention is to provide an apparatus in which splashing will be reduced to a minimum.

In apparatus according to this invention the glass or other vessel is rotated entirely by the action of the internal jets which impinge tangentially against the inside surface of the vessel, and the outside surface of the vessel is rinsed by fine sprays which strike the surface radially or substantially radially.

One arrangement of glass washing apparatus in accordance with the invention is illustrated in, and will now be described with reference to, the accompanying drawings in which Fig. 1 is a vertical elevation partly in section of such arrangement, Fig. 2 is an elevation at right angles to Fig. 1, and Fig. 3 is a plan of the bowl.

Referring to the drawings, 4 indicates the bowl mounted by means of a union and nut 5 and connection 6 upon the upper end of a stand pipe 7 provided at its lower end with a water supply connection 8 and a spring-closed tap or cock 9 adapted to be opened by the operation of a foot-lever 10. Within the connection 6 aforesaid is arranged a supply pipe 11 of lesser diameter which extends into the bowl 4 and is provided with a number of tangentially-arranged turbine jets 12 disposed at various levels and opening at different angles to the horizontal. On the supply pipe 11 is rotatably mounted the glass holder which conveniently consists of a number of spring wire arms 13 connected at the top to a frame or the like 14 rotatably mounted on the supply pipe 11 and having their lower ends bent to engage, as shown at 15, in holes in the rim of a disc or the like 16 also rotatably mounted on the pipe 11. The holder may be provided with rubber studs or the like 17 upon which the glass 18 rests (as shown in dotted lines in Fig. 1).

From the connection 6 aforesaid branch pipes 19 lead up the outside of the bowl 4 to sprayers 20 directed into the interior of the bowl 4 and situated at or near the top thereof for the emission radially or substantially radially to the exterior of the glass 18 of fine sprays of water for rinsing same. The sprayers 20 are preferably adjustable about horizontal axes. The waste water passes away from the bowl 4 through outlet holes 4^a into the connection 6 and a waste pipe 21 leading therefrom.

The supply of water to the turbine jets 12 and the sprayers 20 is regulated by means of the spring-closed tap or cock 9, whilst a hand-operated tap or cock (not shown) may be provided for regulating the pressure or quantity of water delivered on the opening of the said foot-operated tap or cock 9.

Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is:—

1. Apparatus for washing glasses and like vessels, of the type referred to,

wherein the glass or other vessel is rotated entirely by the action of the internal jets which impinge tangentially against the inside surface of the vessel and the
5 outside surface of the vessel is rinsed by fine sprays which strike the surface radially or substantially radially, substantially as herein set forth.

2. The improved apparatus for wash-

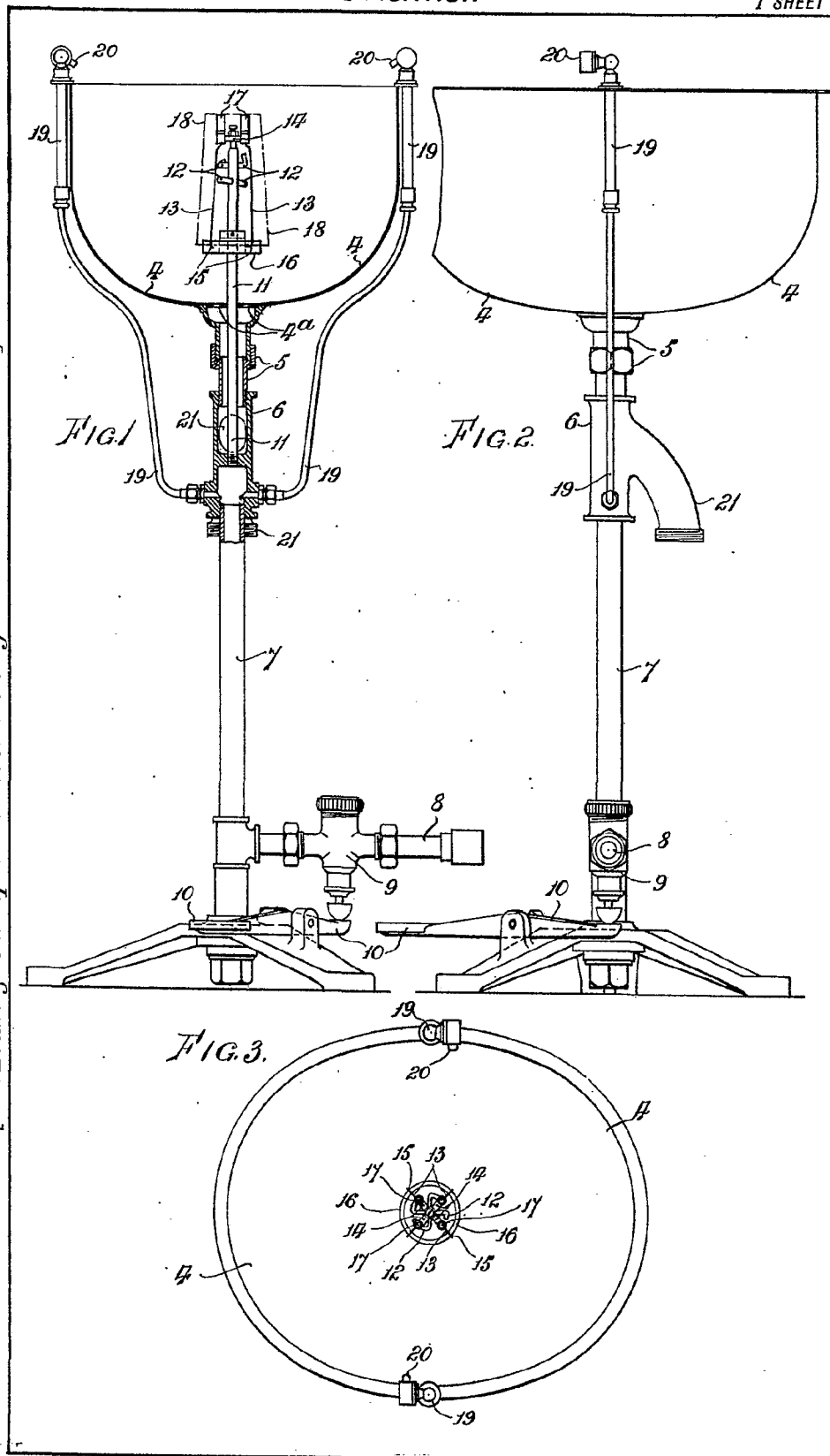
ing glasses and the like, constructed 10 arranged and operating substantially as herein described and illustrated in the accompanying drawings.

Dated this 15th day of April, 1926.

HEYS, SON, DAVIES & PATTISON, 15
51, Deansgate Arcade, Manchester,
Agents for the Applicant.

Redhill: Printed for His Majesty's Stationery Office, by Love & Malcomson, Ltd.—1926.

[This Drawing is a reproduction of the Original on a reduced scale.]



Charles & Read Ltd. Photo Litho.

PATENT SPECIFICATION



Application Date: Sept. 13, 1926. No. 22,495/26.

264,756

" " Oct. 4, 1926. No. 24,467/26.

One Complete Left: Oct. 20, 1926.

Complete Accepted: Jan. 27, 1927.

PROVISIONAL SPECIFICATION.

No. 22,495, A.D. 1926.

Improvements in or relating to Apparatus for Washing Hollow Vessels.

We, WALKER & HOMFRAYS LIMITED, a British company, of Woodside Brewery, Eccles New Road, Salford, in the County of Lancaster, and GEORGE MELLOR FILE, a British subject, of 31, Beech Road, Chorlton-cum-Hardy, in the County of Lancaster, do hereby declare the nature of this invention to be as follows:—

This invention has reference to machines or apparatus for washing hollow vessels, and has for its object to provide a simple and easily operated machine which may be used for washing hollow vessels such as, glasses or cups and which will efficiently wash both the outside and the inside during one operation.

A machine or apparatus according to this invention comprises a cover or hood open at one end having within it a plurality of pipes, tubes or the like with perforated walls, and connected to a valve controlled water supply, one of the perforated pipes or tubes being mounted on the axis of the cover or hood and having a valve rod projecting from its lower end connected to the valve controlling the water supply, which valve is normally held down by a spring, whereby when a vessel to be washed is pushed into the cover or hood and around the central pipe or tube the valve will be opened and the water will be projected on the vessel in a multitude of fine jets from the perforations in the pipes.

Conveniently the apparatus is provided with pads or buffers to protect the vessels being washed, from damage.

According to one embodiment of the invention as applied to a machine or apparatus intended for washing glasses or

cups, the hood or cover is of cylindrical formation being conveniently domed at one end and open and provided with a bell mouth at the other. The domed end of the hood or cover has projecting from it a pipe or tube from which branch pipes or tubes are taken to hot and cold water supplies.

Within the hood or cover is a central pipe or tube and down the wall is a number of similar tubes, say four, and closed at the ends. These tubes are all perforated and are connected through the dome of the hood or cover to the supply pipe.

The centre pipe, which is conveniently shorter than the surrounding pipes, has a rod passing through it connected to a valve normally closed by an adjustable spring pressing on the valve and housed within the top end of the projecting pipe. The outer end of this valve rod has a head conveniently in the form of a rubber button with one or more small projections.

As already stated, the pipes are perforated and conveniently the perforations in the centre pipe are arranged to throw jets of water downward, the perforations in the surrounding pipes being arranged to throw the jets of water in the opposite direction. The surrounding pipes are conveniently nested between buffers, such as lengths of rubber tubing, which will protect the vessel being washed from damage.

A suitable drain pipe from the hood or cover is also provided.

When it is desired to wash say a glass, the latter is pushed into the hood or cover

[Price 1/-]

with its mouth inward and surrounding the central pipe. When the bottom of the glass is brought into contact with the rubber button on the valve rod and is then pressed further in, the valve is opened and a multitude of jets of water is directed against the glass both from without and within. The glass is thus thoroughly scoured and neither the inside nor any portion likely to come in contact with the user's lips is touched by the hand of the person using the apparatus.

A glass so washed may be stood on a grid to dry and requires no rubbing or cleaning with a cloth.

By means of this apparatus every vessel washed is scoured in perfectly clean fresh water and as no cloths, mops or the like are used in connection with the apparatus, the vessels are cleaned and are kept in a most hygienic condition.

It is to be understood that the surrounding pipes need not be straight down the wall of the hood or cover as they may be given a pitch which by the water issuing therefrom will have a strong swirling effect. Moreover the perforations in the pipes may be arranged in the same way for the same purpose.

While the invention has been described in a form suitable for washing glasses or cups it may also be used for washing other articles not so deep as those referred to such as plates, saucers, dishes and the like.

Dated this 11th day of September, 1926.

For the Applicants,
BARLOW, GILLET & PERCIVAL,
Chartered Patent Agents.

PROVISIONAL SPECIFICATION.

No. 24,467, A.D. 1926.

Improvements in or relating to Apparatus for Washing Hollow Vessels.

We, WALKER & HOMFRAYS LIMITED, a British company, of Woodside Brewery, Eccles New Road, Salford, in the County of Lancaster, and GEORGE MELLOR FIE, a British subject, of 31, Beech Road, Chorlton-cum-Hardy, in the County of Lancaster, do hereby declare the nature of this invention to be as follows:—

This invention has reference to machines or apparatus for washing hollow vessels and is cognate to our pending Provisional Specification Numbered 22,495 dated the 13th September 1926, and has for its object to provide improvements in machines or apparatus of the kind described in the Provisional Specification accompanying the above application.

In a machine or apparatus of the kind referred to according to this invention the valve is adapted to be operated by the pressure of the article to be washed on the valve stem and is operated by hand or foot power, the valve being provided with means to allow the escape of water which may have lodged behind the valve in the valve chamber.

Also according to this invention the cover or hood may be made with double walls, the space between the walls being connected to the water supply valve and the inner wall of the double walls having openings whereby the water is directed on

to the article to be washed. The space between the double walls is divided into passages or channels along which the water flows.

According to one embodiment of the invention and as used in connection with apparatus wherein the valve is opened by the pressure of the article to be cleaned on the valve rod, the valve rod which is mounted in the central pipe has a cross arm projecting through slots in the central pipe whereby the movement of the valve rod up and down the central pipe is limited, the valve rod itself having a free upper end which is not connected to the valve directly. Above this free end of the valve rod is a hole running through the valve in which hole a stem is located having at its top end a ball or similar valve and projecting at its lower end into a cavity or housing in the lower part of the valve where it is surrounded by a spring, which normally holds it down and thus seats the ball or other valve on the top of the hole.

When it is desired to use the machine by pressing the article to be washed against the end of the valve rod, the valve rod in moving upwards comes into contact with the end of the stem of the ball or other valve and opens it against the normal closing pressure of the spring. This allows any water which may have

lodged behind the valve during the preceding washing operation to escape through the hole; the continued upward movement of the valve rod brings the
 5 the aforementioned closed member into contact with the top end of the slots in the central tube in which it runs and opens the valve bodily to allow the water to pass into the spraying members.
 10 Instead of operating the valve by pressing the article to be washed against the valve rod and in conjunction therewith the valve rod and/or the valve may be operated by a hand lever or treadle
 15 connected to the valve mechanism in any convenient manner.

It is to be understood that the top of the valve is provided with a spring surrounding the ball or other valve the pressure of which will keep the main valve closed.
 20

According to a further embodiment of the invention the cover or hood instead of being provided with pipes or tubes on

its inside as described in our co-pending Application No. 22,495/1926 may be made from an inside or outside portion, one within the other, and having a space between them. In such a construction the inside wall of the hood or cover is
 25 provided with suitable slots or perforations which will direct the water passed into the space between the walls of the cover on to the article to be washed.
 30

If desired the space between the outside and inside wall may be divided up into channels or passages along which the water is directed, the inside wall over such channels or passages being perforated or provided with slots through
 35 which the water will issue in a multitude of jets as already described.
 40

Dated this 2nd day of October, 1926.

For the Applicants,
 BARLOW, GILLETT & PERCIVAL, 45
 Chartered Patent Agents.

COMPLETE SPECIFICATION.

Improvements in or relating to Apparatus for Washing Hollow Vessels.

We, WALKER & HOMFRAYS LIMITED, a British company, of Woodside Brewery, Eccles New Road, Salford, in the County
 50 of Lancaster, and GEORGE MELLOR FIE, a British subject, of 31, Beech Road, Chorlton-cum-Hardy, in the County of Lancaster, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by
 55 the following statement:—

This invention has reference to apparatus for washing hollow vessels of the kind
 60 in which the vessel to be washed is placed over a pipe or nozzle situated between other pipes or nozzles having perforated walls, the water being ejected from the pipe or nozzles to swirl and wash the vessel when the latter is pressed against
 65 a valve control in the end of the central pipe or tube.

In apparatus according to this invention a pipe or nozzle having an open end
 70 and a perforated wall is centrally mounted in a hood or cover, against or in the wall of which surrounding pipes or passages having perforated walls are disposed, the central pipe having a hollow

valve rod slidable therein which actuates
 75 a valve admitting water to the apparatus, through the medium of a relief valve, the pipes or nozzles and the hood or cover being provided with pads or buffers arranged in such a manner that no part
 80 of the vessel being washed can be brought into contact with any metal part thereof.

The invention is more particularly set forth with reference to the accompanying drawings wherein—
 85

Fig. 1 is a longitudinal section of apparatus according to this invention.

Fig. 2 is an inside view of part of the cover broken away, and

Fig. 3 is an end elevation looking into the apparatus from the open end.
 90

A hood or cover 4 which as shown is conveniently bell-mouthed and which has flanges 5 is secured to a mounting by any convenient means such as by screws passing through the flanges. The hood or cover is of cylindrical shape with a domed end provided with a central hole through which an open ended chamber 6 forming part of the valve chamber projects.
 95 Inside the hood or cover 4 is a central pipe 7 and down the wall a number of similar pipes 8, four of such pipes being
 100

shown in the drawings, are arranged. The central pipe 7 is secured at its inner end to the projecting portion 6 of the valve chamber, which as already stated has an open end, and has openings in the wall which connect it with the pipes 8. Within the central pipe 7 is a hollow valve rod 9 provided with an end piece 10 conveniently of rubber or similar material. The hollow valve rod 9 is slotted as shown at 11, the slot co-operating with a pin 12 passing through the central pipe which slot and pin limit the movement of the valve rod 9. The inner end of the valve rod 9 projects into the projecting portion of the valve chamber where it is in close proximity to the end of a small valve stem 13. The valve stem 13 has a ball head 14 or other similar arrangement which seats in the top of the main valve 15, the valve 14 being held normally closed by a spring 16 surrounding the valve stem. The main valve 15 is normally held closed by a spring 17 contained within an housing having an adjustable cap 18 whereby the pressure of the spring 17 may be controlled. The main valve 15 controls the supply of water from the pipes 19 and 20 to the projecting portion of the valve chamber 6. The central pipe 7 and the pipes 8 around the wall are provided with perforations or slits 21, those on the central pipe conveniently being radial slits or perforations and those on the pipes 8 being partly radial or partly set at an angle. Between the pipes 8 and within the hood or cover 4 a plurality of buffers or pads 22 are arranged which will prevent the article being washed from being brought into contact with any metal part whereby it might be broken.

When it is desired to wash a glass or like vessel, the vessel is pushed inside the hood or cover until the bottom of it comes into contact with the end 10 of the hollow valve rod 9 as shown in Fig. 1. If the vessel be now pushed inward the hollow valve rod 9 will also be moved inward and by coming in contact with the end of the valve stem 13 will open the valve 14 thus releasing from behind the main valve 15 any water which may have gained access thereto and reducing the back pressure which must be overcome before the main valve is opened.

Continued pressure of the hollow valve rod 9 will entirely close the spring 16 and thus the pressure will be transferred to the main valve 15 which will be opened against the pressure of the spring 17. This will allow the water from the supply pipes 19 and 20 to pass through the valve chamber and down the pipes 7 and 8 from which it will issue in a multitude

of jets and also through the end of the valve rod 9 and the end piece 10, the water entering the valve rod by the slot 11 to scour and clean thoroughly both the inside and the outside of the vessel to be cleaned.

A vessel so cleaned requires no subsequent drying or wiping with a cloth and may be placed on a grid to dry.

By means of this apparatus every vessel washed is scoured in perfectly clean fresh water with the result that the vessels are easily cleaned and are kept in a most hygienic condition.

While the invention has been described with reference to a hood or cover provided with pipes down the inside walls, it is to be understood that as a modification of this invention, the pipes may be dispensed with and a hood or cover having double walls may be used, the inner wall having openings for the washing water to pass through. Conveniently, such a double hood may have channels formed between the two walls from which the water is ejected.

Instead of the pipes 8 and the openings in the wall of a double hood or cover, where such is used, being straight as shown in the drawings, they may be arranged to have a pitch which will result in the water issuing therefrom having a strong swirling effect.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

1. Apparatus of the kind referred to wherein a pipe or nozzle having an open end and a perforated wall is centrally mounted in a hood or cover against or in the wall of which surrounding pipes or passages having perforated walls are disposed, the central pipe having a hollow valve rod slidable therein which actuates a valve admitting water to the apparatus, through the medium of a relief valve, the pipes or nozzles and the hood or cover being provided with pads or buffers arranged in such a manner that no part of the vessel being washed can be brought into contact with any metal part thereof.

2. Apparatus according to the preceding claim wherein the hood or cover has double walls, the inner wall being perforated at suitable places and in a suitable manner, water being admitted to the space or part of the space between the double walls and passing outwardly through the perforations as herein set forth.

3. Apparatus according to any of the preceding claims wherein the interior of

the hood or cover and the end of the hollow valve rod are provided with pads or buffers whereby the articles being washed are kept out of contact with the metal portions of the apparatus.

5 4. Apparatus for washing hollow vessels and the like constructed and adapted to operate substantially as

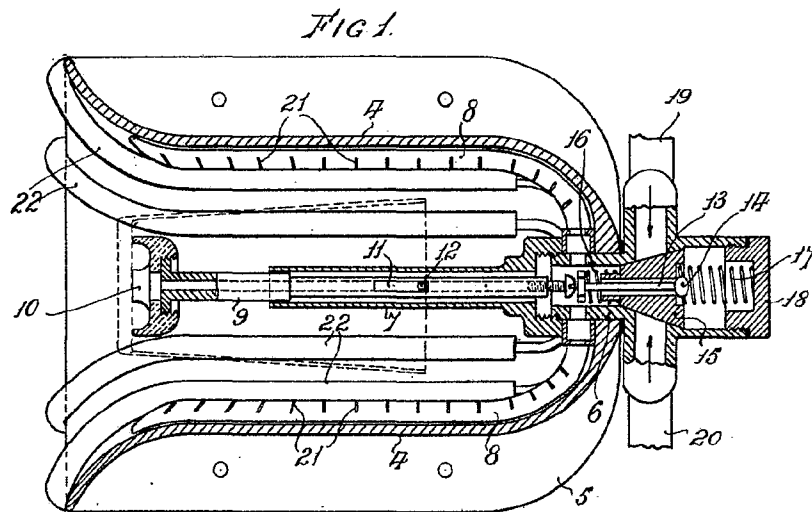
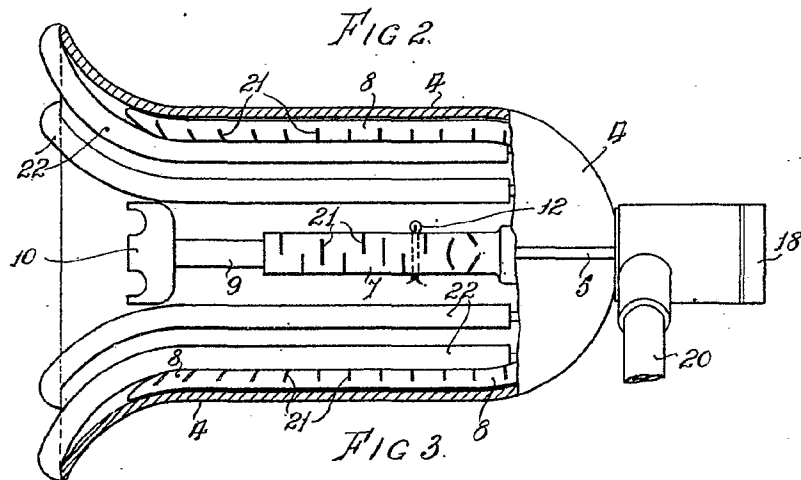
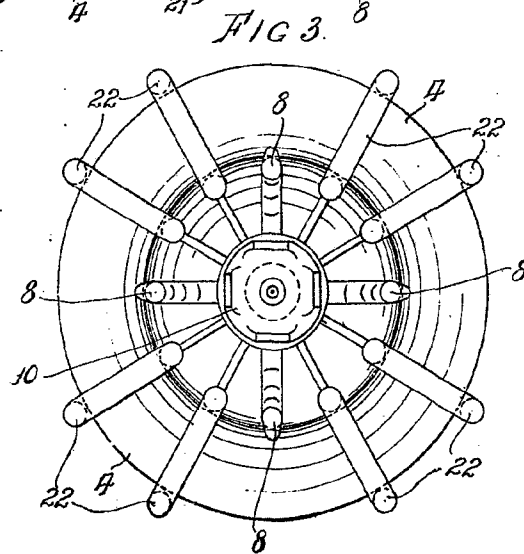
herein set forth and as shown in the accompanying drawings. 10

Dated this 19th day of October, 1926.

For the Applicants,
BARLOW, GILLETT & PERCIVAL,
Chartered Patent Agents,
20/22, St. Ann's Square, Manchester. 15

Redhill: Printed for His Majesty's Stationery Office, by Love & Malcomson, Ltd.—1927.

[This Drawing is a reproduction of the Original on a reduced scale.]



Charles & Read Ltd. Photo Litho.

MINISTÈRE DU COMMERCE ET DE L'INDUSTRIE.

DIRECTION DE LA PROPRIÉTÉ INDUSTRIELLE.

BREVET D'INVENTION.

Gr. IX. — Cl. 1.

N° 624.156

Perfectionnements aux appareils à laver les verres et récipients analogues.

M. JOSEPH HENRY HARDIE résidant en Angleterre.

Demandé le 6 novembre 1926, à 11^h 48^m, à Paris.

Délivré le 29 mars 1927. — Publié le 9 juillet 1927.

La présente invention a trait à un appareil à laver les verres et récipients analogues, et, plus particulièrement à un appareil du genre de ceux dans lesquels, le récipient est supporté par un support rotatif et soumis à l'action de jets d'eau, ou d'un autre moyen de lavage, à l'intérieur et à l'extérieur.

Dans les appareils de ce genre, le verre ou le récipient analogue tourne dans certains cas, uniquement grâce à l'action des jets externes qui frappent tangentiellement sur la surface extérieure du récipient, les jets intérieurs frappant radialement contre la surface intérieure de ce récipient, tandis que dans d'autres cas les jets intérieurs frappent tangentiellement contre la surface intérieure du récipient et aident les jets extérieurs à le faire tourner. Dans chaque cas des éclaboussures nombreuses du moyen de lavage sont causées par les jets extérieurs frappant tangentiellement contre la surface extérieure du récipient, et le but de l'invention est d'offrir un appareil dans lequel les éclaboussures sont réduites au minimum.

Dans l'appareil, selon une forme de réalisation de l'invention, le verre, ou autre récipient, tourne uniquement grâce à l'action des jets intérieurs qui frappent tangentiellement contre la surface intérieure du récipient, et la surface extérieure du récipient est rincée par du liquide finement pulvérisé qui frappe la

surface radialement ou approximativement de manière radiale.

Une forme de construction de l'appareil à laver les verres selon l'invention est représentée sur le dessin annexé dans lequel :

La fig. 1 est une vue en élévation verticale, partie en coupe de l'appareil.

La fig. 2 est une vue de profil correspondante.

La fig. 3 est une vue en plan du bol.

En se reportant au dessin, 4 désigne le bol monté au moyen d'un joint et écrou 5 et d'un raccord 6 sur l'extrémité supérieure d'une conduite support 7 munie à son extrémité inférieure d'un raccord d'amenée d'eau 8 et d'un robinet 9 maintenu fermé par un ressort disposé pour être ouvert par manœuvre d'une pédale 10. A l'intérieur du raccord 6, précédemment cité, est disposée une conduite d'alimentation 11 de diamètre plus petit qui se prolonge dans le bol 4 et qui est munie d'un certain nombre de jets de turbine 12 disposés tangentiellement, situés à divers niveaux, et débouchant sous des angles différents par rapport à l'horizontale.

Sur la conduite d'alimentation 11 est monté de manière rotative le support de verre constitué, de préférence, par un certain nombre de bras en fils métalliques 13 formant ressort reliés au sercnet à un châssis ou élément analogue 14 monté de manière rotative

Prix du fascicule : 5 francs.

sur la conduite d'alimentation 11 et dont les extrémités inférieures sont courbées pour pénétrer comme représenté en 15, dans des trous pratiqués dans le pourtour d'un disque 5 ou élément analogue 16 monté lui aussi de manière rotative sur la conduite 11. Le support peut être muni de plots en caoutchouc ou d'éléments analogues 17, sur lesquels le verre 18 repose, comme représenté en traits mixtes sur la fig. 1. A partir du raccord 6 10 précité, des branchements 19 montent à l'extérieur du bol 4 jusqu'aux gicleurs 20 dirigés vers l'intérieur du bol 4 et situés au, ou près du sommet de celui-ci pour envoyer radialement ou de manière approximativement radiale, de l'eau de rinçage finement pulvérisée au verre 18. Les gicleurs 20 sont réglables, de préférence, suivant des axes horizontaux. L'eau consommée sort du bol 4 par des ouvertures de sortie 4' prévues dans le raccord 6 20 et par un tuyau d'évacuation 21 qui en part.

La quantité d'eau fournie aux jets de turbine 12 et aux gicleurs 20 est réglée au

moyen du robinet 9 maintenu fermé par un ressort, tandis qu'un robinet (non représenté) 25 manœuvrable à la main peut être prévu pour régler la pression ou quantité d'eau délivrée à l'ouverture dudit robinet 9 manœuvrable au pied.

RÉSUMÉ.

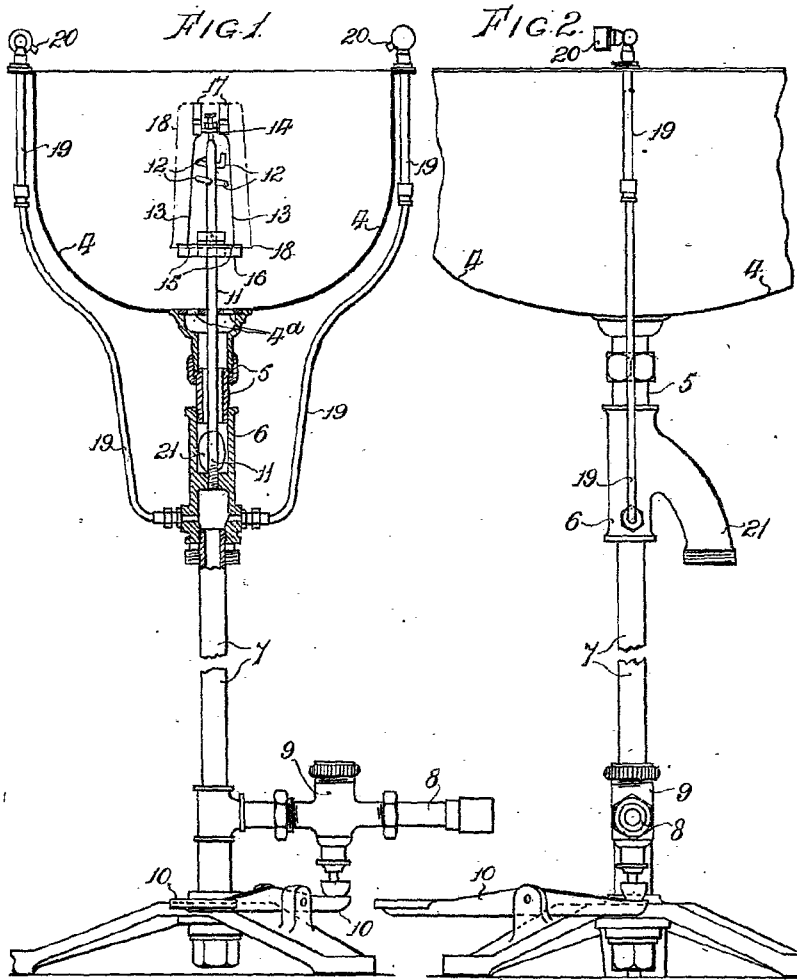
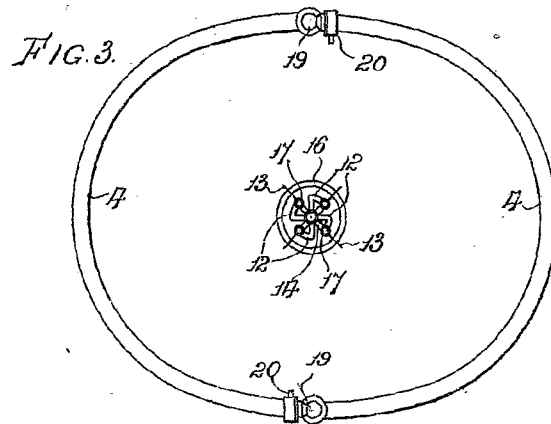
30

Appareil pour laver les verres et les récipients analogues, du genre de ceux dans lesquels le verre ou autre récipient, tourne uniquement grâce à l'action de jets internes frappant tangentiellement contre la surface 35 intérieure du récipient, et dans lesquels la surface extérieure est rincée par des jets finement pulvérisés qui frappent la surface radialement ou approximativement de manière radiale. 40

JOSEPH HENRY HARDIE.

Par procuration :

Société BRANDON, SIMONOT et RINUY.



Notice

This translation is machine-generated. It cannot be guaranteed that it is intelligible, accurate, complete, reliable or fit for specific purposes. Critical decisions, such as commercially relevant or financial decisions, should not be based on machine-translation output.

DESCRIPTION FR624156A

[]

- 13 Improvements in apparatus for washing glasses and similar containers. The present invention relates to an apparatus for washing glasses and similar containers, and more particularly to an apparatus of the kind in which the container is supported by a rotating support and subjected to the action of jets of water, water, or other means of washing, inside and out.
- 17 In devices of this kind, the glass or the similar container rotates in certain cases, solely thanks to the action of the external jets which strike tangentially on the outer surface of the container, the inner jets striking radially against the inner surface of this container, , while in other cases the inner jets strike gently against the inner surface of the container and help the outer jets to rotate it. In each case extensive splashing of the washing medium is caused by the outer jets striking tangentially against the outer surface of the container, and the object of the invention is to provide an apparatus in which splashing is reduced to a minimum.
- 24 In the apparatus, according to one embodiment of the invention, the glass, or other container, rotates solely thanks to the action of the interior jets which strike tangentially against the interior surface of the container, and the exterior surface of the container, is flushed by finely sprayed liquid, which strikes the surface radially or approximately (the radial manner).
- 28 One form of construction of the glass washing apparatus according to the invention is shown in the accompanying drawing in which Fig. 1 is a vertical elevational view, partly in section, of the apparatus.
- 31 fig. 2 is a corresponding profile view; FIG. 3 is a plan view of the bowl.
- 32 Referring to the drawing, there designates the bowl mounted by means of a seal and nut 5 and a connector 6 on the upper end of a support pipe 7 provided at its lower end with a supply connector water 8 and a tap 9 kept closed by a spring arranged to be opened by maneuvering a pedal 10. Inside the connector 6, mentioned above, is arranged a supply pipe 11 of smaller diameter which extends into the bowl 4 and which is provided with a certain number of turbine jets 12 arranged tangentially, located at various levels, and emerging at

different angles in relation to the horizontal.

- 39 On the supply line 12 is rotatably mounted the glass support consisting, - preferably, of a number of wire arms 13 forming a spring connected to its chassis or similar element 14. 15 rotatably mounted on the supply line 12 and whose lower ends are curved to penetrate as shown at 15, in holes made in the periphery of a disc or similar element 16 also mounted - so rotating on the pipe 11. 17 support may be provided with rubber pads or elements 18 analogous to 17, 18 or 19's glass 18 rests, as shown in dashed lines in fig. 5. From the aforementioned connector 6, connections 19 rise at the outside of the bowl 4 as far as the nozzles 20 directed towards the inside of the bowl 4 and located at or near the top of the latter to send radially or approximately radially, finely sprayed rinse water to the glass 18.
- 48 20 The nozzles 20 are preferably adjustable along horizontal axes. The water consumed comes out of the bowl 4 by nozzles, outlets 21 provided in the rearward 6 and by an evacuation pipe 22 which starts there.
- 51 The quantity of water supplied to the turbine jets 23 and to the nozzles 20 is regulated by means of the valve 9 kept closed by a spring, while a hand-operated valve (not shown) can be provided to regulate the pressure or quantity of water delivered at the opening of said tap 9 operable by foot.



Patent Translate

Powered by EPO and Google

Notice

This translation is machine-generated. It cannot be guaranteed that it is intelligible, accurate, complete, reliable or fit for specific purposes. Critical decisions, such as commercially relevant or financial decisions, should not be based on machine-translation output.

CLAIMS FR624156A

10 01SUAi É. Apparatus for washing glasses and similar receptacles, of the kind in which the glass or other receptacle is uniquely rotated by the action of internal jets striking tangentially against the inner surface of the receptacle, and in which the outer surface is rinsed with finely sprayed jets which strike the surface radially or approximately radially.

⑫ DEMANDE DE BREVET D'INVENTION

A1

⑲ Date de dépôt : 07.05.93.

⑳ Priorité :

④③ Date de la mise à disposition du public de la
demande : 10.11.94 Bulletin 94/45.

⑤⑥ Liste des documents cités dans le rapport de
recherche préliminaire : *Ce dernier n'a pas été
établi à la date de publication de la demande.*

⑥① Références à d'autres documents nationaux
apparentés :

⑦① Demandeur(s) : SOCIETE MONTANIER (SA) — FR.

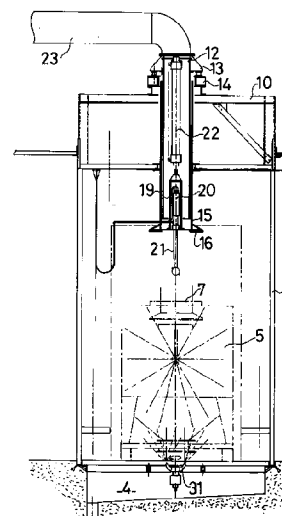
⑦② Inventeur(s) : Montanier Gérard.

⑦③ Titulaire(s) :

⑦④ Mandataire : Ravina SA.

⑤④ Installation pour le lavage intérieur et extérieur de conteneurs.

⑤⑦ L'installation selon l'invention est constituée d'une en-
ceinte recevant le conteneur (5), dans laquelle est montée
une colonne mobile du haut vers le bas et inversement qui
repose en position de travail sur un orifice supérieur (7) du
conteneur, ladite colonne comportant montée sur vérin une
tête de lavage alimentée en fluide de lavage et/ou rinçage
mobile axialement du haut vers le bas et inversement qui
pénètre dans le conteneur et qui est également mobile en
rotation dans celui-ci et d'autre part, un conduit fixe et un
conduit coaxial à la tête de lavage sur vérin (22) qui véhi-
cule depuis un générateur de l'air chaud et/ou sec dans et
autour du conteneur et que dans la dite enceinte sont mon-
tées des rampes verticales de projection de fluide de la-
vage et/ou rinçage et que ladite enceinte est dotée de
moyens de projection rotatifs (31) de fluide de lavage et/ou
rinçage sur la partie inférieure du conteneur et de moyens
d'extraction de l'air humide.



FR 2 704 782 - A1



1 La présente invention a pour objet une installation
pour le lavage intérieur et extérieur de conteneurs.
Les conteneurs concernés sont du type utilisés pour le sto-
ckage de produits pulvérulents et/ou granuleux par exemple
5 dans l'industrie chimique.

Généralement, ces conteneurs métalliques de grande
capacité en principe 500 à 1500 litres, montés sur des
moyens de roulement, sont dotés d'un orifice supérieur de
chargement ou de visite et d'un orifice inférieur générale-
10 ment de plus faible diamètre que le précédent qui peut être
équipé d'une vanne de vidange.

Le lavage au jet avec ou sans détergent se pratique
généralement sur des aires à l'air libre, le jet étant guidé
manuellement par l'utilisateur.

15 Le lavage se pratique également dans des enceintes dotées de
têtes de lavage internes et externes fonctionnant de manière
simultanée avec séchage à l'air chaud.

Le problème des installations connues est qu'elles
ne sont pas conçues pour travailler avec une projection de
20 fluide de lavage à haute pression et qu'elles consomment
beaucoup de fluide et beaucoup d'énergie.

La présente invention vise à remédier à ces inconvé-
nients en réalisant une installation dans le fonctionnement
de laquelle l'intervention humaine soit réduite par exemple
25 à la mise en place et à l'évacuation des conteneurs.

A cet effet, l'installation selon l'invention pour
le lavage et le séchage intérieur et extérieur de conteneurs
se caractérise essentiellement en ce qu'elle est constituée

1 d'une enceinte recevant le conteneur, que dans cette enceinte est montée une colonne mobile creuse du haut vers le bas et inversement qui, en position de travail, repose sur un orifice supérieur du conteneur ou s'arrête au-dessus de
5 l'orifice, que ladite colonne comporte montée sur un vérin une tête de lavage axiale alimentée en fluide sous pression, mobile axialement du haut vers le bas et inversement qui pénètre dans le conteneur et qui est également mobile en rotation dans celui-ci et que la dite colonne comprend un
10 conduit fixe et un conduit coaxial à la tête de lavage, mobile par coulisement de haut en bas et inversement qui véhicule depuis un générateur, un fluide de séchage dans et autour du conteneur et que dans ladite enceinte sont montées des rampes de projection de fluide de lavage et ou de
15 rinçage à mouvement oscillant, que ladite enceinte est dotée de moyens de projection de fluide de lavage et/ou de rinçage sur la partie inférieure du conteneur et des moyens d'extraction de l'air humide.

D'autres caractéristiques et avantages de l'invention apparaîtront à la lecture de la description ci-après d'une forme de réalisation de l'invention donnée à titre d'exemple non limitatif mais explicatifs et illustrée par les dessins joints dans lesquels :

- la figure 1 est une vue en coupe verticale de l'installation selon l'invention,
- la figure 2 est une autre vue en coupe verticale de l'installation selon l'invention,
- la figure 3 est une vue en coupe selon les repères AA de la figure 1,

- 1 - la figure 4 est une vue représentant le générateur d'air de séchage,
- la figure 5 est une vue partielle de la colonne mobile de l'installation.

5 Telle que représentée aux dessins annexés, l'installation selon l'invention présente une enceinte 1 en forme de tour parallélépipédique dotée d'au moins une entrée 2 et de préférence d'une entrée 2 et d'une sortie 3.

 L'enceinte 1 est de préférence étanche et
10 calorifugée.
elle est fixée sur le sol au-dessus d'une fosse 4 de récupération des eaux.

 Le conteneur 5 sur roues est introduit dans l'enceinte qui est dotée de guides latéraux 6 de positionnement
15 (figure 4).

Le sol de l'enceinte peut également être doté de moyens d'indexation pour déterminer la position que doit occuper le conteneur 5.

 Le conteneur 5 présente un orifice supérieur 7 et un
20 orifice inférieur 8 sur lequel peut être montée une vanne de vidange au dosage non représentée.

Au-dessus de la paroi supérieure 9 formant plafond de l'enceinte est réalisé un bâti 10 support des différents organes.

25 Sur le bâti 10 est montée une colonne verticale qui pénètre dans l'enceinte à travers la paroi 9.

La colonne est désignée génériquement par la référence 11.

1 La colonne 11 (figure 1) est constituée d'un premier tube 12
fixé à son extrémité supérieure sur une bride annulaire 13
reliée au bâti 10 par des organes élastiques du type silent-
bloc 14 permettant au tube 12 une certaine amplitude de mou-
5 vement latéral.

Sur le tube fixe 12 est monté un tube concentrique
15 avec interposition de cale 16 de guidage et de
coulissement.

Le tube 15 est coulissant sur le tube 12.

10 L'extrémité du tube 15 est dotée d'une collerette 16
annulaire de plus grand diamètre que le tube.

Cette collerette plane, par appui sur l'orifice supérieur 7
du conteneur, fait étanchéité au moins partielle.

Selon le cas, l'extrémité du tube 15 peut venir au-
15 dessus de l'orifice 7 sans être en contact avec le
conteneur, l'installation selon l'invention étant pourvue
d'une détection de position à cet effet.

A l'intérieur de la colonne constituée de tubes con-
centriques 12/15 est montée dans un boîtier 19 un tube
20 plongeur axial 21 commandé par un moteur pneumatique 20.

Le tube plongeur axial est doté d'une tête de pro-
jection de type connu mobile en rotation à 360° dans les
deux sens.

Le boîtier 19 reçoit la tige d'un vérin 22 dont le corps est
25 axial et fixé par un axe à l'extrémité supérieure du tube 12
constituant la partie fixe de la colonne.

La colonne 11 est reliée par un conduit 23 à un gé-
nérateur d'air chaud de séchage représenté à la figure 4.

1 Ce générateur comprend un ventilateur électrique 24, un filtre à poussière 25, un échangeur 26 alimenté en eau chaude avec une sonde de température en sortie de l'air qui permet une régulation de température.

5 A travers le plafond 9 de l'enceinte, des orifices 27 sont reliés à des conduits 28 d'extraction qui sont raccordés à un extracteur.

Selon une variante de réalisation représentée à la figure 5, le tube 15 mobile de la colonne 11 est doté au-
10 dessus de la collerette 16 de lumières 29 par lesquelles passe de l'air de séchage vers l'extérieur.

Latéralement à l'intérieur de l'enceinte et de préférence à chaque angle de celle-ci, sont montées des rampes 30 de projection de fluide de lavage et/ou de rinçage.

15 Chaque rampe comprend un tube vertical alimenté en eau et rotatif et des tubes perpendiculaires avec buses de projection.

Ces rampes sont montées oscillantes par rotation du tube vertical par tous moyens connus en sorte d'assurer un
20 arrosage de la plus grande surface extérieure possible du conteneur.

Au niveau du plancher de l'enceinte est monté un dispositif d'aspersion permettant le nettoyage de l'orifice de sortie 8 du conteneur ou de la vanne dont il est muni.

25 Ce dispositif d'aspersion est de préférence constitué par un jet rotatif 31 à plusieurs buses de lavage orientables alimenté en fluide sous pression.

Le fonctionnement de l'installation selon l'invention est le suivant :

1 Après mise en place du conteneur à nettoyer dans l'enceinte
par actionnement du vérin 22, le tube 15 de la colonne 11
coulisse sur le tube fixe 12.

La collerette 16 vient se positionner sur l'orifice
5 supérieur 7 du conteneur.

La possibilité de débattement latéral de la colonne 11 mon-
tée sur les silentblocs 14 par la bride 13, facilite le cen-
trage de la colonne.

Le coulisement du tube 15 sur le tube 12 est obtenu
10 sans coincement au moyen de patins de glissement et d'un
guide qui peut être une tige montée sur une génératrice d'un
des tubes qui se loge dans une rainure de l'autre tube.

La colonne étant en pression sur l'orifice 7 du con-
teneur, la tête d'aspersion du tube plongeur, qui est mobile
15 à 360° est alimentée en fluide à haute pression pendant le
temps nécessaire au lavage interne du conteneur.

Simultanément ou de préférence dans un deuxième temps, les
rampes verticales 30 sont alimentées en fluide à haute
pression.

20 Les rampes 30 peuvent être mises en fonction de ma-
nière simultanée ou successives.

De préférence, pour permettre un fonctionnement en haute
pression, un distributeur alimente en fluide de lavage et/ou
de rinçage successivement chacune des rampes oscillantes
25 30, puis le distributeur inférieur rotatif 31 et enfin la
tête de projection rotative dans le conteneur.

Le séquençement des opérations de lavage interne et externe
avec ou sans détergent permet un lavage à haute pression
avec une importante économie de fluide.

1 Après le lavage de l'air chaud et sec généré par la
centrale représenté à la figure 4 est soufflé à travers les
conduits de la colonne 11.

 Comme représenté schématiquement aux figures 5 et 6,
5 l'air est soufflé à travers le conteneur et par les lumières
du tube mobile 15 à l'extérieur du conteneur, ce qui réalise
un séchage extérieur et intérieur.

Conjointement, cet air est extrait par les orifices 27 et
les conduits 28.

10 En fin de cycle, la colonne 11 se rétracte en posi-
tion telle que représentée en traits pleins à la figure 1 ou
à la figure 2 par coulisement du tube 15 sur le tube fixe
12, les portes verrouillées en début de cycle se déverrouil-
lant et le conteneur propre et sec peut être évacué et
15 remplacé par un conteneur à nettoyer.

20

25

1 **REVENDEICATIONS :**

1. Installation pour le lavage intérieur et extérieur de conteneurs caractérisée en ce qu'elle est constituée d'une enceinte recevant le conteneur (5), que dans la
5 dite enceinte est montée une colonne (11) mobile du haut vers le bas et inversement qui repose en position de travail sur une ouverture supérieure (7) du conteneur, la dite colonne comportant d'une part une tête de lavage coaxiale (21) alimentée en fluide de lavage et/ou rinçage, mobile axialement du haut vers le bas et qui pénètre dans la cuve et mobile en rotation à l'intérieur de celle-ci et d'autre part, un conduit fixe (12) et un conduit (15) coaxial à la tête de lavage par lequel est amené de l'air chaud et/ou sec dans le conteneur et autour de celui-ci et que dans ladite enceinte
15 sont montées des rampes (30) verticales de projection de fluide de lavage et que ladite enceinte est dotée de moyens de projection rotatifs (31) de fluide de lavage sur la partie inférieure du conteneur et de moyens d'extraction de l'air humide.

20 2. Installation selon la revendication 1 caractérisée en ce que le tube mobile (15) est doté au-dessus de la collerette (16) de lumières (29) de passage de l'air chaud et sec à l'extérieur.

3. Installation selon la revendication 1 caractérisée en ce que la colonne (11) est montée oscillante sur des
25 silentbloks (14).

4. Installation selon les revendications 1 et 2 caractérisée en ce que le flux d'air chaud et sec est soufflé

1 du haut vers le bas dans le conteneur et aspiré du bas vers
le haut.

5. Installation selon la revendication 1 caracté-
sée en ce que la distribution de fluide de lavage et/ou de
5 rinçage s'effectue successivement à chacune des rampes
oscillantes (30) puis au distributeur inférieur rotatif (31)
et enfin à la tête de projection rotative dans le conteneur.

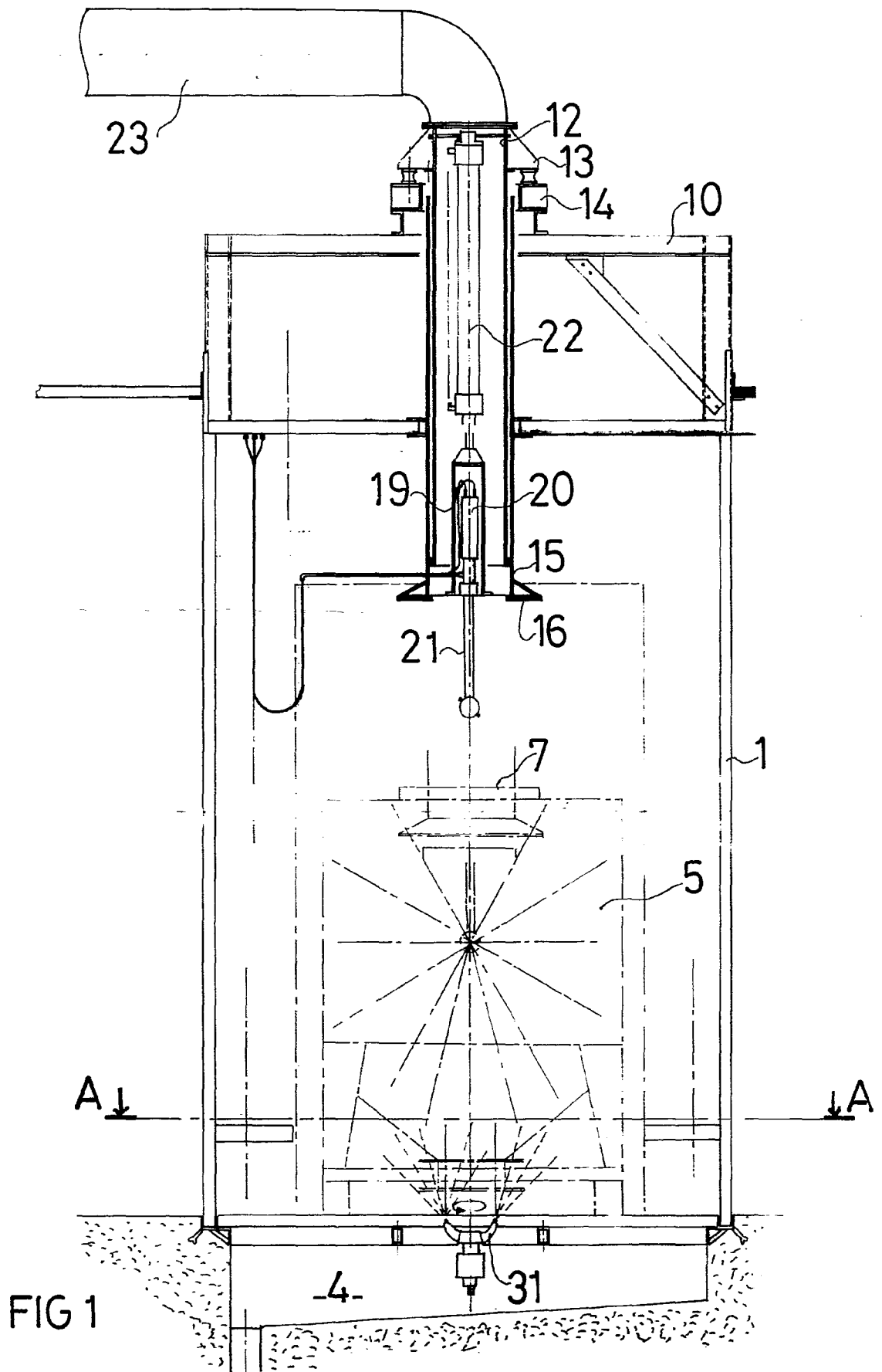
10

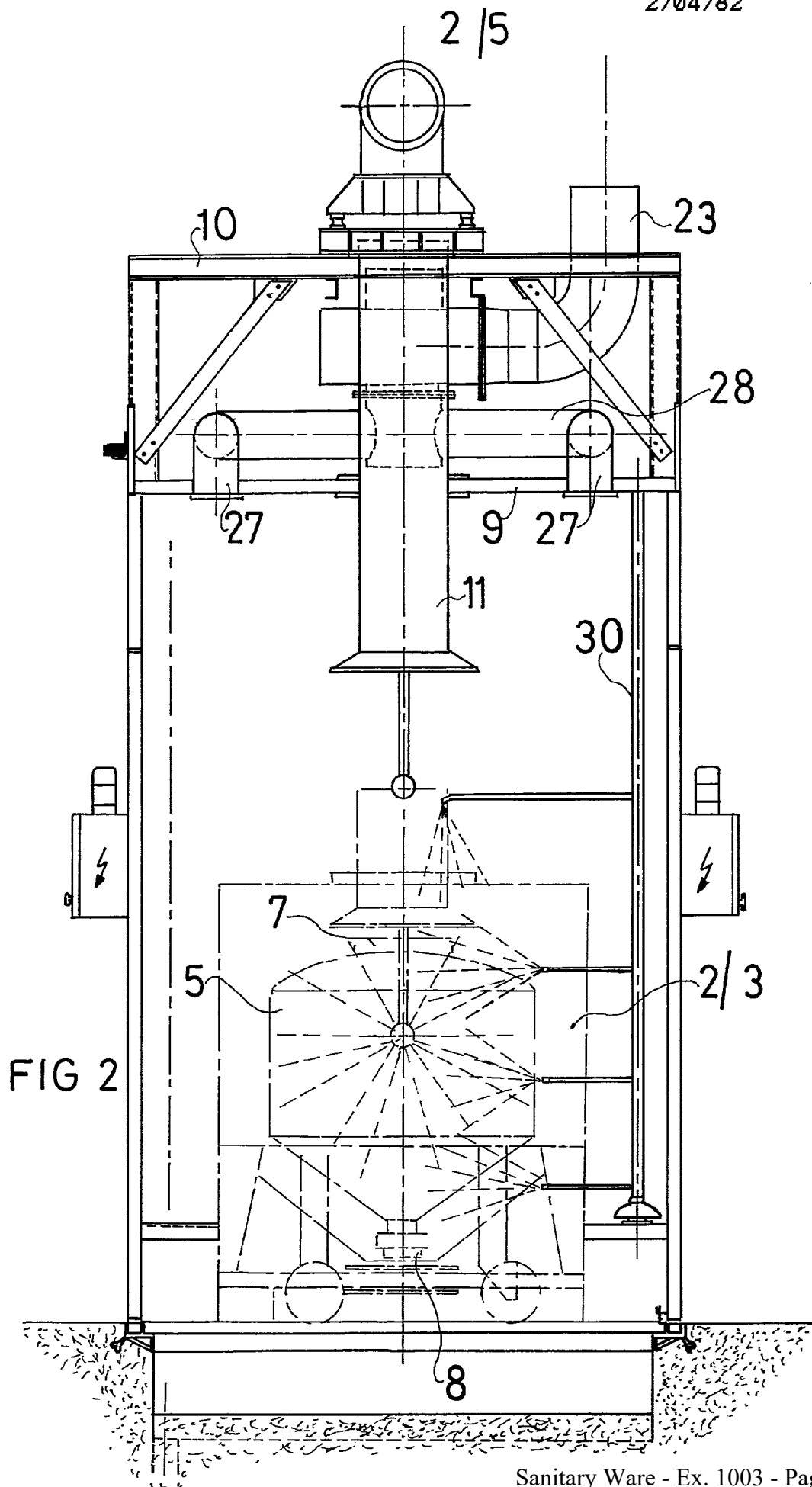
15

20

25

1/5.





3 / 5

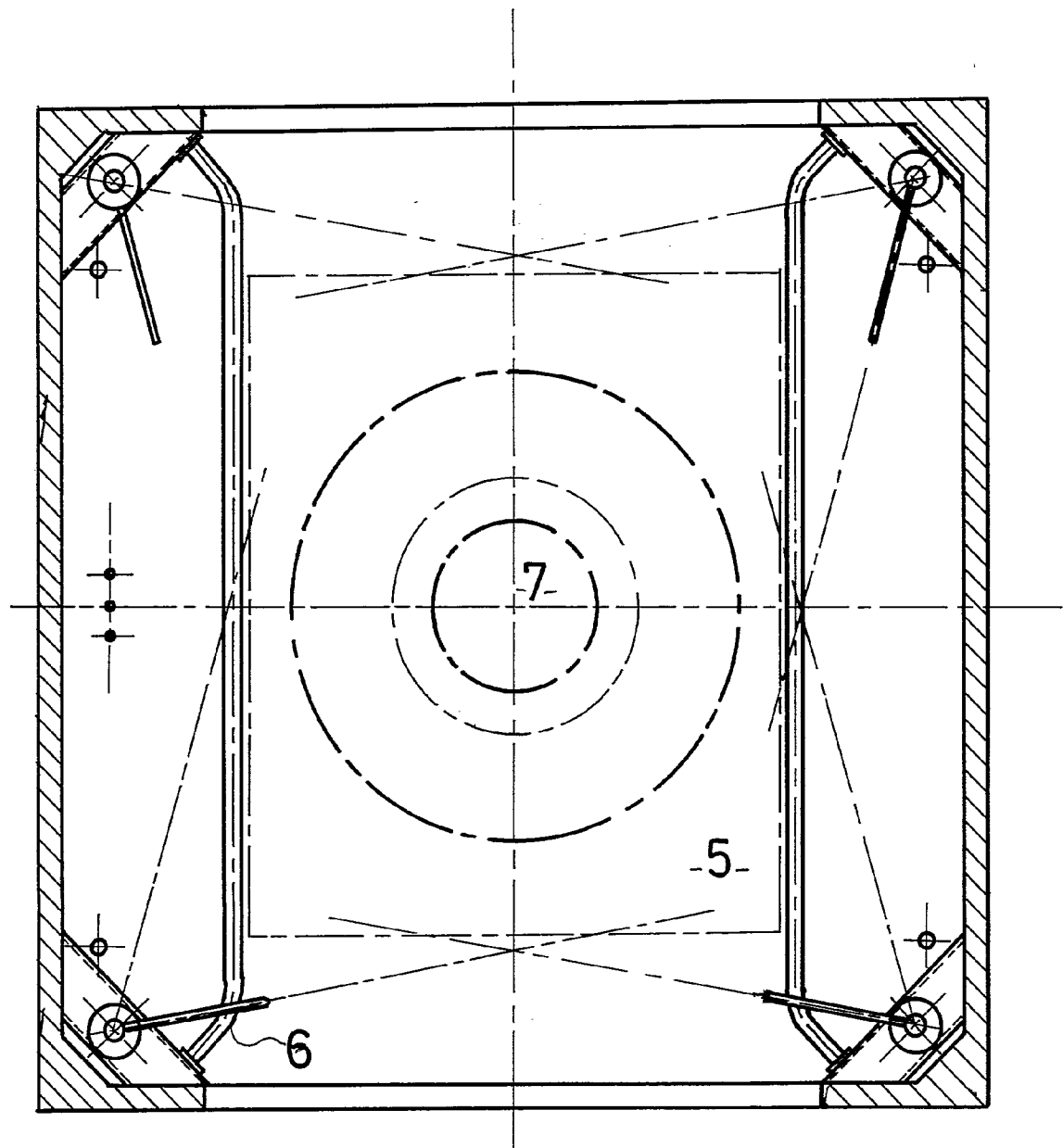
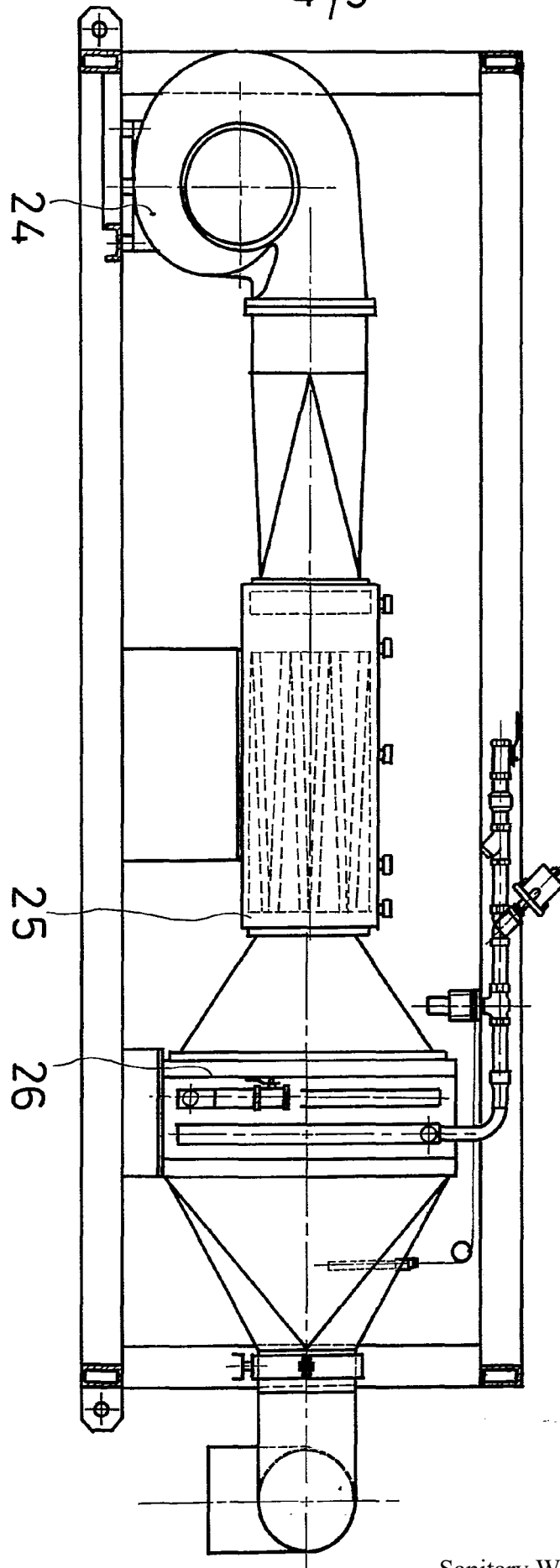


FIG 3

4/5

FIG 4



5 / 5

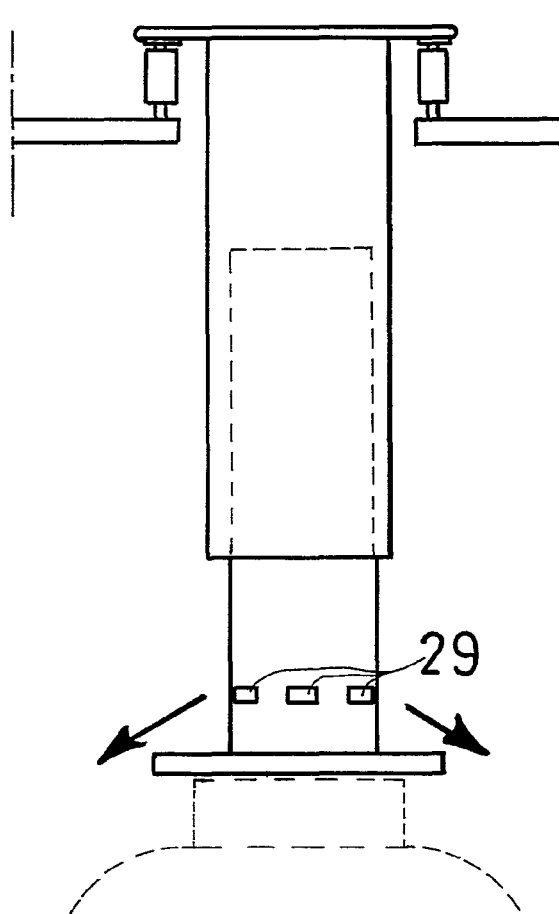


FIG 5

Patents

fr2704782a1



Installation for cleaning the interior and exterior of containers

Abstract

The installation according to the invention consists of an enclosure accommodating the container (5). Mounted inside this is a column that can be moved down and up and rests in the working position on an orifice (7) in the top of the container, which column comprises, mounted on an actuator, a cleaning head supplied with cleaning and/or rinsing fluid; this can be moved axially down and up and passes into the container and can also be rotated inside the latter. There is also a fixed pipe and a pipe coaxial with the cleaning head on the [an] actuator (22) which conveys hot and/or dry air from a generator into and around the container. Mounted inside said enclosure are vertical sprinklers for spraying cleaning and/or rinsing fluid. Said enclosure is equipped with rotating means (31) for spraying a cleaning and/or rinsing fluid onto the bottom of the container and means for extracting the moist air.

Classifications

80889/093 Cleaning containers, e.g. tanks by the force of jets or sprays

FR2704782A1

France

[Download PDF](#)
[Find Prior Art](#)
[Similar](#)
Other languages: French

Inventor: Montanier Gerard

Current Assignee: MONTANIER SA

Worldwide applications

 1993 [FR](#)

Application FR9305616A events ⓘ

1993-05-07 Application filed by MONTANIER SA

1993-05-07 Priority to FR9305616A

1994-11-10 Publication of FR2704782A1

1995-08-25 Application granted

1995-08-25 Publication of FR2704782B1

Info: Patent citations (4), Cited by (4), Legal events, Similar documents, Priority and Related Applications

External links: Espacenet, Global Dossier, Discuss

Claims (5)

[Hide Dependent](#) ^

CLAIMS:

1. Installation for interior and exterior washing of containers characterized in that it consists of an enclosure receiving the container (5), that in said enclosure is mounted a column (11) movable from top to bottom and vice versa which rests in the working position on an upper opening (7) of the container, the said column comprising on the one hand a coaxial washing head (21) supplied with washing and / or rinsing fluid, axially movable from top to bottom and which enters the tank and which rotates within it and on the other hand, a fixed duct (12) and a duct (15) coaxial with the washing head through which hot air is brought and / or dry in and around the container and in said enclosure are mounted vertical ramps (30) for spraying washing fluid and that said enclosure is provided with rotary spraying means (31) for washing fluid on the bottom of the container and extra means ction of humid air.
2. Installation according to claim 1 characterized in that the movable tube (15) is provided above the flange (16) of lights (29) for the passage of hot and dry air outside.
3. Installation according to claim 1 characterized in that the column (11) is mounted oscillating on silentblacs (14).
4. Installation according to claims 1 and 2 characterized in that the hot and dry air flow is blown from the top to the bottom into the container and sucked from the bottom to the top.
5. Installation according to claim 1 characterized in that the distribution of washing and / or rinsing fluid is carried out successively at each of the oscillating ramps (30) then at the rotary lower distributor (31) and finally at the rotary projection head in the container.

Description

The present invention relates to an installation for the interior and exterior washing of containers.

The containers concerned are of the type used for the storage of powdery and / or granular products, for example in the chemical industry.

Generally, these large-capacity metal containers, in principle 500 to 1500 liters, mounted on rolling means, are provided with an upper loading or inspection opening and a lower opening generally of smaller diameter than the previous one which can be equipped with a drain valve.

Jet washing with or without detergent is generally carried out in open air areas, the jet being guided manually by the user.

Washing is also carried out in enclosures with internal and external washing heads operating simultaneously with hot air drying.

The problem with known installations is that they are not designed to work with a spray of high pressure washing fluid and that they consume a lot of fluid and a lot of energy.

The present invention aims to remedy these drawbacks by providing an installation in the operation of which human intervention is reduced, for example to the establishment and removal of containers.

To this end, the installation according to the invention for washing and drying the interior and exterior of containers is essentially characterized in that it consists of an enclosure receiving the container, that in this enclosure is mounted a hollow mobile column, from top to bottom and vice versa which, in the working position, rests on an upper orifice of the container or stops above the orifice, that said column comprises mounted on a jack an axial washing head supplied with fluid under pressure, axially movable from top to bottom and vice versa which penetrates into the container and which is also movable in rotation therein and that said column comprises a fixed duct and a duct coaxial with the washing head, movable by sliding of top to bottom and vice versa which conveys from a generator, a drying fluid in and around the container and that in said enclosure are mounted spray fluid spray ramps and or rinsing with oscillating movement, that said enclosure is provided with means for spraying washing and / or rinsing fluid onto the lower part of the container and means for extracting moist air.

Other characteristics and advantages of the invention will appear on reading the following description of an embodiment of the invention given by way of nonlimiting but explanatory example and illustrated by the accompanying drawings in which - the Figure 1 is a vertical sectional view of the installation according to the invention, - Figure 2 is another vertical sectional view of the installation according to the invention, - Figure 3 is a sectional view along the marks AA of Figure 1, - Figure 4 is a view showing the drying air generator, - Figure 5 is a partial view of the moveable column of one installation.

As shown in the accompanying drawings, the installation according to the invention has an enclosure 1 in the form of a parallelepiped tower with at least one inlet 2 and preferably an inlet 2 and an outlet 3.

The enclosure 1 is preferably sealed and insulated.

It is fixed to the ground above a water recovery pit 4.

The container 5 on wheels is introduced into the enclosure which is provided with lateral positioning guides 6 (FIG. 4).

The floor of the enclosure can also be provided with indexing means to determine the position to be occupied by the container 5.

The container 5 has an upper orifice 7 and a lower orifice 8 on which can be mounted a metering drain valve not shown.

Above the upper wall 9 forming the ceiling of the enclosure is made a frame 10 supporting the various organs
On the frame 10 is mounted a vertical column which enters the enclosure through the wall 9.

The column is generically designated by the reference 11.

Column 11 (Figure 1) consists of a first tube 12 fixed at its upper end on an annular flange 13 connected to the frame 10 by elastic members of the silentbloc type 14 allowing the tube 12 a certain amplitude of lateral movement.

On the fixed tube 12 is mounted a concentric tube 15 with interposition of shim 16 for guiding and sliding.

The tube 15 is sliding on the tube 12.

The end of the tube 15 is provided with an annular flange 16 of larger diameter than the tube.

This flat flange, by pressing on the upper orifice 7 of the container, makes at least partial sealing.

Depending on the case, the end of the tube 15 can come above the orifice 7 without being in contact with the container, the installation according to the invention being provided with a position detection for this purpose.

Inside the column made up of concentric tubes 12/15 is mounted in a housing 19 an axial dip tube 21 controlled by a pneumatic motor 20.

The axial dip tube has a known type of projection head that can rotate 360° in both directions.

The housing 19 receives the rod of a jack 22 whose body is axial and fixed by an axis at the upper end of the tube 12 constituting the fixed part of the column.

Column 11 is connected by a conduit 23 to a generator of hot air for drying shown in FIG. 4.

This generator comprises an electric fan 24, a dust filter 25, an exchanger 26 supplied with hot water with a temperature probe at the outlet of the air which allows temperature regulation.

Through the ceiling 9 of the enclosure, orifices 27 are connected to extraction conduits 28 which are connected to an extractor.

According to an alternative embodiment shown in Figure 5, the moveable tube 15 of the column 11 is provided above the flange 16 of lights 29 through which the drying air passes to the outside.

Laterally inside the enclosure and preferably at each angle thereof, are mounted ramps 30 for spraying washing and / or rinsing fluid.

Each ramp includes a vertical tube supplied with water and rotating and perpendicular tubes with projection nozzles.

These ramps are mounted oscillating by rotation of the vertical tube by any known means so as to ensure watering of the largest possible external surface of the container.

At the level of the floor of the enclosure is mounted a spray device allowing the cleaning of the outlet orifice 8 of the container or of the valve with which it is provided.

This spraying device preferably consists of a rotary jet 31 with several adjustable washing nozzles supplied with pressurized fluid.

The operation of the installation according to the invention is as follows

After the container to be cleaned has been placed in the enclosure by actuating the jack 22, the tube 15 of the column 11 slides on the fixed tube 12.

The collar 16 is positioned on the upper orifice 7 of the container.

The possibility of lateral movement of the column 11 mounted on the silentbloks 14 by the flange 13, facilitates the centering of the column.

The sliding of the tube 15 on the tube 12 is obtained without jamming by means of sliding pads and a guide which can be a rod mounted on a generator of one of the tubes which is housed in a groove of the other tube.

The column being under pressure on the orifice 7 of the container, the spray head of the dip tube, which is movable 360 °, is supplied with high pressure fluid for the time necessary for the internal washing of the container.

Simultaneously or preferably in a second step, the vertical ramps 30 are supplied with high pressure fluid.

The ramps 30 can be operated simultaneously or successively.

Preferably, to allow operation at high pressure, a distributor supplies washing and / or rinsing fluid successively to each of the oscillating ramps 30, then the lower rotary distributor 31 and finally the rotary projection head in the container.

The sequencing of the internal and external washing operations with or without detergent allows a high pressure washing with a significant saving of fluid.

After washing the hot and dry air generated by the central unit shown in FIG. 4 is blown through the conduits of column 11.

As shown diagrammatically in FIGS. 5 and 6, the air is blown through the container and through the openings of the movable tube 15 outside the container, which achieves external and internal drying.

Together, this air is extracted through the orifices 27 and the conduits 28.

At the end of the cycle, the column 11 retracts into position as shown in solid lines in FIG. 1 or in FIG. 2 by sliding the tube 15 on the fixed tube 12, the probes locked at the start of the cycle unlocking and the container clean and dry can be removed and replaced by a container to be cleaned.

Patent Citations (4)

Publication number	Priority date	Publication date	Assignee	Title
GB1238394A *	1969-07-25	1971-07-07		
DE3014788A1 *	1980-04-17	1981-10-22	Heinz Till	Cleaning appts. for barrel exteriors - has movable hooped pipe and nozzle unit rotating round correctly positioned stationary container
EP0377367A1 *	1988-12-19	1990-07-11	Butagaz	Method and device for cleaning the outer surfaces of cylindrical objects, especially those of gas bottles
DE4048553A1 *	1990-12-18	1992-06-25	Herfeld GmbH & Co Kg Dr	Appts. for cleaning inside of vessel, esp. mixing vessel - has upright, stationary support frame, fork on foot of support frame and cleaning cover
Family To Family Citations				

* Cited by examiner, † Cited by third party

Cited By (4)

Publication number	Priority date	Publication date	Assignee	Title
FR2758746A1 *	1997-01-24	1998-07-31	3 C France	High pressure cleaning system for containers and tanks, especially those used in pharmacies or cosmetics industry
WO2004026495A1 *	2002-09-20	2004-04-01	Ico Oleodinamici S.P.A.	An apparatus for cleaning tubular elements
NL2018046A *	2016-11-02	2017-01-19	Central Glass Co Ltd	Method for washing sevoflurane storage container and method for storing sevoflurane
CN112382104A *	2019-08-19	2021-02-23	德尔塔阀门公司	Ware washing device and drain container and faucet assembly for same
Family To Family Citations				

* Cited by examiner, † Cited by third party, ‡ Family to family citation

Similar Documents

Publication	Publication Date	Title
US4299245A	1981-11-10	Filter cleaning system
FR2655470A1	1991-06-07	HIGH PRESSURE CLEANER EQUIPPED WITH A SET OF RECOVERY OF CLEANING LIQUID AND WASTE
US20090056751A1	2009-03-05	Cleaning storage and like tanks
FR2704782A1	1994-11-10	Installation for cleaning the interior and exterior of containers
EP2478972B1	2014-04-30	Cleaning device for spray gun
US4827563A	1989-05-09	Tank cleaning apparatus and method
EP0559541B1	1997-01-02	Cleaning installation for containers such as dustbins
FR2550957A1	1985-03-01	Method of cleaning a steam generator

US1857766A	1932-05-10	Tank cleaning device
US20050183745A1	2005-08-25	Tank cleaning device
EP2998963B1	2016-11-09	Guiding device for flexible lance
EP0457682B1	1994-01-26	Method of unblocking a pipe carrying dangerous products
BE890490A	1982-01-18	METHOD FOR CLEANING A STEAM GENERATOR WITH WATER AND MEASURING METHOD
FR2956591A1	2011-08-26	DEVICE FOR EVAPORATING A TREATMENT LIQUID
BE1004430A3	1992-11-17	Device for cleaning a steam generator.
KR102182380B1	2020-11-24	Gas pressure type valve for by-product collecting apparatus of semiconductor manufacturing process
FR2510234A1	1983-01-28	Cleaning vertical steam generator drum contg. tube nest - using liquid entering at centre removed from tube bottom, and spray moved radially
JP2006122811A	2006-05-18	Washing device
FR2758746A1	1998-07-31	High pressure cleaning system for containers and tanks, especially those used in pharmacies or cosmetics industry
CN213591295U	2021-07-02	Pipe inner wall cleaning system
FR2757094A1	1998-06-19	Hermetically sealed mobile brushing machine
FR2696977A1	1994-04-22	Cleaning machine for cylinders of screen printing process - has rotary support moving cylinder in relation to internal and external series of spray nozzles delivering controlled jets of cleaning fluid
FR2528807A1	1984-01-13	Spraying or sprinkling boom with incorporated automatic cleaning device.
JPH0734876Y2	1995-08-09	Cleaning device in filling device
SU1681991A1	1991-10-07	Apparatus for cleaning reservoirs

Priority And Related Applications

Priority Applications (1)

Application	Priority date	Filing date	Title
FR9305616A	1993-05-07	1993-05-07	Installation for interior and exterior washing of containers.

Applications Claiming Priority (1)

Application	Filing date	Title
FR9305616A	1993-05-07	Installation for interior and exterior washing of containers.

Legal Events

Date	Code	Title	Description
2001-12-28	CD	Change of name or company name	
2007-11-02	CA	Change of address	
2007-11-02	CD	Change of name or company name	
2007-11-02	CJ	Change in legal form	
2010-02-26	ST	Notification of lapse	Effective date: 20100129

Concepts

machine-extracted

Download Filter table

Name	Image	Sections	Count	Query match
installation		title,claims,abstract,description	16	0.000
cleaning		title,abstract,description	10	0.000

⌵ fluid	claims,abstract,description	19	0.000
⌵ spraying	claims,abstract,description	7	0.000
⌵ rest	claims,abstract,description	3	0.000
⌵ washing	claims,description	23	0.000
⌵ HOTAIR	claims,description	2	0.000

Show all concepts from the description section

Data provided by IFI CLAIMS Patent Services



(19) 대한민국특허청(KR)

(12) 등록특허공보(B1)

(45) 공고일자 2017년08월07일

(11) 등록번호 10-1765550

(24) 등록일자 2017년08월01일

(51) 국제특허분류(Int. Cl.)

E03C 1/04 (2006.01) *B05B 1/18* (2006.01)

F16K 3/28 (2006.01)

(52) CPC특허분류

E03C 1/04 (2013.01)

B05B 1/18 (2013.01)

(21) 출원번호 10-2016-0022369

(22) 출원일자 2016년02월25일

심사청구일자 2016년02월25일

(56) 선행기술조사문헌

KR200338662 Y1*

KR101314012 B1*

KR100185365 B1*

*는 심사관에 의하여 인용된 문헌

(73) 특허권자

한세옥

대구광역시 달서구 월배로32안길 61, 102동 805호
(진천동, 귀빈아파트)

(72) 발명자

한세옥

대구광역시 달서구 월배로32안길 61, 102동 805호
(진천동, 귀빈아파트)

(74) 대리인

김경미

전체 청구항 수 : 총 3 항

심사관 : 안경수

(54) 발명의 명칭 **상향 분출형 주방용 행굼수전**

(57) 요약

본 발명은 식기의 세척공간이 형성된 싱크대 등지에 배치되어 세척을 마친 식기의 표면에 행굼수를 저압 분사시켜 식기의 표면에 이물질을 행굼하여 제거하는 상향 분출형 주방용 행굼수전에 관한 것으로,

본 발명에서는 싱크대에 직립되게 배치되어, 공급관을 따라 유입되는 행굼수를 유로를 따라 상향 배출하는 직립관과; 상부와 측부가 폐쇄되고 하부가 개방된 중공의 캡몸체로 이루어져, 직립관의 상부에 승강구조로 배치되어 개방된 직립관 유로의 상부를 커버하며, 상부 또는 측부에 유로를 따라 중공부 내로 유입된 행굼수를 표면으로 배출하는 하나 이상의 분출공이 형성된 승강 노즐캡과; 상기 직립관의 유로에 내장되게 배치되어, 직립관의 유로를 개폐하는 개폐밸브; 및 승강 노즐캡의 단계적인 승강작용에 의해, 개폐밸브에 의한 유로의 개폐상태를 전환 및 유지시키는 전환 스톱퍼를 포함하여 구성되며, 승강 노즐캡의 가압에 의해 행굼수를 연속적으로 상향 분출하도록 구성된 것을 특징으로 한다.

(52) CPC특허분류

E03C 1/0401 (2013.01)

E03C 1/0404 (2013.01)

F16K 3/28 (2013.01)

[10001]	<p>본 발명은 상향 분출형 주방용·헬몬수전에 관한 것으로, 더욱 상세하게는 식기의 세척공간이 형성된 싱크대 등기에 배치되어 세척을 마친 식기의 표면에 헬몬수를 적양 분사시켜 식기의 표면에 이물질을 헬몬하여 제거하는 상향 분출형 주방용·헬몬수전에 관한 것이다.</p>
배경 기술	<p>일반적으로 수전은, 건축 구조물의 벽면으로부터 돌출된 상수관의 단부에 연결 설치되어 수도물(이하, '용수'라 칭함)을 배출하여 공급하는 수단으로, 이러한 수전은 싱크대 등기에 배치되는 주방용으로 활용되어서, 식기의 세척과 해몽을 포함하는 선거지 등 주방에서 다양한 용도로 활용되고 있다.</p>
[10003]	<p>그런데, 종래 주방용에 설치된 수전들은 외부에 노출된 레버나 노브의 조작에 의해 유로가 게폐되는 범용의 수전들은 단순히 싱크대 등기에 설치한 형태로 이루어져, 세척을 마친 식기를 헬몬하는 용도 등으로 사용하기에는 부적합한 한계성이 지적되고 있다.</p>
[10004]	<p>즉, 종래 주방에 설치된 수전들은 외부에 노출된 레버나 노브의 조작을 통해 유로의 게폐상태를 설정하도록 구성된 관계로, 한 손으로 헬몬을 요하는 식기를 파지한 상태에서 레버나 노브를 반복적으로 조작하는 행위를 반복적으로 수행하는 것은 매우 번거롭다.</p>
[10005]	<p>따라서, 일반적으로 헬몬과정에 노브나 레버를 조작하여 유로를 지속적으로 개방시켜 수도물(헬몬수)를 지속적으로 배출하면서 식기를 헬몬하게 되는데, 이는 수도물의 파도한 양비를 조래하므로 바람직하지 아니하다.</p>
[10006]	<p>물론, 대한민국 등록 특허공고 제 10-0718076 등에서는 노브를 마련하여, 노브를 누르게 되면 일시적으로 유로가 게방되어 수도물이 외부로 배출되도록 한 절수형 수전을 제안하고 있다.</p>
[10007]	<p>이러한 절수형 수전은, 수도물의 절약 측면에서는 많은 이점을 갖지만, 수도물의 배율이 요구될 때마다 한 손으로 노브를 지속적으로 돌려야 하므로, 식기의 안정된 헬몬작업을 구현하기에는 많은 불편함을 조래하므로, 본 발명에서 구현하고자 하는 헬몬수전으로는 적용이 어렵다.</p>
[10008]	<p>그러고, 종래 싱크대에 설치된 수전은 수도물을 배출하는 배출구가 하부로 형성되어 수도물(헬몬수)을 하향 분사하도록 구성된 관계로, 식기의 헬몬과정에 식기의 헬몬상태를 육안으로 확인하기 어렵다.</p>
[10009]	<p>특히 외부에 노출된 레버나 노브를 조작하면 세제 등에 의해 해당 레버나 노브가 오염된 상태를 유지하는 결점을 갖고, 이에 따라 식기의 헬몬을 마친 다음 세제 등에 의해 오염된 수전의 레버나 노브에 물을 임의로 뿌려 해당 부위를 세척하고 있으나, 이는 매우 번거롭고 불편하다.</p>
발명의 내용	발명하려는 과제
[10010]	<p>상기한 문제점을 해소하기 위해 안출된 본 발명의 목적은, 헬몬수가 토출되는 상강 노즐캡의 코번된 기암에 의해 유로의 게폐상태가 순차적으로 전환 및 유지되도록 구성하여, 사용자가 게폐별브의 노브나 레버를 임의 조작하여 유로의 게폐상태를 임의로 설정하는 번거로움 없이, 헬몬을 요하는 식기를 통해 상강 노즐캡을 직접 가압하여서 헬몬수의 토출상태를 간편하게 전환하고, 특히 기존 헬몬수를 하부로 토출하는 하향식 수전의 제한적인 문제점 즉, 점이나 그릇 등의 식기를 세척할 때 물은 여러번 담아 헬몬하는 번거로움과, 파도한 물 소비량이 많은 것은 문제점이 해소되도록 한 상향 분출형 주방용·헬몬수전을 제공함에 있다.</p>
발명의 해결 수단	상기한 목적은, 본 발명에서 제공되는 하기 구성에 의해 달성된다.
[10012]	본 발명에 따른 상향 분출형 주방용·헬몬수전은,
[10013]	싱크대에 직접 배치되어, 공분관을 따라 유입되는 헬몬수를 유로를 따라 상향 배출하는 직접관과;
[10014]	상부와 측부가 폐쇄되고 하부가 개방된 중공의 캡문체로 이루어져, 직접관의 상부에 상강구조로 배치되어 개방

- 원 칩립관 유로의 상부를 커버하며, 상부 또는 측부에 유로를 따라 중공부 내로 유입된 헬공수를 표면으로 배출하는 하나 이상의 분출공이 형성된 승강 노즐캡과;
- [10015] 상기 칩립관의 유로에 내장되게 배치되어, 칩립관의 유로를 개폐하는 게폐밸브; 및
- [10016] 승강 노즐캡의 단계적인 승강작용에 의해, 게폐밸브에 의한 유로의 개폐상태를 전환 및 유지시키는 전환 스프링을 포함하여 구성되어, 승강 노즐캡의 가압에 의해 헬공수를 연속적으로 상향 분출하도록 구성되고,
- [10017] 상기 게폐밸브는 칩립관의 유로 상에 축관하여 형성된 밸브 시트부와; 상기 밸브 시트부가 형성된 유로에 승강 구조로 배치되어 밸브 시트부와의 밀착여부에 따라 유로의 개폐상태를 설정하는 밸브 디스크; 및 상기 밸브 디스크를 상향 탄지하여 밸브 시트부에 밸브 디스크를 밀착시키는 압축 스프링을 포함하여 구성되어,
- [10018] 상기 밸브 디스크는, 압축 스프링에 의해 상향 탄지되어 밸브 시트부에 밀착되어 칩립관의 유로를 폐쇄하고, 하강하는 승강 노즐캡의 가압에 의한 전환 스프링의 가압작용에 의해 밸브 시트부에서 이격되어 유로를 개방하며,
- [10019] 보다 바람직하게는, 상기 전환 스프링은 칩립관의 내벽에 형성되며 승강레일과 전좌구간이 교번되게 형성된 레일부와; 승강 노즐캡의 하부에 배치되며, 하부면에 정사진 밀면돌기들이 등간격으로 형성되고 외벽에 가이드 돌기들이 형성되어, 승강 노즐캡의 가압에 의해 레일부의 승강레일을 따라 하강하는 승강캡; 및 상기 압축 스프링에 의해 지지된 밸브 디스크에 가압로드를 통해 상향 지지되고, 외벽에 형성된 스프링 돌기를 통해 승강레일을 따라 하강한 승강캡의 밀면돌기와 빗면구조로 간섭되어 임방향으로 등각 회전하는 가압 회동자를 포함하여 구성되어,
- [10020] 상기 회동자는 승강 노즐캡의 단계적인 가압에 의해 승강레일을 따라 상승하는 상승파장과, 전좌구간의 하단에 전좌되어 게폐밸브를 하부로 가압하는 전좌파장을 교번되게 수행하여서, 게폐밸브에 의한 유로의 개폐상태를 전환시켜 유지하도록 구성된다.
- [10021] 그리고, 상기 칩립관의 유로에 헬공수를 공급하는 공급관에는 온수와 냉수의 혼합비를 조절하는 혼합비 조절밸브와, 수전으로 공급되는 헬공수의 유량을 조절하는 유량 조절밸브가 각각 배치된다.
- [10022] 전술한 바와 같이 본 발명에 따른 상향 분출형 주방용 헬공수전은, 싱크대에 직접되게 배치되어 헬공수를 상부로 저장 토출하도록 구성되어, 헬공를 요하는 식기의 표면에 헬공수를 고르게 분출하여 식기의 안정된 헬공를 도모하고, 또 이물질을 제거한 헬공수는 지중에 의해 하부로 즉시 배출되므로 항상 청결한 위생상태를 형성하고, 원수효과와 보다 신속하고 편리한 세정효과가 확보된다.
- [10023] 그리고, 본 발명에서는 상기 칩립관의 상부에 승강 노즐캡을 승강구조로 배치하고, 상기 칩립관과 승강 노즐캡 사이에 게폐밸브와, 승강 노즐캡의 승강에 의해 게폐밸브의 개폐상태를 전환 및 유지시키는 전환 스프링을 유기적으로 배치하고 있다.
- [10024] 따라서, 본 발명은 종래 게폐밸브에 형성된 노즐을 별도 조작하는 번거로운 조작과정을 삭제하면서, 식기에 의한 승강 노즐캡의 단계적인 가압에 의해 헬공수의 분출여부가 전환 및 유지된다.
- [10025] 특히, 상기 승강 노즐캡은 사용자의 손이 아닌 헬공를 요하는 식기에 의한 가압에 의해 승강하여 게폐밸브의 개폐상태를 전환하므로, 가압노브, 또는 외장노브의 작제를 통한 구조의 간소화가 이루어지고, 조작에 따른 편리성이 확보될 수 있다.

발명의 효과

제적인 가림을 통해 유로(11)의 개폐상태를 단계적으로 전환 유지하도록 한다.

한편, 본 발명에서는 이러한 상황 분출형 주방용 행균수전(1)을 구원함에 있어, 도 5 내지 도 6에서 보는 바와 같이 상기 승강 노즐캡(20)의 가림에 의한 유로(11)의 개폐상태가 단계적으로 구원되도록 구성하여, 사용자가 게페벨브(30)의 노브나 레버를 눌러 조작하는 번거로움 없이 행균을 요하는 식기를 통한 승강 노즐캡(20)의 단

[10035]

다음 제정수를 표면에 분사하여 세정하는 번거로움이 해소된다.

한편, 본 발명에 따른 행균수전(1)은 승강 노즐캡(20)을 통해 상황 분출되어 자중에 의해 표면을 따라 하부로 흐르면서 배출되는 행균수에 의해 표면의 자가 세정이 이루어지므로, 별도 사용자가 식기의 행균을 마친 결과적으로, 본 실시예에 따른 행균수전(1)은 승강 노즐캡(20)을 통해 상황 분출되어 자중에 의해 표면을 따라

[10034]

수에 의해 승강 노즐캡(20) 및 직립관(10)의 표면에 묻은 이물질들은 제거되어 항상 청결한 상태를 유지한다.

이때, 상기 승강 노즐캡(20)을 통해 상황 분출되어 이물질이 잔류된 식기의 표면을 행균한 행균수는 자중에 의해 하부로 배출되어, 싱크대(200)의 개수대로 유입하여 배출되고, 또 승강 노즐캡(20)을 통해 상황 분출된 행균

[10033]

(20)의 상부에 덮여진 식기(B) 표면에 묻은 이물질을 행균하여 제거한다.

이러한 상황 분출형 주방용 행균수전(1)은, 도 5 내지 도 6에서 보는 바와 같이 싱크대(200)에 직접되게 배치되 어 공급관(100)을 통해 공급되는 행균수를 상부에 배치된 승강 노즐캡(20)을 통해 직접 분출하여, 승강 노즐캡

[10032]

(120)가 자가 배치되어서, 정온의 행균수가 직립관의 유로를 따라 정량 공급되도록 한다.

그리고, 상기 직립관(10)의 유로(11)에 행균수(W)를 공급하는 공급관(100)에는 온수와 냉수의 혼합비를 조절하 는 혼합비 조절밸브(110)와, 행균수전(1)의 직립관(10)으로 공급되는 행균수의 유량을 조절하는 유량 조절밸브

[10031]

면으로 배출하는 복수의 분출공(22)이 형성된 승강 노즐캡(20)을 포함한다.

(10) 유로(11)의 상부를 커버하며, 상부 또는 측부에 유로(11)를 따라 중공부(21) 내로 유입된 행균수(W)를 포 폐시키고 하부가 개방된 중공의 캡체로 이루어져, 직립관(10)의 상부에 승강구조로 배치되어 개방된 직립관 배치되어, 공급관(100)을 따라 유입되는 행균수를 유로(11)를 따라 상황 배출하는 직립관(10)과; 상부와 측부가

[10030]

상황 분출하여 식기의 표면에 잔류된 이물질을 행균하는 전용수단이다.

본 발명에서 바람직한 실시예로 제안하고 있는 상황 분출형 주방용 행균수전(1)은, 도 1에서 보는 바와 같이 식 기의 세척구간이 형성된 싱크대(200)에 직접되게 고정되어, 세척을 마친 식기의 표면에 행균수(W)를 저장으로

[10029]

태도이고, 도 7은 상기 도 5와 도 6에서 'A'부분과 'B'부분의 작용상태를 확대하여 보여주는 것이다.

안하고 있는 행균용 수전에 있어, 식기에 의한 승강 노즐캡의 승강에 따른 유로의 개폐상태를 보여주는 작용 상 전에 있어, 승강 노즐캡의 제부 구성을 보여주는 것이고, 도 5 내지 도 6은 본 발명에서 바람직한 실시예로 제 구성을 보여주는 문제 및 조립상태도이고, 도 4는 본 발명에서 바람직한 실시예로 제안하고 있는 주방용 행균수 태도이고, 도 2와 도 3은 본 발명에서 바람직한 실시예로 제안하고 있는 상황 분출형 주방용 행균수전의 외형

[10028]

상세히 설명하기로 한다.

이하, 첨부된 도면을 참조하여 본 발명에서 바람직한 실시예로 제안하고 있는 상황 분출형 주방용 행균수전을

[10027]

발명을 실시하기 위한 구체적인 내용

도 7은 상기 도 5와 도 6에서 'A'부분과 'B'부분의 작용상태를 확대하여 보여주는 것이다.

의 승강에 따른 유로의 개폐상태를 보여주는 작용 상태도이고,

도 5 내지 도 6은 본 발명에서 바람직한 실시예로 제안하고 있는 행균용 수전에 있어, 식기에 의한 승강 노즐캡

여주는 것이고,

도 4는 본 발명에서 바람직한 실시예로 제안하고 있는 주방용 행균수전에 있어, 승강 노즐캡의 제부 구성을 보

주는 문제 및 조립상태도이고,

도 2와 도 3은 본 발명에서 바람직한 실시예로 제안하고 있는 상황 분출형 주방용 행균수전의 외형 구성을 보여

태도이고,

도 1은 본 발명에서 바람직한 실시예로 제안하고 있는 상황 분출형 주방용 행균수전을 싱크대에 장착한 시공 상

[10026]

도면의 간단한 설명

- [10036] 이와 같이 구성하면, 사용자가 작기(B)의 폐공과정에 한 손으로 폐공을 요하는 작기를 파지하고, 또 나머지 손으로 수전에 형성된 게페멜브의 노브나 레버를 별도 조작함에 따른 편거로온 조작해위의 작제가 가능하고, 특히 세제가 묻은 손으로 게페멜브의 노브나 레버를 잡의 조작함에 따른 게페멜브 노브의 오염이 방지된다.
- [10037] 특히, 본 발명에서는 상기 상형 문충형 주방용 폐공수전(1)에, 적립관(10)의 유로(11)에 내장되어 유로(11)를 폐쇄하며, 하강한 증강 노즐캡(20)의 가압작용에 의해 폐쇄한 적립관(10)의 유로를 개방하는 게페멜브(30)와; 가압에 의한 증강 노즐캡(20)의 단계적인 증강작용에 의해, 게페멜브(30)에 의한 유로(11)의 게페상태를 전환 및 유지시키는 전한 스토퍼(40)를 부가하여, 폐공을 요하는 작기에 의해 가압되는 증강 노즐캡(20)의 교반된 가압작용에 의해, 전한 스토퍼(40)는 게페멜브(30)에 의한 유로(11)의 개방 또는 폐쇄상태를 전환 및 유지시키도록 구성한다.
- [10038] 본 실시예에 따르면, 상기 게페멜브(30)는 도 2 내지 도 3 및 도 5 내지 도 6에서 보는 바와 같이 적립관(10)의 유로(11) 상에 축관하여 형성된 멜브 시트부(31)와; 상기 멜브 시트부(31)가 형성된 유로(11)에 승강구조로 배치되어 멜브 시트부(31)와의 밀착여부를 통해 유로(11)를 게폐하는 멜브 디스크(32); 및 상기 멜브 디스크(32)를 상향 탄지하여 멜브 시트부(31)에 멜브 디스크(32)를 밀착시키는 압축 스프링(33)을 포함한다.
- [10039] 따라서, 상기 멜브 디스크(32)는 도 5와 같이 압축 스프링(33)에 의해 상향 탄지되어 멜브 시트부(31)에 밀착되어 적립관(10)의 유로(11)를 폐쇄하고, 하부로 가압된 증강 노즐캡(20)의 가압작용에 의해 도 6과 같이 전한 스토퍼(40)의 가압에 의해 멜브 시트부(31)에서 이격되어 유로(11)를 개방하도록 구성된다.
- [10040] 그러고, 상기 멜브 시트부(31)의 상부와 하부에 형성된 유로(11)에는 상대적으로 넓은 공간의 화관 챔버(11a, 11b)를 형성하여, 유로(11)를 따라 유입된 폐공수는 하부에 형성된 화관챔버(11a) 내에 감압된 상태로 잔류하나가, 게페멜브(30)가 개방되면 상부에 형성된 화관챔버(11b)를 통과하면서 2차 감압된 상태로 증강 노즐캡(20)의 문충문(22)를 통해 저압 문충되도록 한다.
- [10041] 이러한 화관챔버(11a, 11b)들의 감압작용에 의해 상기 증강 노즐캡(20)의 문충문(22)을 따라 저압의 폐공수(W)가 서서히 문충되고, 결과적으로 작기의 폐공과정에 폐공수가 고압 문충됨에 따라 폐공수가 외부로 문산되어 주위를 오염시키는 현상이 예방될 수 있다.
- [10042] 그러고, 상기 게페멜브(30)에 의한 유로(11)의 게폐상태를 전환 및 유지시키는 전한 스토퍼(40)는, 적립관(10)의 내벽에 형성되며 증강레일(41a)과 전작구간(41b)이 교번되게 형성된 레일부(41)와; 노즐캡(20)의 하부에 배치되며, 하부면에 경사진 빗면돌기(42a)들이 등간격으로 형성되고 외벽에 가이드 돌기(42b)들이 형성되어, 증강 노즐캡(20)의 가압에 의해 레일부(41)의 증강레일(41a)을 따라 하강하는 증강캡(42); 및 외벽에 형성된 스톱핑 돌기(43a)를 통해 증강레일(41a)을 따라 하강한 증강캡(42)의 빗면돌기(42a)와 빗면구조로 간섭되어 일방향으로 등각 회전하는 가압 회동자(43)를 포함한다.
- [10043] 이때, 상기 회동자(43)는 압축 스프링(33)에 의해 상향 탄지된 멜브 디스크(32)에 가압포드(43b)를 통해 상향 지지되어서, 압축 스프링(33)의 탄지력에 의해 항상 안정되게 탄지된 상태를 유지한다.
- [10044] 따라서, 상기 게페멜브(30)를 구성하는 압축 스프링(33)은, 게페멜브(30)의 멜브 디스크(32)를 상향 탄지시켜 멜브 시트부(31)에 밀착시키는 기능과, 전한 스톱퍼(40)의 가압 회동자(43)를 상향 탄지하는 기능을 동시에 수행하므로, 구조의 간소화와 함께 동작 안정성의 확보가 가능하다.
- [10045] 특히, 본 실시예에서는 도 4와 같이 상기 증강캡을 별도 제작 및 설치하지 아니하고, 증강 노즐캡을 구성하는 캡몸체의 하부에 빗면돌기들을 등간격으로 형성하고 캡몸체의 외벽에 가이드 돌기를 형성하여서, 증강 노즐캡은 적립관의 상부에 전회구조로 설치되어 폐공수를 문충하는 기능과, 증강을 통해 가압 회동자를 등각 회전시키는 증강캡의 기능을 각각 수행하도록 한다.
- [10046] 그리고, 본 실시예에서는 상기 적립관의 내벽에 레일부를 인체로 형성하여, 별도 형성된 레일부를 적립관의 내부에 배치함에 따른 문충비용의 증가를 방지하고 있다. 즉, 상기 레일부는 적립관의 상형시 일체로 형성된다.
- [10047] 따라서, 상기 회동자(43)는 도 5에서 보는 바와 같이 증강 노즐캡(20)의 단계적인 가압에 의해 증강레일(41a)을 따라 상응하는 상응과정과, 도 6에서 보는 바와 같이 전작구간(41b)의 하단에 전착되어 게페멜브(30)의 멜브 디스크(32)를 하부로 가압하는 전작과정을 교번되게 수행하여서, 게페멜브(30)에 의한 유로(11)의 게폐상태를 전환시켜 유로(11)에 의한 유로(11)의 개폐를 가능하게 된다.
- [10048] 즉, 도 5와 같이 가압 회동자(43)가 레일부(41)의 증강레일(41a)을 따라 상응한 상태에서는, 압축 스프링(33)에

의해 상향 탄지된 개폐밸브(30)의 밸브 디스크(32)는 유로(11)상에 형성된 밸브 시트부(31)에 밀착되어서 유로(11)의 안정적인 폐쇄를 도모한다.

- [0049] 이 상태에서, 사용자가 도 6과 같이 행굼을 요하는 식기(B)를 통해 승강 노즐캡(20)을 하부로 가압하면, 압축 스프링(33)에 의해 상향 지지된 승강캠(42)과 가압 회동자(43)는 레일부(41)의 승강레일(41a)을 따라 하강한다.
- [0050] 이때, 상기 가압 회동자(43)는 스톱핑 볼기(43a)를 통해 승강캠(42)에 형성된 빗면볼기(42a)와 간섭되어 일방향으로 등각 회전하여서, 견착구간(41b)의 하단에 견착되어 하강된 상태를 유지한다.
- [0051] 따라서, 상기 승강 노즐캡(20)의 가압이 해제되더라도, 상기 가압 회동자(43)는 레일부(41)의 견착구간(41b) 하단에 견착되어 하강한 상태를 유지하고, 결과적으로 개폐밸브(30)의 밸브 디스크(32)는 하강한 가압 회동자(43)의 가압로드(43b)에 의해 하강된 상태로 지지되어서, 밸브 시트부(31)와 이격된 상태를 유지한다.
- [0052] 상기 밸브 디스크(32)는 밸브 시트부(31)에서 이격된 상태를 유지하고 직립관(10)에 형성된 유로(11)는 개방된 상태를 유지하므로, 승강 노즐캡(20)을 지속적으로 가압하지 아니하더라도 개방된 유로(11)를 따라 행굼수(W)는 승강 노즐캡(20)의 분출공(22)으로 저압 분출된다.
- [0053] 그리하여, 본 실시예에 따른 상향 분출형 주방용 행굼수전(1)은 직립된 직립관(10)의 상부에 상향 돌출된 승강 노즐캡(20)의 1차 가압에 의해서는 유로(11)는 개방되어 승강 노즐캡(20)을 따라 행굼수의 상향 분출이 지속적으로 이루어지고, 또 승강 노즐캡(20)의 2차 가압에 의해서는 유로(11)는 폐쇄되어 행굼수의 상향 분출이 정지한다.
- [0054] 따라서, 별도 개폐밸브나 개폐밸브에 형성된 레버나 노브의 조작없이도 행굼수의 분출여부를 간편하게 제어할 수 있고, 또 행굼수의 분출상태는 지속적으로 유지되므로 행굼과정에 승강 노즐캡을 지속적으로 가압함에 따른 사용상의 불편함이 해소된다.
- [0055] 또한, 본 발명에서는 이러한 상향 분출형 주방용 행굼수전(1)에, 개폐밸브(30)에 의한 유로(11)의 차폐시 직립관(10) 내에 잔류된 행굼수를 외부로 배출하는 배수구조를 부가하여 잔류된 행굼수의 오염에 의해 행굼수전 내부의 위생상태가 불량해지는 현상이 예방되도록 한다.
- [0056] 이를 위해, 본 실시예에서는 도 5 내지 도 7에서 보는 바와 같이 상기 밸브 시트부(31)의 상부에 형성된 직립관(10)의 일지점에 외부와 연통하는 드레인공(12)을 형성하고, 상기 밸브 디스크(32)의 상부에는 드레인공(12)과 선택적으로 내접하는 차폐림(32a)을 형성한다.
- [0057] 따라서, 도 6과 도 7b와 같이 승강 노즐캡(20)의 가압에 의해 밸브 디스크(32)가 하강하면 드레인공(12)은 내접된 차폐림(32a)에 의해 차폐되어서 드레인공(12)을 통해 행굼수가 외부로 유출되는 현상이 예방된다.
- [0058] 또한, 도 5와 도 7a와 같이 밸브 디스크(32)가 상승하여 밸브 시트부(31)에 밀착되어 유로(11)가 폐쇄되면, 차폐림(32a)은 상부로 이동하여 드레인공(12)을 개방하게 된다.
- [0059] 그리하여, 본 실시예에 따른 상향 분출형 주방용 행굼수전(1)은, 개폐밸브(30)에 의해 유로(11)가 폐쇄된 상태에서는 드레인공(12)은 개방되고, 개방된 드레인공(12)을 통해 밸브 시트부(31)의 상부에 잔류된 행굼수는 외부로 배출되므로, 잔류된 행굼수에 의해 행굼수전 내부가 오염되는 현상이 예방된다.

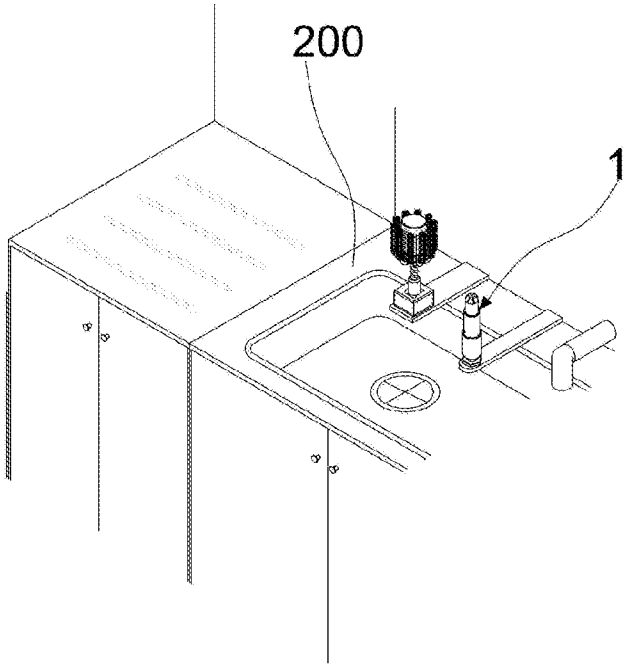
부호의 설명

- [0060] 1. 주방용 행굼수전
- | | |
|----------------|------------|
| 10. 직립관 | 11. 유로 |
| 11a, 11b. 확장챔버 | 12. 드레인공 |
| 20. 승강 노즐캡 | 21. 중공부 |
| 22. 분출공 | |
| 30. 개폐밸브 | 31. 밸브 시트부 |
| 32. 밸브 디스크 | 32a. 차폐림 |
| 33. 압축 스프링 | |

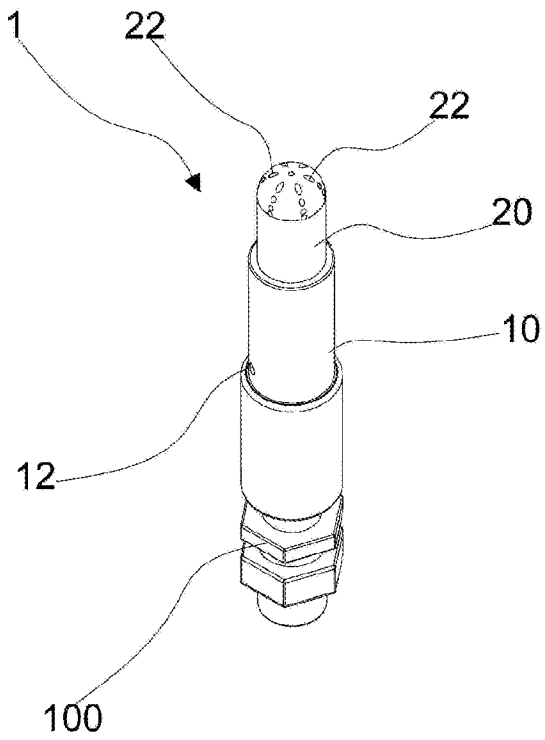
- 40. 전환 스톱퍼
- 41a. 승강레일
- 42. 승강캡
- 42b. 가이드 돌기
- 43a. 스톱핑 돌기
- 100. 공급관
- 120. 유량 조절밸브
- 41. 레일부
- 41b. 견착구간
- 42a. 빗면돌기
- 43. 가압 회동자
- 43b. 가압로드
- 110. 혼입비 조절밸브
- 200. 싱크대

도면

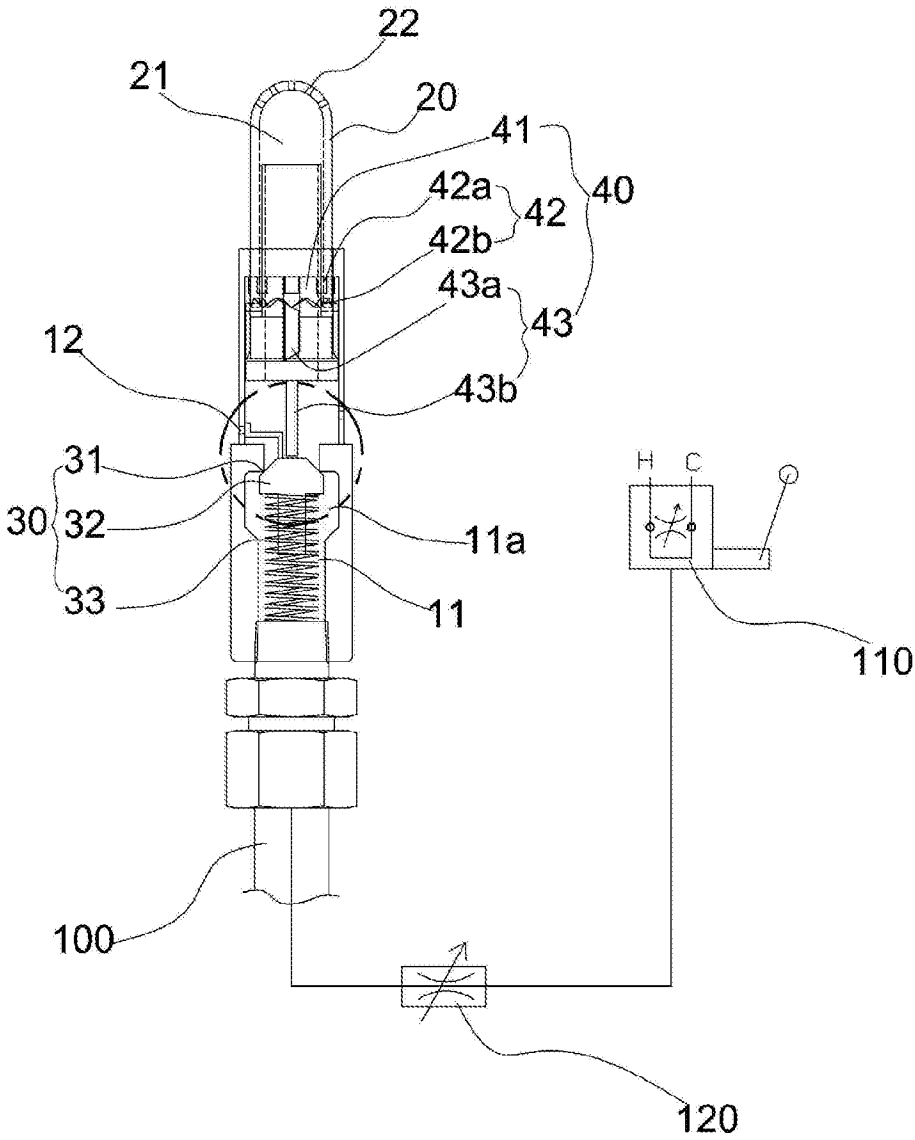
도면



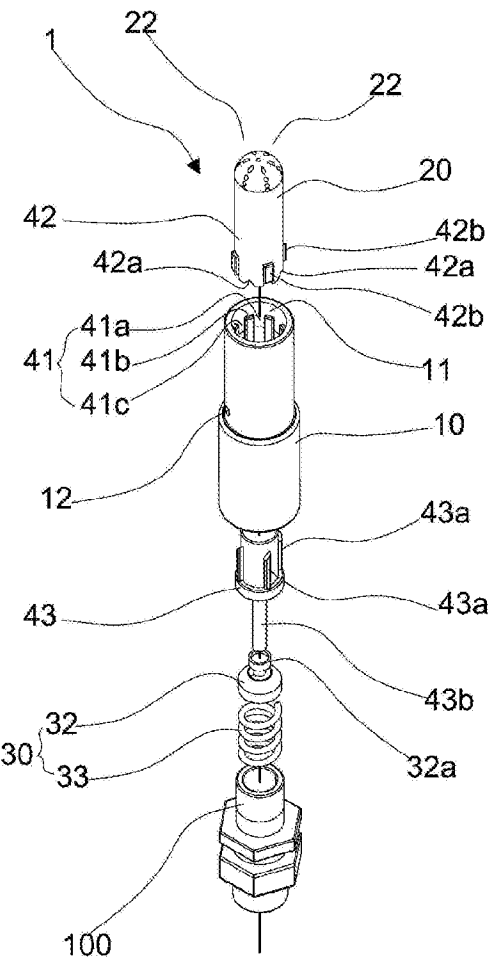
도면2a



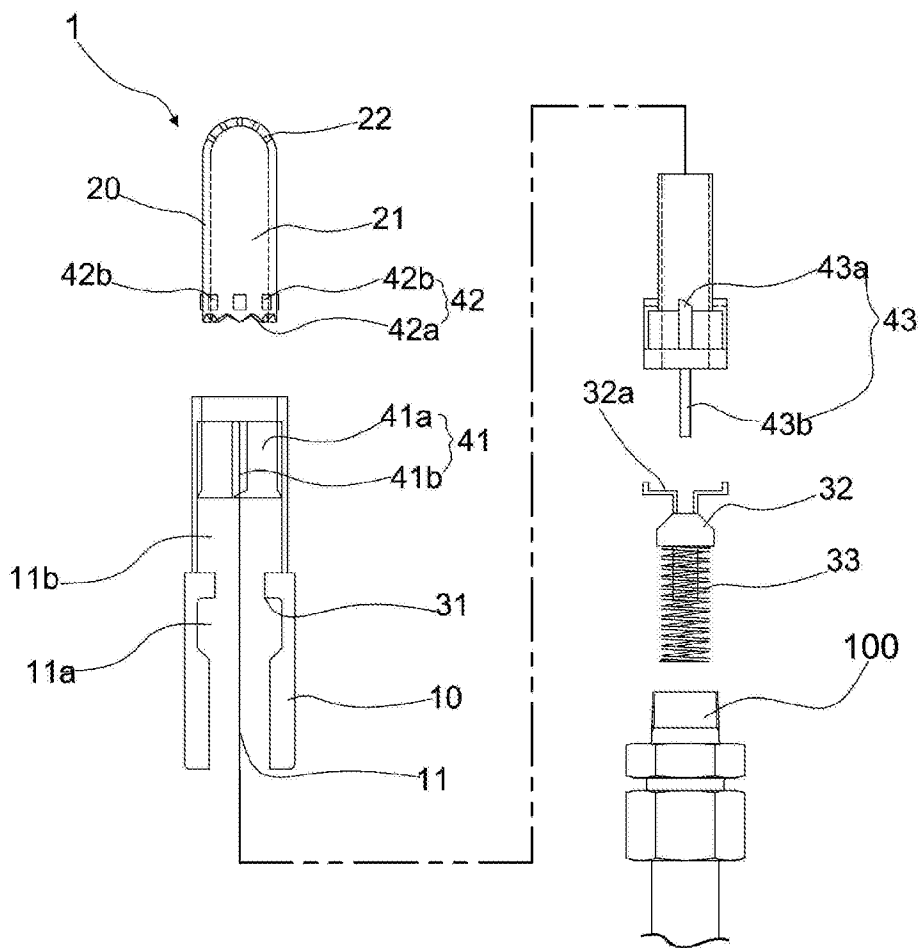
도면2b



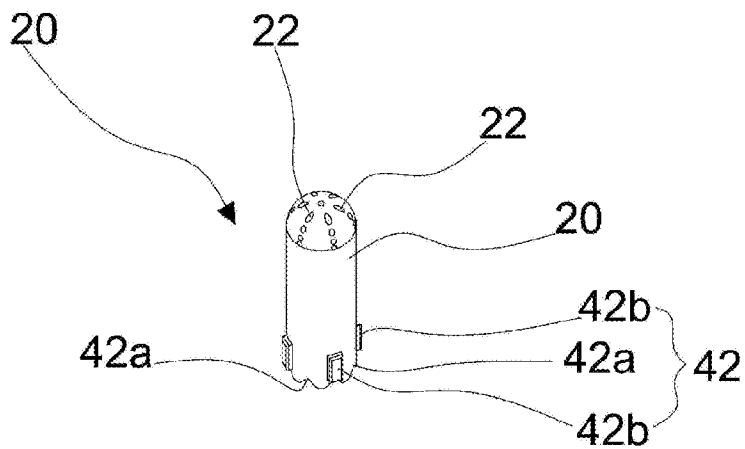
도면 2a



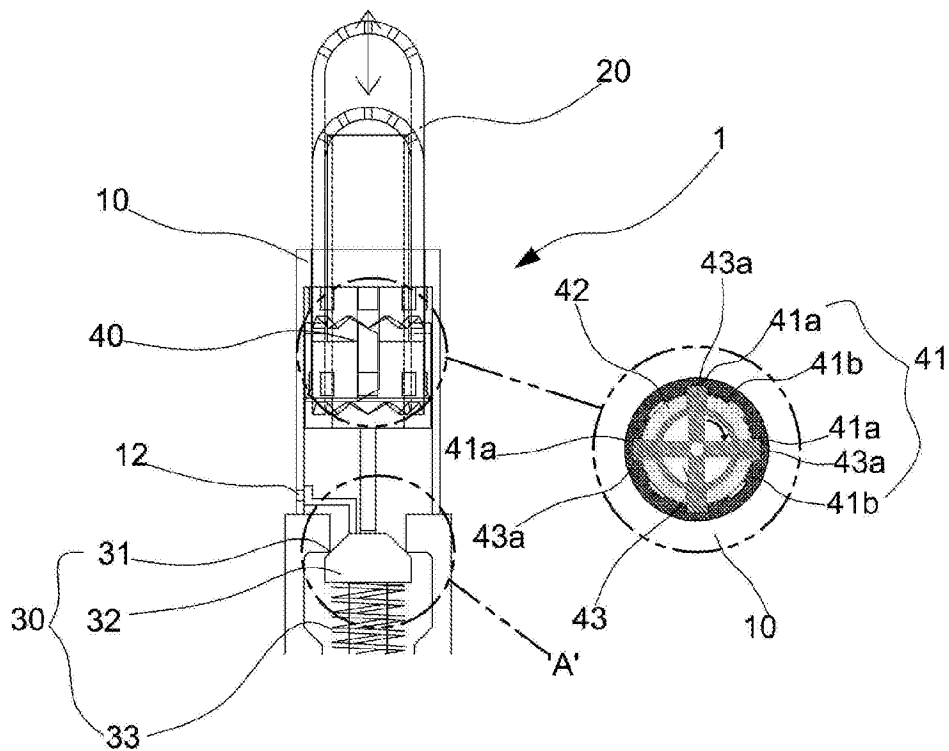
도면3b



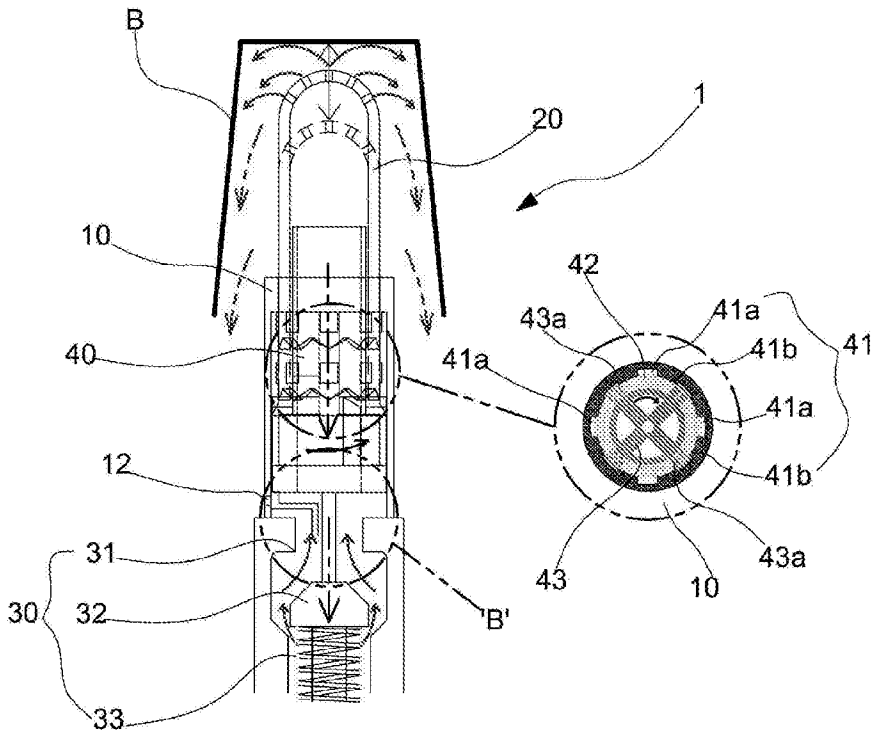
도면4



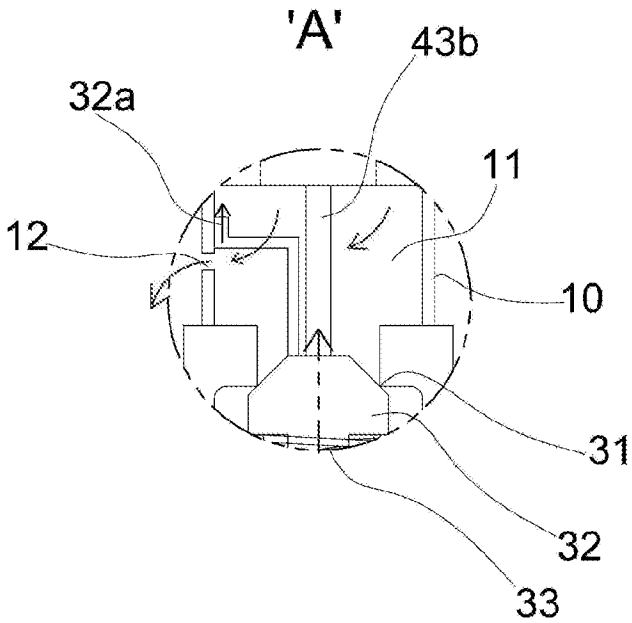
도면5



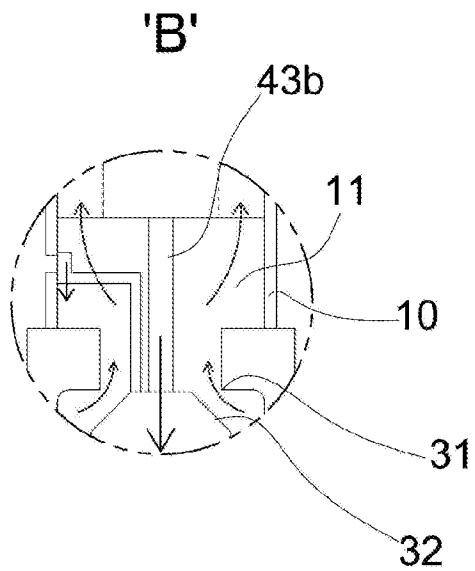
도면6



도면7a



도면7b





Upward type rinse faucet for kitchen

Abstract

The present invention relates to an upward injection type rinse faucet, capable of rinsing and removing foreign substances on a surface of a dish by being installed in a sink having a washing space for the dish, and injecting rinsing water to the surface of the dish which is completely washed at low pressure. According to the present invention, the upward injection type rinse faucet comprises: a vertical pipe vertically installed in the sink, discharging the rinsing water flowing inside through a supply pipe along a flow path to an upper side; a lifting nozzle cap covering an upper part of the flow path of the vertical pipe by being installed in a lifting structure on the upper part of the vertical pipe, having one or more injection holes discharging rinsing water flowing into a hollow unit along the flow path to the surface on the upper part or the side, wherein the lifting nozzle cap includes a hollow cap body with the open lower part, the closed upper part, and the closed side; an opening and closing valve opening and closing the flow path of the vertical pipe by being embedded in the flow path of the vertical pipe; and a change stopper changing and maintaining the opening and closing state of the flow path by the opening and closing valve by a stepwise lifting action of the lifting nozzle cap. As such, the upward injection type rinse faucet is able to continuously inject rinsing water upward by pressurizing the nozzle cap.

Images (10)



Classifications

E03C1/34 Water-basin installations specially adapted to wash-basins or baths

[View 4 more classifications](#)

Claims (4)

[Hide Dependent](#)

1. An uprising pipe arranged upright on the sink for discharging the rinsing water flowing along the supply pipe upwards along the flow path;
And a hollow cap body having an upper portion and a side portion closed and an opened lower portion, the upper portion and the lower portion covering the upper portion of the opened upright flow path arranged in an elevated structure on the upper portion of the upright tube, An elevating nozzle cap having at least one spray hole for discharging the rinse water to the surface;
An on-off valve disposed in the flow path of the upright pipe and opening / closing the flow path of the upright pipe; And
And a switching stopper for switching and maintaining the open / close state of the flow path by the opening / closing valve by the stepwise lifting and lowering action of the lifting nozzle cap. The rinse water is continuously sprayed upward by the pressure of the lifting nozzle cap,
Wherein the on-off valve comprises: a valve seat portion formed on the flow path of the uprising pipe in an axial direction; A valve disc disposed in the flow path formed with the valve seat portion in an ascending / descending structure and setting the open / closed state of the flow passage according to whether the valve seat portion is in close contact with the valve seat portion; And a compression spring urging the valve disc upward to closely contact the valve disc to the valve seat portion,
The valve disc is upwardly biased by the compression spring and is brought into close contact with the valve seat portion to close the flow path of the upright tube and is spaced apart from the valve seat portion by the pushing action of the switching stopper by the downward movement of the up / Open,
The rinsing water flowing along the flow path remains in a reduced pressure state in the expansion chamber formed in the lower portion. When the opening / closing valve is opened, Pressure nozzle through the ejection holes of the lift-up nozzle cap while being secondarily reduced in pressure while passing through the formed expansion chamber,
A drain hole communicating with the outside is formed at one point of the upright tube formed on the upper portion of the valve seat portion, and a shielding rim selectively in contact with the drain hole is formed on the valve disc,
When the valve disk is lowered by the pressure of the lift nozzle cap, the drain hole is shielded by the insulated shielding rim, so that the rinse water is prevented from flowing to the outside through the drain hole. , The shielding rim is moved upward to open the drain hole, and the rinsing water remaining on the upper portion of the valve seat portion is discharged through the opened drain hole to the outside.
2. delete
3. [2] The apparatus according to claim 1, wherein the switching stopper is formed on an inner wall of the upright tube and includes a lift portion and a bead portion alternately formed; A lifting cap disposed at a lower portion of the lifting nozzle cap and having inclined oblique protrusions formed at equal intervals on a lower surface thereof and having guide projections formed on an outer wall thereof and descending along a lifting rail of the reeling portion by pressing of the lifting nozzle cap; And a valve disk supported by the compression spring and supported by a pushing rod so as to interfere with the oblique projection of the elevating cam descending along the elevating rail through the stopping protrusion formed on the outer wall, ≪ / RT> >
The pressurizing rotator alternately performs an ascending process of ascending along the lifting rail by stepwise pressurization of the lifting nozzle cap and a

KR101765550B1

South Korea

[Download PDF](#)

[Find Prior Art](#)

[Similar](#)

Other languages: Korean

Inventor: 한세욱

Worldwide applications

2016 [KR](#)

Application KR1020160022369A events

2016-02-25 Application filed by 한세욱

2016-02-25 Priority to KR1020160022369A

2017-08-07 Application granted

2017-08-07 Publication of KR101765550B1

Info: Patent citations (2), Cited by (1), Legal events, Similar documents, Priority and Related Applications

External links: Espacenet, Global Dossier, Discuss

descaling process of adhering to the lower end of the tacking section and pressing the opening and closing valve downward, Wherein the open / close state of the upwardly-spread type kitchen rinse faucet is switched.

4. 2. The apparatus according to claim 1, wherein the supply pipe for supplying the rinsing water to the upright pipe includes a mixing ratio control valve for controlling the mixing ratio of hot water and cold water, and a flow rate control valve for controlling the flow rate of the rinsing water Wherein the upwardly-spredding type kitchen rinsing faucet is disposed on the upper surface of the main body.

Description

[0001] Upward type rinse faucet for kitchen [

More particularly, the present invention relates to an upwardly rinsing type kitchen rinse trough, and more particularly, to a rinse tank receiving upwardly rinsing type kitchen rinse trough which is disposed in a sink or the like where a washing space for a tableware is formed, To a rinse water supply for an upward spray type kitchen.

Generally, a water supply is connected to an end of a water pipe protruding from a wall surface of a building and discharges tap water (hereinafter referred to as "water"), and this water supply is used for a kitchen disposed in a sink or the like, Washing dishes including dishwashing and rinsing, and so on.

However, the faucets installed on the kitchen have been constructed by simply installing the faucets of the general purpose, which are opened and closed by the operation of the levers or knobs exposed to the outside, on the sink or the like and are unsuitable for rinsing dishes that have been washed Limitations are pointed out.

That is, the faucets installed in the kitchen in the prior art are configured to set the opening and closing states of the passages through the operation of the levers or knobs exposed to the outside. In the state where the dishes and the rinsers are held by one hand, it is very cumbersome to perform it repeatedly.

Therefore, generally, the knob or lever is operated to continuously open the channel to rinse the dishes while continuously discharging tap water (rinse water), which is undesirable because it causes an excessive waste of tap water.

Of course, in Korean Patent Registration No. 10-0718076 and the like, a knob is provided, and when the knob is depressed, the channel is temporarily opened so that tap water is discharged to the outside.

Such a water-saving faucet has many advantages in terms of saving tap water. However, since it is necessary to constantly depress the knob with one hand every time when the discharge of tap water is required, it is inconvenient to realize a stable rinse operation of the tableware, it is difficult to apply it to the rinsing water tank to be implemented in the present invention.

In addition, in the conventional faucet installed in the sink, the discharge port for discharging tap water is formed at the lower part so that the tap water (rinse water) is sprayed downward, and it is difficult to visually confirm the rinsing state of the tableware during the rinsing of the tableware.

In particular, when a lever or a knob exposed to the outside is operated, the lever or knob is kept in a contaminated state by a detergent or the like. Accordingly, after the rinse of the tableware is completed, water is supplied to the lever or knob it is sprayed at random and the area is washed, but this is cumbersome and inconvenient.

SUMMARY OF THE INVENTION It is an object of the present invention, which is devised to solve the above-described problems, to provide an apparatus and a method for controlling the opening and closing states of a flow path by sequentially alternately switching and maintaining the flow path by alternate pressurization of a lifting nozzle cap, To directly discharge the rinsing water by discharging the existing rinsing water to the lower part by directly pressing the lift cap on the lifting nozzle cap through the tableware requiring rinsing without any trouble to arbitrarily set the open / The main object of the present invention is to provide an upward spray type kitchen rinsing faucet capable of eliminating the problem of rinsing and rinsing the water several times when washing dishes such as cups and utensils.

The above object is achieved by the following constitutions provided in the present invention.

The upwardly-rinsing type kitchen rinsing faucet according to the present invention comprises:

An uprising pipe arranged upright on the sink for discharging the rinsing water flowing along the supply pipe upwards along the flow path;

And a hollow cap body having an upper portion and a side portion closed and an opened lower portion, the upper portion and the lower portion covering the upper portion of the opened upright flow path arranged in an elevated structure on the upper portion of the upright tube, An elevating nozzle cap having at least one spray hole for discharging the rinse water to the surface;

An on-off valve disposed in the flow path of the upright pipe and opening / closing the flow path of the upright pipe; And

And a switching stopper for switching and maintaining the open / close state of the flow path by the opening / closing valve by the stepwise lifting and lowering action of the lifting nozzle cap. The rinse water is continuously sprayed upward by the pressure of the lifting nozzle cap,

Wherein the on-off valve comprises: a valve seat portion formed on the flow path of the uprising pipe in an axial direction; A valve disc disposed in the flow path formed with the valve seat portion in an ascending / descending structure and setting the open / closed state of the flow passage according to whether the valve seat portion is in close contact with the valve seat portion; And a compression spring urging the valve disc upward to closely contact the valve disc to the valve seat portion,

The valve seat disk is upwardly biased by the compression spring and is brought into close contact with the valve seat portion to close the flow path of the upright pipe and is separated from the valve seat portion by the pushing action of the switching stopper by the pressure of the falling up / Open,

The rinsing water flowing along the flow path remains in a reduced pressure state in the expansion chamber formed in the lower portion. When the opening / closing valve is opened, Pressure nozzle through the ejection holes of the lift-up nozzle cap while being secondarily reduced in pressure while passing through the formed expansion chamber,

A drain hole communicating with the outside is formed at one point of the upright tube formed on the upper portion of the valve seat portion, and a shielding rim selectively in contact with the drain hole is formed on the valve disc,

When the valve disk is lowered by the pressure of the lift nozzle cap, the drain hole is shielded by the insulated shielding rim, so that the rinse water is prevented from flowing to the outside through the drain hole. The shielding rim is moved upward to open the drain hole, and the rinsing water remaining on the upper portion of the valve seat portion is discharged to the outside through the opened drain hole.

More preferably, the conversion stopper is formed on an inner wall of the upright tube and includes a lift portion and a bead portion alternately formed; A lifting cap disposed at a lower portion of the lifting nozzle cap and having inclined oblique protrusions formed at equal intervals on a lower surface thereof and having guide projections formed on an outer wall thereof and descending along a lifting rail of the reeling portion by pressing of the lifting nozzle cap; And a valve disk supported by

the compression spring and supported by a pushing rod so as to interfere with the oblique projection of the elevating cam descending along the elevating rail through the stopping protrusion formed on the outer wall, <i>RTI >

The pressurizing rotator alternately performs an ascending process of ascending along the lifting rail by stepwise pressurization of the lifting nozzle cap and a descaling process of adhering to the lower end of the tacking section and pressing the opening and closing valve downward, And the open / close state of the switch is switched.

The supply pipe for supplying the rinsing water to the flow path of the upright pipe is provided with a mixing ratio control valve for controlling the mixing ratio of the hot water and the cold water and a flow rate control valve for controlling the flow rate of the rinsing water supplied by the water supply.

As described above, the upwardly-rinsing type kitchen rinse water supply according to the present invention is arranged to stand upright on the sink and discharge the rinse water to the upper portion at a low pressure so that the rinse water is evenly sprayed on the surface of the tableware requiring rinsing. Since rinsing water is immediately discharged to the lower part by its own weight, the rinsing water which has been rinsed and removed the foreign matter forms a clean sanitary condition at all times, and a water saving effect and quick and convenient cleaning efficiency are ensured.

According to the present invention, the lifting and lowering nozzle cap is disposed on the upper portion of the upright tube in an ascending and descending manner, and an opening and closing valve is provided between the upright tube and the lifting and lowering nozzle cap. The switching stopper is arranged in an organic manner.

Therefore, according to the present invention, whether or not the rinse water is ejected is switched and maintained by the gradual pressurization of the lifting nozzle cap by the tableware while eliminating the cumbersome operation process of separately operating the knob formed on the opening / closing valve.

Particularly, the lifting and lowering nozzle cap is raised and lowered by pressing by a tableware that requires rinsing, rather than the hands of a user, so that the open / close state of the opening / closing valve is switched, thereby simplifying the structure by eliminating the pressure knob or the external knob. The convenience of the operation can be ensured.

FIG. 1 is a construction view showing a state in which an upward spray type kitchen rinsing water supply faucet proposed in the preferred embodiment of the present invention is mounted on a sink.

FIG. 2 and FIG. 3 are exploded and assembled state views showing the outline configuration of the upwardly-ejecting type kitchen rinsing faucet proposed as a preferred embodiment of the present invention.

Fig. 4 shows a detailed configuration of a lifting nozzle cap in a rinse water supply for kitchen, which is proposed in the preferred embodiment of the present invention.

5 to 6 are operational state diagrams showing the opening and closing states of the oil passage due to the lifting and lowering of the lifting nozzle cap by the tableware in the rinsing water supply which is proposed as a preferred embodiment of the present invention.

FIG. 7 is an enlarged view of the operating states of the 'A' portion and the 'B' portion in FIGS. 5 and 6.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS Hereinafter, an upwardly-rinsing type kitchen rinsing faucet proposed as a preferred embodiment of the present invention will be described in detail with reference to the accompanying drawings.

FIG. 1 is a view showing a state in which a upwardly-rinsing type kitchen rinsing faucet proposed to be a preferred embodiment of the present invention is mounted on a sink; FIGS. 2 and 3 are perspective views showing an upward- Fig. 4 is a view showing the detailed configuration of the lifting nozzle cap in the rinse water supply for the kitchen, which is proposed in the preferred embodiment of the present invention. Fig. 5 to Fig. 7 is a view showing an operation state of the opening and closing of the lifting and lowering nozzle cap by the tableware in the rinsing water supply proposed in the embodiment. Fig. 7 is a sectional view of the 'A' And to enlarge the working status of the part.

As shown in FIG. 1, the upwardly-upward type kitchen rinse water faucet 1 proposed as a preferred embodiment of the present invention is fixed upright on a sink 200 on which a washing space for a tableware is formed, And is an exclusive means for rinsing the foreign matter remaining on the surface of the tableware by blowing upward the rinse water W to a low pressure.

As shown in FIGS. 2 to 3, the upward spray type kitchen rinse water supply 1 is disposed upright on the sink 200 so that the rinsing water flowing along the supply pipe 100 is discharged upward along the flow path 11. An upright tube 10; (10) of the upright pipe (10), which is arranged on the upper part of the upright pipe (10) in an elevated structure, and which covers the upper part of the upright pipe (10) And a lift nozzle cap 20 having a plurality of spray holes 22 for discharging the rinsing water W flowing into the hollow portion 21 along the flow path 11 to the surface.

The supply pipe 100 for supplying the rinsing water W to the flow path 11 of the upright pipe 10 is provided with a mixing ratio control valve 110 for controlling the mixing ratio of the hot water and the cold water, And a flow control valve 120 for controlling the flow rate of the rinsing water supplied to the uprising pipe 10 of the uprising pipe 10 are respectively provided so that the constant rinsing water is supplied in a constant amount along the flow path of the uprising pipe.

5 to 6, the upwardly-rinsing type kitchen rinse water receptacle 1 includes rinse water, which is disposed upright on the sink 200 and supplied through the supply pipe 100, to the lift nozzle cap 20 So as to rinse and remove the foreign matter adhering to the surface of the tableware B which is overlaid on the top of the lifting nozzle cap 20. [

At this time, the rinsing water rinsed on the surface of the tableware, which is sprayed upward through the lift cap 20, is discharged to the lower part by its own weight, flows into the sink 200 of the sink 200 and is discharged, Foreign substances adhering to the surfaces of the lifting nozzle cap 20 and the uprising pipe 10 are removed by the rinsing water sprayed upward through the cap 20 to maintain a clean state at all times.

As a result, the rinsing water receiver 1 according to the present embodiment is self-cleaned by rinsing water sprayed upward through the lifting nozzle cap 20 and discharged downward along its surface by its own weight. After the tableware is rinsed, the trouble of spraying the cleaning water on the surface to clean it is eliminated.

5 to 6, the opening and closing states of the flow path 11 by the pressurization of the lifting nozzle cap 20 may be changed in a stepwise manner in order to realize the upwardly- Closing state of the flow path 11 through the gradual pressurization of the lifting nozzle cap 20 through the tableware requiring the rinse without the hassle of the user operating the knob or lever of the opening and closing valve 30 separately Keep transitioning step by step.

This configuration allows the user to grasp the tableware requiring rinsing with one hand in the rinsing process of the tableware B and to remove the cumbersome operation of manipulating the knob or lever of the opening / in particular, contamination of the opening / closing valve knob due to arbitrary manipulation of the knob or lever of the opening / closing valve is prevented by the hand with detergent.

Particularly, in the present invention, the upwardly-spraying type kitchen rinsing faucet 1 is installed in the flow path 11 of the upright tube 10 to close the flow path 11 and to pressurize the lowered lift cap 20 An open / close valve (30) for opening the flow path of the upright tube (10) closed by the opening / closing valve (30); A switching stopper 40 for switching and maintaining the open / close state of the flow path 11 by the opening / closing valve 30 is added by the stepwise lifting action of the lifting nozzle cap 20 by pressurization, The switching stopper 40 is configured to switch and maintain the opening or closing state of the flow path 11 by the opening and closing valve 30 by the alternate pressing action of the lifting nozzle cap 20 which is pressed by the opening /

According to the present embodiment, the on-off valve 30 includes a valve seat portion 31 formed on the flow path 11 of the upright tube 10 in the axial direction as shown in Figs. 2 to 3 and Figs. 5 to 6, A valve disc 32 which is disposed on the flow path 11 formed with the valve seat portion 31 in an ascending and descending structure and opens or closes the flow path 11 through tight contact with the valve seat portion 31; And a compression spring 33 for urging the valve disc 32 upward to bring the valve disc 32 into close contact with the valve seat portion 31.

5, the upper valve disc 32 is upwardly urged by the compression spring 33 and is brought into close contact with the valve seat portion 31 to close the flow passage 11 of the upright tube 10, And is configured to be separated from the valve seat portion 31 by the urging of the switching stopper 40 as shown in Fig. 6 by the urging action of the lifting nozzle cap 20 to open the flow passage 11.]

The widening chambers 11a and 11b having a relatively large space are formed in the flow path 11 formed at the upper and lower portions of the valve seat portion 31 so that the rinsing water flowing along the flow path 11 is formed at the lower portion. When the open / close valve 30 is opened, the pressure in the expansion hole 22 of the lifting nozzle cap 20 is reduced in the secondary pressure reduced state while passing through the expansion chamber 11b formed in the upper portion, So that the low pressure is ejected.

Pressure rinse water W is gradually ejected along the ejection holes 22 of the elevating nozzle cap 20 by the decompression action of the widening chambers 11a and 11b and consequently the rinse water is rinsed in a high- As the water is sprayed, the rinse water is dispersed to the outside and the circumferential pollution can be prevented.

The switching stopper 40 for switching and maintaining the open / close state of the flow path 11 by the on-off valve 30 is formed on the inner wall of the upright tube 10 and includes a lift rail 41a and a fastening section 41b. A rail part 41 formed alternately; The inclined protrusions 42a are formed at regular intervals on the lower surface of the nozzle cap 20 and the guide protrusions 42b are formed on the outer wall of the nozzle cap 20. By pressing the lift cap 20, A lifting cam 42 descending along the lifting rail 41a of the lifting and lowering member 41; And a pressing pivotal member 43 which interferes with the oblique protrusion 42a of the elevating cam 42 descending along the elevating rail 41a through the stopping protrusion 43a formed on the outer wall and is interlocked by the oblique surface structure in a one direction, .

At this time, the pressing rotator 43 is supported upward by the pressing rod 43b on the valve disc 32 upwardly biased by the compression spring 33, and is constantly stabilized by the biasing force of the compression spring 33. Maintains the state of being raised.

The compression spring 33 constituting the opening and closing valve 30 functions to bring the valve disc 32 of the opening and closing valve 30 upwardly in contact with the valve seat portion 31, Since the function of pushing up the pressing claw 43 in the upward direction is simultaneously performed, the structure can be simplified and the operation stability can be ensured.

In particular, in this embodiment, as shown in FIG. 4, the elevating cam is not separately manufactured and installed, but the oblique protrusions are formed at equal intervals in the lower part of the cap body constituting the lifting nozzle cap, and guide protrusions are formed on the outer wall of the cam body. The lift cap is installed on the upper portion of the upright tube to advance the rinse water and to perform the function of the lift cam to rotate the pressure rotor in a uniform manner through the lifting and lowering.

In this embodiment, the rail portion is integrally formed on the inner wall of the upright tube, and the additional cost due to the manufacturing due to the separately formed rail portion is arranged on the inner wall of the upright tube is prevented. That is, the rail portion is integrally formed when the upright tube is formed.

5, the pressing rotator 43 are moved up and down along the lifting rails 41a by the gradual pressurization of the lifting nozzle caps 20, 41b so as to press the valve disc 32 of the opening and closing valve 30 downward to alternately open and close the flow path 11 by the opening and closing valve 30 do.

5, the valve disc 32 of the open / close valve 30, which is upwardly raised by the compression spring 33, is lifted up along the lifting rail 41a of the rail portion 41, is closely attached to the valve seat portion 31 formed on the oil passage 11 to stably close the oil passage 11.]

In this state, when the user presses the lift cap 20 downward through the tableware B requiring rinsing as shown in Fig. 6, the lifting cam 42 and the pressing motor 42, which are upwardly supported by the compression spring 33, The movable member 43 descends along the lifting rail 41a of the rail portion 41.]

At this time, the pressing rotator 43 interferes with the oblique protrusion 42a formed on the elevating cam 42 through the stopping protrusion 43a and rotates in one direction in one direction, and is attached to the lower end of the fastening section 41b, .

Therefore, even if the pressurization of the lifting nozzle cap 20 is released, the presser foot 43 adheres to the lower end of the fastening section 41b of the rail portion 41 and remains in the lowered state, 30 are held in a state of being lowered by the pressurizing rod 43b of the lowered pressing pedal 43 so as to remain separated from the valve seat portion 31.]

The valve disc 32 is kept separated from the valve seat portion 31 and the flow path 11 formed in the uprising pipe 10 is maintained in an open state, The rinse water W is sprayed to the spray hole 22 of the lift nozzle cap 20 at a low pressure along the open channel 11.

Thus, the upwardly projecting rinse water supply receptacle 1 according to the present embodiment is opened by the primary pressurization of the lifting nozzle cap 20 protruding upward from the upper portion of the erected upright tube 10. The upward rinsing of the rinsing water is continuously performed along the lifting nozzle cap 20 and the upward flow of the rinsing water is stopped by the secondary pressurization of the lifting nozzle cap 20 by closing the flow path 11.

Therefore, it is possible to easily control whether the rinse water is sprayed or not, without operating the lever or the knob formed on the separate on-off valve or the on-off valve, and the sprayed state of the rinse water is continuously maintained. Therefore, Thereby eliminating the inconvenience of use.

In the present invention, a drainage structure for discharging the rinsing water remaining in the standing pipe 10 when the flow path 11 is blocked by the opening / closing valve 30 is provided to the upwardly- Thereby preventing the sanitary condition inside the rinsing water tank from becoming poor due to contamination of the remaining rinsing water.

5 to 7, a drain hole 12 communicating with the outside is formed at one point of the upright tube 10 formed on the upper portion of the valve seat portion 31, On the upper portion of the valve disc 32, a shielding rim 32a selectively in contact with the drain hole 12 is formed.

6 and 7B, when the valve disc 32 is lowered by the pressurization of the lifting nozzle cap 20, the drain hole 12 is shielded by the insulated shielding rim 32a so that the drain hole 12. Thereby preventing the rinse water from flowing out to the outside.

5 and 7A, when the valve disc 32 rises and is brought into close contact with the valve seat portion 31 to close the flow path 11, the shielding rim 32a moves upward to move the drain hole 12. .

Thus, in the upward spray type kitchen rinsing water power supply 1 according to the present embodiment, when the flow path 11 is closed by the opening / closing valve 30, the drain hole 12 is opened and the drain hole 12, The rinsing water remaining on the upper portion of the valve seat portion 31 is discharged to the outside, so that the rinsing water inside is prevented from being contaminated by the residual rinsing water.

1. Kitchen rinse trough
 10. Upright tube 11. Euro
 11a, 11b. Expansion chamber 12. Drainer
 20. Lifting nozzle cap 21. Hollow
 22. Spout
 30. Switching valve 31. Valve seat part
 32. Valve disk 32a. Shielded rim
 33. Compression spring
 40. Transition stopper 41. Le Mans
 41a. The lifting rails 41b. Fastening section
 42. Lifting cap 42a. Bevel
 42b. Guide protrusion 43. Presser member
 43a. Stopping projection 43b. Pressure rod
 100. Supply pipe 110. Containment rate control valve
 120. Flow control valve 200. Sink

Patent Citations (2)

Publication number	Priority date	Publication date	Assignee	Title
KR200338662Y1 *	2003-10-29	2004-01-16	윤경순	Valve for Faucet
KR101314012B1 *	2012-04-23	2013-10-01	김종구	Faucet
Family To Family Citations				

* Cited by examiner, † Cited by third party

Cited By (1)

Publication number	Priority date	Publication date	Assignee	Title
CN112392104A *	2019-09-19	2021-02-23	德尔塔阀门公司	Ware washing device and drain container and faucet assembly for same
Family To Family Citations				

* Cited by examiner, † Cited by third party, ‡ Family to family citation

Similar Documents

Publication	Publication Date	Title
US20160289933A1	2016-10-06	Easy rinse sink
KR101765550B1	2017-08-07	Upward type rinse faucet for kitchen
KR200450106Y1	2010-09-03	assembled nozzle of bidet
KR101143269B1	2012-05-11	A toilet balltap for changing water way
KR100901186B1	2009-06-04	A toilet stool having a check valve for preventing backflowing between bowl and water tank
US5286000A	1994-02-15	Wand activated dispensing valve for a faucet
JP6717936B2	2020-07-08	A sink that incorporates the functionality of a dishwasher
KR101074144B1	2011-10-17	Water supply apparatus of sink for foot pedal working type
JP2006175156A	2006-07-06	Tableware rack
KR20120097714A	2012-09-05	A 2way discharge valve for faucet
KR100964838B1	2010-06-24	Cleaner of inner mouse
KR101104119B1	2012-01-13	Bidet having Device for Washing Chamber pot
JP2021059864A	2021-04-15	Water-saving type sanitary faucet
KR101468846B1	2014-12-05	Jet pump for preventing overflowing and toilet stool having the same
KR101609108B1	2016-04-04	A Water-saving device for faucet having push-button of hands-free flushing

EP2919916B1	2017-10-04	Container cleaner with timing mechanism
KR100939693B1	2010-02-01	The device for washing the washstand plug
KR20170013071A	2017-02-06	Nozzle for bidet
KR100338152B1	2002-05-27	A washing device of automatic shutter type faucet
KR20210004537A	2021-01-13	Sink bubble apparatus
KR20180145030A	2015-12-29	Toilet apparatus having double water tank and water saving system using the same toilet apparatus
CN214423484U	2021-10-19	Cleaning tool and cleaning device
KR100896076B1	2009-05-07	Change valve apparatus of control valve in bidet
JPS764592B2	2006-04-12	Faucet equipment
KR200484133Y1	2017-08-03	Pressure valve main water supply conversion device of the upper and lower movable

Priority And Related Applications

Priority Applications (1)

Application	Priority date	Filing date	Title
KR1020160022369A	2016-02-25	2016-02-25	Upward type rinse faucet for kitchen

Applications Claiming Priority (1)

Application	Filing date	Title
KR1020160022369A	2016-02-25	Upward type rinse faucet for kitchen

Legal Events

Date	Code	Title	Description
2017-08-01	GRNT	Written decision to grant	

Concepts

machine-extracted

[Download](#) [Filter table](#)

Name	Image	Sections	Count	Query match
☞ rinsing water		claims,abstract,description	41	0.000
☞ discharging		claims,abstract,description	11	0.000
☞ water		claims,description	45	0.000
H ₂ O				
☞ pressing		claims,description	16	0.000
☞ compression		claims,description	14	0.000
☞ elevating		claims,description	11	0.000
☞ spray		claims,description	9	0.000
☞ ON-OFF		claims,description	8	0.000
☞ ascending		claims,description	8	0.000
☞ method		claims,description	6	0.000
☞ Respiratory tract infection		claims,description	2	0.000
☞ bead		claims,description	2	0.000

⌵ washing	abstract,description	3	0.000
⌵ substance	abstract,description	2	0.000
⌵ injection	abstract	4	0.000
⌵ injection	abstract	4	0.000
Show all concepts from the description section			

Data provided by IFI CLAIMS Patent Services



UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/167,647	02/04/2021	Mark Cipriani	DFC-5558-01-02-US	3847
79958	7590	03/03/2022	EXAMINER	
Masco Corporation			TATE-SIMS, CRISTI J	
Bose McKinney & Evans LLP			ART UNIT	
111 Monument Circle			PAPER NUMBER	
Suite 2700			1711	
Indianapolis, IN 46204			NOTIFICATION DATE	
			DELIVERY MODE	
			03/03/2022	
			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):

dyerkeson@boselaw.com
patent@boselaw.com

DETAILED ACTION

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.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on nonstatutory double patenting provided the reference application or patent either is shown to be commonly owned with the examined application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement. See MPEP § 717.02 for applications subject to examination under the first inventor to file provisions of the AIA as explained in MPEP § 2159. See MPEP § 2146 *et seq.* for applications not subject to examination under the first inventor to file provisions of the AIA. A terminal disclaimer must be signed in compliance with 37 CFR 1.321(b).

The USPTO Internet website contains terminal disclaimer forms which may be used. Please visit www.uspto.gov/patent/patents-forms. The filing date of the application in which the form is filed determines what form (e.g., PTO/SB/25, PTO/SB/26, PTO/AIA/25, or PTO/AIA/26) should be used. A

web-based eTerminal Disclaimer may be filled out completely online using web-screens. An eTerminal Disclaimer that meets all requirements is auto-processed and approved immediately upon submission. For more information about eTerminal Disclaimers, refer to

www.uspto.gov/patents/process/file/efs/guidance/eTD-info-I.jsp.

3. Claims 1-4, 8-11, and 20 rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1-3 and 8-10 of U.S. Patent No. 10,914,056. Although the claims at issue are not identical, they are not patentably distinct from each other because US 10,914,056 anticipates the instant application. Claims 5-7 are dependent upon claim 1. Claims 12-19 are dependent upon claim 11. Claims 21-24 are dependent upon claim 20.

Instant Application 17/167,647	Conflicting Patent US 10,914,056
1. A vessel rinsing apparatus comprising: a mounting member extending along a longitudinal axis, the mounting member configured to extend through a mounting aperture formed within a mounting deck; a fluid discharge member including a central body supporting a plurality of nozzles and a trigger, the central body being movable relative to the mounting member; a valve member operably coupled to the fluid discharge member and configured to control water flow through the central body to the plurality of nozzles in response to movement of the trigger; and a drain bowl operably coupled to the mounting member, the drain bowl including a	1. A vessel rinsing apparatus comprising: a mounting base including an upper coupler and a downwardly extending mounting shank defining an opening extending along a longitudinal axis, the upper coupler configured to be supported above an upper surface of a mounting deck, and the mounting shank configured to extend through a mounting aperture formed within the mounting deck; a fluid discharge member including a central body supporting a plurality of nozzles and a trigger extending outwardly from the central body, the central body received within the opening of the mounting shank and movable along the longitudinal axis; a valve shaft operably coupled to the fluid discharge member and configured to move

lower wall, an upwardly extending wall operably coupled to the lower wall, and a drain channel extending through the upwardly extending wall, the drain channel configured to receive water from the drain bowl and discharge water above and into a sink basin supported by the mounting deck.	with the trigger to control water flow through the central body to the plurality of nozzles ; and an escutcheon supported by the upper coupler of the mounting base and including an upwardly extending wall defining a drain bowl , and a drain channel extending through the upwardly extending wall, the drain channel configured to provide fluid communication between the drain bowl and receive water from the drain bowl and discharge water above and into a sink basin supported by the mounting deck.
2. The vessel rinsing apparatus of claim 1, wherein the mounting member comprises a mounting shank defining an opening extending along the longitudinal axis, and the central body of the fluid discharge member is received within the opening of the mounting shank and movable along the longitudinal axis.	2. The vessel rinsing apparatus of claim 1, further comprising a removable plate supported by the trigger of the fluid discharge member.
3. The vessel rinsing apparatus of claim 2, wherein the lower wall includes an opening through which the mounting shank extends.	3. The vessel rinsing apparatus of claim 2, wherein the removable plate comprises one of a strainer including a base and a plurality of circumferentially spaced drain openings, and an elastomeric brush including a plurality of upwardly extending cleaning projections and a plurality of drain

	openings positioned intermediate adjacent ones of the cleaning projections.
4. The vessel rinsing apparatus of claim 1, wherein the drain bowl is defined by an escutcheon .	Claim 1
8. The vessel rinsing apparatus of claim 1, wherein the drain channel includes a channel lower wall, opposing side walls, and an undercut formed in a lower surface of the channel lower wall for preventing water flowing through the drain channel from running back toward a rear wall of the sink basin.	8. The vessel rinsing apparatus of claim 1, wherein the drain channel includes a lower wall having an undercut to prevent water from running back along a rear wall of the sink basin.
9. The vessel rinsing apparatus of claim 1, wherein the drain channel includes a movable tray, such that a length of the drain channel is adjustable.	9. The vessel rinsing apparatus of claim 1, wherein the escutcheon includes a moveable tray defining the drain channel, such that the length of the drain channel is adjustable.
10. The vessel rinsing apparatus of claim I , wherein the trigger of the fluid discharge member includes a plurality of arms extending radially outwardly from the central body of the fluid discharge member.	10. The vessel rinsing apparatus of claim 1, wherein the trigger of the fluid discharge member includes a plurality of arms extending radially outwardly from the central body of the fluid discharge member.

<p>11 . A vessel rinsing apparatus comprising: a drain bowl including a lower wall, an upwardly extending wall operably coupled to the lower wall, and a drain channel extending through the upwardly extending wall. the drain channel configured to receive water from the drain bowl and discharge water above and into a sink basin supported by a mounting deck: a mounting member operably coupled to the drain bowl. the mounting member configured to couple the drain bowl to the mounting deck: a fluid discharge member including a central body supporting a plurality of nozzles and a trigger, the central body being movable relative to the mounting member; a valve member operably coupled to the fluid discharge member and configured to control water flow through the central body to the plurality of nozzles; and wherein the drain channel slopes away from the fluid discharge member and the drain bowl to facilitate water drainage into the sink basin.</p>	<p>Claim 1</p>
--	----------------

<p>20. A fluid delivery device comprising: a vessel rinsing apparatus including: a drain bowl including a lower wall and an upwardly extending wall, and a drain channel extending through the upwardly extending wall, the drain channel configured to receive water from the drain bowl and discharge water above and into a sink basin supported by a mounting deck; a mounting member operably coupled to the drain bowl, the mounting member configured to couple the drain bowl to the mounting deck; a fluid discharge member including a central body supporting a plurality of nozzles and a trigger, the central body being movable relative to the mounting member; and a valve member operably coupled to the fluid discharge member and configured to control water flow through the central body to the plurality of nozzles; and a faucet including: a delivery spout having a water outlet; a valve fluidly coupled to the delivery spout, the valve configured to control water flow to the water outlet; and wherein the fluid discharge member of the vessel rinsing apparatus is in selective fluid communication with the valve of the faucet.</p>	<p>21. The vessel rinsing apparatus of claim 12, wherein the fluid discharge member is fluidly coupled to an outlet of a faucet mixing valve. Claim 1</p>
--	---

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CRISTI J TATE-SIMS whose telephone number is (571)272-1722. The examiner can normally be reached M-F 9am-6pm.

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.

CRISTI J. TATE-SIMS
Primary Examiner
Art Unit 1711

/CRISTI J TATE-SIMS/
Primary Examiner, Art Unit 1711

<i>Search Notes</i> 	Application/Control No. 17/167,647	Applicant(s)/Patent Under Reexamination Cipriani et al.
	Examiner CRISTI J TATE-SIMS	Art Unit 1711

CPC - Searched*		
Symbol	Date	Examiner
A47L 15/0065, 15/16, 15/42, 15/4278 with keywords	02/26/2022	CTS
E03C 1/0404, 1/04 with keywords	02/26/2022	CTS
B05B 12/002, 1/28 with keywords	02/26/2022	CTS
B08B 9/34 with keywords	02/26/2022	CTS

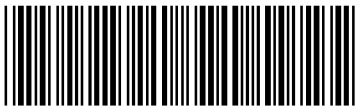
CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner
134	104.2 with keywords	02/26/2022	CTS

* 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
EAST assignee search	02/26/2022	CTS
EAST inventor search	02/26/2022	CTS
EAST search history attached	02/26/2022	CTS

/CRISTI J TATE-SIMS/ Primary Examiner, Art Unit 1711	
---	--

<i>Search Notes</i> 	Application/Control No. 17/167,647	Applicant(s)/Patent Under Reexamination Cipriani et al.
	Examiner CRISTI J TATE-SIMS	Art Unit 1711

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
134	104.2 with keywords	02/26/2022	CTS
A47L	15/0065, 15/16, 15/42, 15/4278 with keywords	02/26/2022	CTS
E03C	1/0404, 1/04 with keywords	02/26/2022	CTS
B05B	12/002, 1/28 with keywords	02/26/2022	CTS
B08B	9/34 with keywords	02/26/2022	CTS

/CRISTI J TATE-SIMS/ Primary Examiner, Art Unit 1711	
---	--

Bibliographic Data

Application No: 17/167,647

Foreign Priority claimed: ☐ Yes ☒ No

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

Verified and Acknowledged: /CRISTI J TATE-SIMS/

CTS

Examiner's Signature

Initials

Title: VESSEL RINSING APPARATUS

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
02/04/2021	134	1711	DFC-5558-01-02-US
RULE			

APPLICANTS

Delta Faucet Company, Indianapolis, IN,

INVENTORS

Mark Cipriani, Carmel, IN, UNITED STATES

Anthony Joseph Tentler, Windfall, IN, UNITED STATES

Jack William Judge, Indianapolis, IN, UNITED STATES

Thad J. Eads, Urbana, IN, UNITED STATES

Michael Scot Rosko, Greenwood, IN, UNITED STATES

Raoul Labrie, Shelbyville, IN, UNITED STATES

Alejandra Lazarini, Carmel, IN, UNITED STATES

Michael J. Veros, Carmel, IN, UNITED STATES

CONTINUING DATA

This application is a CON of 16131035 09/14/2018 PAT 10914056

FOREIGN APPLICATIONS

IF REQUIRED, FOREIGN LICENSE GRANTED**

02/17/2021

STATE OR COUNTRY

UNITED STATES

ADDRESS

Masco Corporation
Bose McKinney & Evans LLP
111 Monument Circle
Suite 2700
Indianapolis, IN 46204

UNITED STATES
FILING FEE RECEIVED
\$2,220

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	11,516	(A47L15/0065 or A47L15/16 or A47L15/42 or A47L15/4278).cpc. (E03C1/0404 or B05B12/002 or B05B1/28 or B08B9/34 or E03C1/04).cpc. 134/104.2.ccls.	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2022/02/26 16:10
L2	129	L1 and ((sink basin bowl) with (drain\$3 empty\$3) with (channel sprayer nozzle faucet))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2022/02/26 16:10
L3	864	((("DELTA") near3 ("FAUCET") near3 ("COMPANY"))).AS,AANM.	USPAT	OR	OFF	2022/02/26 16:10
L4	423	((("CIPRIANI") near3 ("Mark")) OR ((("TENTLER") near3 ("Anthony")) OR ((("JUDGE") near3 ("Jack")) OR ((("EADS") near3 ("Thad")) OR ((("ROSKO") near3 ("Michael")) OR ((("LABRIE") near3 ("Raoul")) OR ((("LAZARINI") near3 ("Alejandra")) OR ((("VEROS") near3 ("Michael")))).INV.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2022/02/26 16:10
L5	2	L2 and L3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2022/02/26 16:11
L6	7	L2 and L4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2022/02/26 16:11
L9	1	"17167647"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2022/02/26 16:27
S1	1	"16131035"	US-PGPUB; USPAT;	OR	ON	2020/07/19 18:41

			USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
S2	2	"20200087899"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/07/19 18:43
S3	2	"20200087899"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/07/19 20:46
S4	1	("20080142095").PN.	US-PGPUB; USPAT	OR	OFF	2020/07/19 20:48
S5	3	(US-737247-\$ US-708844-\$ US-20040168711-\$ US-20180092505-\$ US-8646476-\$ US-784755-\$).DID.	US-PGPUB; USPAT	OR	OFF	2020/07/19 20:50
S6	70	"737247" "708844" "784755"	US-PGPUB; USPAT	OR	OFF	2020/07/19 20:51
S7	1	("20080142095").PN.	US-PGPUB; USPAT	OR	OFF	2020/07/19 20:53
S8	5	(US-0092505-\$ US-0168711-\$ US-20040168711-\$ US-20180092505-\$ US-8646476-\$).DID.	US-PGPUB; USPAT	OR	OFF	2020/07/19 20:53
S9	1	US adj "708844"	US-PGPUB; USPAT	OR	OFF	2020/07/19 20:54
S10	27	("0708844" "0737247" "0784755" "1075734" "1337303" "1433337" "1460094" "20100012163" "2251059" "2691986" "2723894" "3595253" "4768534" "4836230" "6092540" "6863231" "7104474").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2020/07/19 20:55
S11	640	((("DELTA") near3 ("FAUCET") near3 ("COMPANY"))).AS,AANM.	USPAT	OR	OFF	2020/07/19 20:56
S12	306	((("CIPRIANI") near3 ("Mark")) OR ((("TENTLER") near3 ("Anthony")) OR ((("JUDGE") near3 ("Jack")) OR ((("EADS") near3 ("Thad")) OR ((("ROSKO") near3 ("Michael")) OR ((("LABRIE") near3 ("Raoul")) OR	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2020/07/19 20:56

		((("LAZARINI") near3 ("Alejandra"))) OR ((("VEROS") near3 ("Michael"))).INV.				
S13	2	"20110061754"	US-PGPUB; USPAT	OR	OFF	2020/07/19 21:23
S14	14	(A47L15/0065 or A47L15/16 or A47L15/42 or A47L15/4278).cpc. and (E03C1/0404 or B05B12/002 or B05B1/28 or B08B9/34 or E03C1/04).cpc.	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2020/07/19 21:26
S15	0	S11 and S14	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2020/07/19 21:29
S16	1	S12 and S14	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2020/07/19 21:30
S17	0	((("DELTA") near3 ("FAUCET"))).AS,AANM. and (shank with nozzle with valve)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2020/07/19 21:32
S18	0	S14 and (shank with nozzle with valve)	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2020/07/19 21:33
S19	1	S14 and ((shank with nozzle) same valve)	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2020/07/19 21:34
S20	1	S14 and (shank with nozzle)	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2020/07/19 21:34
S21	9,880	(A47L15/0065 or A47L15/16 or A47L15/42 or A47L15/4278).cpc. (E03C1/0404 or B05B12/002 or B05B1/28 or B08B9/34 or E03C1/04).cpc. 134/104.2.ccls.	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2020/07/19 21:35
S22	9	S21 and ((shank with nozzle) same valve)	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2020/07/19 21:36
S23	127	(E03C1/\$.cpc. B05B\$.cpc. A47L15/\$.cpc.) and ((shank with nozzle) same valve)	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2020/07/19 21:37

S24	78	(E03C1/\$.cpc. B05B\$.cpc. A47L15/\$.cpc.) and ((shank with nozzle) with valve)	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2020/07/19 21:37
S25	1	(shank with nozzle) and tate-sims	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2020/07/19 21:38
S26	10	("20050145717" "20060156463" "20140083470" "20140209131" "3548844" "4427221" "5934298" "6581614" "9505013").PN. OR ("10575705").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2020/07/19 21:39
S27	2	"20170172369"	US-PGPUB; USPAT; USOCR	OR	OFF	2020/07/19 21:40
S28	4	("1607096").URPN.	USPAT	OR	OFF	2020/07/19 22:08
S29	25	(F16K\$.cpc.) and ((shank with nozzle) with valve)	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2020/07/19 22:16
S30	45	(F16K\$.cpc.) and ((shank with nozzle) same valve)	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2020/07/19 22:17
S31	1	escutcheon and ((shank with nozzle) same valve)	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2020/07/19 22:20
S32	2	escutcheon and (shank same (nozzle with valve))	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2020/07/19 22:21
S33	98	(F16K\$.cpc.) and (shank same (nozzle with valve))	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2020/07/19 22:22
S34	16	S21 and (shank same (nozzle with valve))	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2020/07/19 22:23
S35	99	("20020167171" "20030102256" "20040011399" "20040117906" "20060117477" "20060131228" "20080178935" "3336935" "3459207" "3520325" "3600723" "3620254" "3757824" "3796380" "3835887"	US-PGPUB; USPAT; USOCR	OR	OFF	2020/07/19 23:01

		"3998240" "4026328" "4076279" "4103709" "4337795" "4356574" "4387738" "4458839" "4513769" "4552171" "4577653" "4607659" "4609006" "4610429" "4626005" "4635673" "4649958" "4754993" "4760871" "4762143" "4798221" "5027851" "5073991" "5090062" "5095554" "5100565" "5131428" "5219185" "5494259" "5558128" "5566707" "5573037" "5642755" "5653868" "5669417" "5685341" "5687952" "5701926" "5725008" "5746244" "5803120" "5865473" "5871029" "5881754" "5884662" "5937892" "5944225" "5950663" "5960490" "5979489" "6023796" "6062251" "6070614" "6073972" "6079447" "6085784" "6123106" "6138296" "6202686" "6256810" "6305407" "6328059" "6609732" "6729344" "6757921" "6920892" "7000854" "7077153" "7096879" "7121303" "7216663" "7721761").PN. OR ("8646476").URPN.				
S36	1	(12/992442).APP.	USPAT; USOCR	OR	OFF	2020/07/20 10:55
S37	8	BE adj "896360"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/07/20 11:00
S38	9,880	(A47L15/0065 or A47L15/16 or A47L15/42 or A47L15/4278).cpc. (E03C1/0404 or B05B12/002 or B05B1/28 or B08B9/34 or E03C1/04).cpc. 134/104.2.ccls.	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2020/07/20 12:44
S39	333	S38 and (brush bristle)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/07/20 12:44
S40	12	S38 and ((brush bristle) with glass)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	OR	ON	2020/07/20 12:44

			DERWENT; IBM_TDB			
S41	0	"16997089"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/28 10:31
S42	10,040	(A47L15/0065 or A47L15/16 or A47L15/42 or A47L15/4278).cpc. (E03C1/0404 or B05B12/002 or B05B1/28 or B08B9/34 or E03C1/04).cpc. 134/104.2.ccls.	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2020/09/28 23:08
S43	110	S42 and ((sink basin bowl) with (drain\$3 empty\$3) with (channel sprayer nozzle faucet))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/28 23:08
S44	192	S42 and ((sink basin bowl) with (drain\$3 empty\$3 discharg\$3) with (channel sprayer nozzle faucet))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/28 23:44
S45	241	(F16K\$.cpc.) and ((sink basin bowl) with (drain\$3 empty\$3 discharg\$3) with (channel sprayer nozzle faucet))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/09/28 23:57

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L7	5,599	(A47L15/0065 or A47L15/16 or A47L15/42 or A47L15/4278).cpc. (E03C1/0404 or B05B12/002 or B05B1/28 or B08B9/34 or E03C1/04).cpc. 134/104.2.ccls.	US-PGPUB; USPAT	OR	ON	2022/02/26 16:23
L8	25	L7 and ((sink basin bowl) with (discharg\$3) with (channel sprayer nozzle faucet)).clm.	US-PGPUB; USPAT	OR	ON	2022/02/26 16:23

S46	5,079	(A47L15/0065 or A47L15/16 or A47L15/42 or A47L15/4278).cpc. (E03C1/0404 or B05B12/002 or B05B1/28 or B08B9/34 or E03C1/04).cpc. 134/104.2.ccls.	US-PGPUB; USPAT	OR	ON	2020/09/28 23:09
S47	17	S46 and ((sink basin bowl) with (drain\$3 empty\$3) with (channel sprayer nozzle faucet)).clm.	US-PGPUB; USPAT	OR	ON	2020/09/28 23:09
S48	20	S46 and ((sink basin bowl) with (discharg\$3) with (channel sprayer nozzle faucet)).clm.	US-PGPUB; USPAT	OR	ON	2020/09/28 23:41
S49	305	((("CIPRIANI") near3 ("Mark")) OR ((("TENTLER") near3 ("Anthony")) OR ((("JUDGE") near3 ("Jack")) OR ((("EADS") near3 ("Thad")) OR ((("ROSKO") near3 ("Michael")) OR ((("LABRIE") near3 ("Raoul")) OR ((("LAZARINI") near3 ("Alejandra")) OR ((("VEROS") near3 ("Michael")))).INV.	US-PGPUB; USPAT	OR	OFF	2020/09/28 23:45
S50	38	S46 and S49	US-PGPUB; USPAT	OR	OFF	2020/09/28 23:45

2/26/2022 4:28:44 PM

C:\Users\csims1\Documents\EAST\Workspaces\17167647.wsp

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.

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>		Complete if Known	
		Application Number	
		Filing Date	
		First Named Inventor	Mark Cipriani
		Art Unit	
		Examiner Name	
Sheet 1	of 2	Attorney Docket Number	DFC-5558-01-02-US

U. S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
		US- 708,844	09-09-1902	Sweeney	
		US- 737,247	08-25-1903	Krammerer	
		US- 784,755	03-14-1905	Pein	
		US- 6,612,507	09-02-2003	Meyer et al.	
		US- 8,646,476	02-11-2014	Thomas et al.	
		US- 2004/0060109	04-01-2004	Hensley	
		US- 2004/0168711	09-02-2004	Dickson, et al.	
		US- 2008/0142095	06-19-2008	Van Der Linden	
		US- 2011/0061754	03-17-2011	Thomas et al.	
		US- 2014/0215709	08-07-2014	Nightlinger et al.	
		US- 2017/0172369	06-22-2017	Gonzalez et al.	
		US- 2018/0092505	04-05-2018	Simon	
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T ⁶
		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)				
		BE896360	08-01-1983	Vervenne & Van Bell S A		

Examiner Signature	/CRISTI J TATE-SIMS/	Date Considered	02/26/2022
-----------------------	----------------------	--------------------	------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

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 2 hours 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, 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 (1-800-786-9199) and select option 2.

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.

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>		Complete if Known	
		Application Number	
		Filing Date	
		First Named Inventor	Mark Cipriani
		Art Unit	
		Examiner Name	
Sheet 2	of 2	Attorney Docket Number	DFC-5558-01-02-US

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	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, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		US Patent Appl. No. 16/997,089, filed August 19, 2020, titled "VESSEL RINSING APPARATUS, DRAIN RECEPTACLE, INTERCHANGEABLE NOZZLE ASSEMBLY, AND FAUCET SYSTEM INCLUDING SAME."	
		Espacenet translation FR2543426A3, Drainer for drinking glasses (Year: 1983).	

Examiner Signature	/CRISTI J TATE-SIMS/	Date Considered	02/26/2022
--------------------	----------------------	-----------------	------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 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 2 hours 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, 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 (1-800-786-9199) and select option 2.

PTO SB08/A

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Complete if Known	
				Application Number	17/167,647
				Filing Date	February 4, 2021
				First Named Inventor	Mark Cipriani
				Art Unit	OPAP
Examiner Name	Not Assigned				
Sheet	1	of	2	Attorney Docket Number	DFC-5558-01-02-US

U.S. PATENT AND PATENT PUBLICATION DOCUMENTS					
*EXAMINER INITIAL	Cite No.	DOCUMENT NUMBER	Publication Date MM-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code (if known)			
	AA	708,844	09-1902	Sweeney	
	AB	737,247	08-1903	Kammerer	
	AC	784,755	03-1905	Pein	
	AD	6,612,507	09-2003	Meyer et al.	
	AE	2004/0060109	04/2004	Hensley	
	AF	2004/0168711	09-2004	Dickson, Jr. et al.	
	AG	2008/0142095	06-2008	Van Der Linden	
	AH	2011/0061754	03-2011	Thomas et al.	
	AI	8,646,476	02-2014	Thomas et al.	
	AJ	2014/0215709	08-2014	Nightlinger et al.	
	AK	2017/0172369	06-2017	Gonzalez et al.	
	AL	2018/0092505	04-2018	Simon	
	AM	2020/0087899	03-2020	Cipriani et al.	
	AN	10,914,056	02-2021	Cipriani et al.	
	AO	2021/0052131	02-2021	Cipriani et al.	
	AP				
	AQ				
	AR				
	AS				
	AT				
	AU				
	AV				
	AW				
	AX				
	AY				
	AZ				
	AAA				
	ABB				
	ACC				
Examiner Signature	/CRISTI J TATE-SIMS/			Date Considered	02/26/2022

*EXAMINER: Initial if reference considered whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

PTO SB08/A

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Complete if Known	
				Application Number	17/167,647
				Filing Date	February 4, 2021
				First Named Inventor	Mark Cipriani
				Art Unit	OPAP
Examiner Name				Not Assigned	
Sheet	2	of	2	Attorney Docket Number	DFC-5558-01-02-US

FOREIGN PATENT DOCUMENTS					
*EXAMINER INITIAL	Cite No.	DOCUMENT NUMBER	Publication Date MM-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code (if known)			
	BA	BE 896360	08-1983	Vervenne & Van Bell S A	English Language Translation
	BB	FR 2543426	05-1984	Vervenne Van Belle	English Language Translation
	BC				
	BD				
	BE				
	BF				
	BG				
	BH				
	BI				
	BJ				
	BK				
	BL				
	BM				
	BN				
	BO				
	BP				
	BQ				
	BR				
	BS				
Examiner Signature		/CRISTI J TATE-SIMS/		Date Considered	02/26/2022

*EXAMINER: Initial if reference considered whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Notice

This translation is machine-generated. It cannot be guaranteed that it is intelligible, accurate, complete, reliable or fit for specific purposes. Critical decisions, such as commercially relevant or financial decisions, should not be based on machine-translation output.

DESCRIPTION FR2543426A3

¹⁰ GLASS RINSE AND DRAINER EQUIPPED WITH SUCH A GLASS RINCE (rî) Publication number: (21) National registration number (51) CI: A 47 L 15/00, 19/04.

¹² INSTITUT NATIONAL DE LA PROPRIÉTÉ INDUSTRIELLE PARIS (g) filing: March 20, 1984. (f§): BE, April 1, 1983, n896.360.

¹⁴ @ Applicant (s): BE.

¹⁵ (72) Inventors): Maurice Donald Moeyensoon.

¹⁶ @ Date the application was made available to the public: B0PI "Patents" n "40 of October 5, 1984. (65) References to other related national documents: (7 l) Holder) (74) Agent (s): Germain and Maureau.

¹⁹ (5[^] Glass rinser and drip tray fitted with such a glass rinser.

²⁰ (57) Glass rinser intended to be mounted in a bowl of a drip tray characterized in that it comprises a central tubular body 22 inside which is mounted the mechanism 20 for controlling the passage of the rinsing water and to the outside of which is mounted a concentric sleeve 36 between which and the tubular body 22 can flow the discharges of liquids.

²⁴ The present invention relates to the glasses rinser and their drip tray used in particular for drinking establishments. Drip trays of this kind are generally made of stainless steel sheet folded over its edges and often have a glass rinser placed in a bowl. This can be stamped in the sheet itself, or attached by welding. The glass rinser consists of a cross provided in its center with a nozzle connected to a rinsing water line generally refrigerated. When you apply the upper edge of an inverted glass to the spider, it moves slightly downwards, thus opening the passage of the rinsing water to the nozzle. The mechanisms for rinsing glasses currently on the market are of such a height that it is necessary to have a deep-drawn part or bowl protruding far below the underside of the folded edge of the tray.

³³ This has the detrimental consequence that a large cut, corresponding to the total area of the stamped part or cup, must be made in the countertop, which is not always acceptable and sometimes difficult to achieve. On the other hand, the current glass rinser mechanism cannot be mounted higher since the top or crosspiece cannot protrude from the top surface of the tray. Another drawback of these trays is that the production of deep drawing still poses

manufacturing problems and in particular with stainless steel sheets. The current drip trays are provided with a return water flow arranged laterally with respect to the connection of the glass-rinser. In the bottom of the bowls, there are therefore two orifices, one 35 for the rinser and one for the flow, which are the basis of parasitic leaks of the rinsing water, resulting in: - unnecessary consumption of water 10 - consumption no electricity: you should know, in fact, that the rinsing water is generally refrigerated by the equipment ensuring the refrigeration of the drinks.

- 45 The objects of the present invention are to improve the hygiene in the use of the rinser, to facilitate the manufacture of the drip tray as well as the placement and maintenance of the assembly and e * ifin de reduce refrigerated water losses resulting in water and electricity savings in use. 20 To this end, the glass rinser, object of the invention, essentially comprises a central tubular body inside which is mounted the control mechanism for the passage of the rinsing water and outside which is mounted. a concentric sleeve between which and the tubular body can flow discharges of liquids. Another object of the invention is that the upper end of the tubular body is provided with a cylindrical shoulder for keeping the tubular body in a central position relative to the central flow orifice of the bowl, this cylindrical shoulder. being provided on its circumference with several radial notches allowing the flow of liquids.
- 55 Other particularities and advantages of the invention will be described below with the aid of a nonlimiting exemplary embodiment with reference to the appended drawings in which: FIG. 1 represents a view in partial section of the glass rinser / drip tray assembly according to the invention; Figure 2 is a partial view of. above the shoulder of the central tubular body. In Figure 1 there is shown at 10 the tablet of a beverage outlet counter, at 11 the drip tray 10 with its side rim 12 and a stamped portion of conical shape or bowl 13. The periphery of the bowl 13 is usually surmounted by a removable grid 14. In the center of the grid 14 and at a slightly lower level thereof, is arranged a cross of the type known per se which is connected to the control mechanism 20 of the passage of the rinsing water of the glass rinser. . According to the invention, this mechanism 20, 20 also known per se, is housed inside a tubular body 22, the upper end of which is provided with a cylindrical shoulder 24.
- 66 The periphery of this shoulder 24 is provided with radial notches 26 (FIG. 2) which are four in number in the example 25 illustrated. The shoulder 24 bears on the edge of the flow orifice 16 of the bowl 13. Preferably, the edge bordering this orifice 16 will have a slight vertical edge 17 in order to stiffen the sheet, 30 to allow easy centering of the tubular body 22 and to avoid leaks by water discharge in the event of a seal defect at the seal. 23 which will be discussed later in the description. The interior of the mechanism 20 of the rinser 35 can be dismantled with the aid of a knurled nut 28 which also serves as a deflector for the rinsing water. Between the knurled nut 28 and the tubular body 22 is provided an O-ring or "C"-ring 30. Between a push rod 32 and the body 20 of the glass rinser mechanism there is also an O-ring 34. This rod 3 2 is moved downwards, as illustrated in dotted lines in FIG. 1, when pressing with a glass on the spider 15 and releases the passage of the rinsing water.
- 77 10 Around the tubular body 22 is mounted, according to the invention, a concentric sleeve 36 using a tightening nut 38. The upper edge of the sleeve 36 is provided with a concentric groove in which the seal 23 is housed. By tightening the nut 38, the gasket 23 is crushed between the

upper edge of the sleeve 36 and the lower periphery of the outlet 16 of the bowl 13. In the lower part of the sleeve 36 is provided a side discharge pipe 40 for wastewater. This pipe is advantageously inclined downward to facilitate the flow and avoid stagnation of water in the bottom of the sleeve 36. The merit of the present invention lies in the combination of the flow with the water supply in a compact glass-rinse assembly, the reduction in size of which has been obtained by an original arrangement of the constituent parts such as part of the mechanism is incorporated in the reduced space that constitutes the water intake manifold as well as by a close study of the dimensions of the parts.

88 The advantages specific to the glass rinser according to the invention are in particular: a) that it can be dismantled manually: for dismantling, inspection or repair, without the use of tools. The large knurled nut can be easily operated by hand. As an accessory, the dimension of the nut is such that disassembly can be carried out without first removing the spider; 5 b) that it can be removed from the top: that is to say from the easily accessible part of the plate without requiring removal of the water inlet pipe; c) that there is no parasitic water loss: 10 a "O" ring seals the push rod so that there is no other water consumption than that of the upper nozzle. It should be noted that this factor facilitates the use of trays with shallow bowls: there is no splashing towards the user by ricochet of parasitic water projections on the walls of the bowl.

97 The advantages specific to the drainer, according to the invention, are that the counter must no longer be cut to allow the bowl to pass through and that its drilling is limited to the clearance necessary for the passage of the water inlet pipes and of flow, which provides: - a considerable saving in placement time - a reduction in the damaged surface of the counter 25 - a reduction in the bulk - in the case of refrigerated counters: a significant reduction in refrigeration losses. The flow-specific advantages, the parts of which are arranged concentrically on the water inlet tubing of the rinser, are: a) improved flow of liquids, i.e. ease of maintenance and better hygiene. The arrangement makes it possible to produce a conical bowl favoring drainage: a continuous slope leads the liquids to the drainage orifice without encountering any roughness or flat surfaces allowing stagnation. b) improvement of the seal: the elimination of the lateral flow hole obviously leads to a reduction in the possibilities of leaks.

108 Also from an aesthetic point of view, the appearance of the tray is significantly improved. c) ease of placement: - a single hole, of reduced diameter, is necessary 10 hence saving time and limited damage to the counter. It should be noted, in this regard, that the flow device has the particularity of having been designed to be able to be introduced into a hole of 0 52 mm, this diameter corresponds to the passage necessary for a tube of 1 '1/2 " (38 mm) which happens to be the one generally used for the rack mounting of multiple flow draft columns, so that professionals generally have the correct material for this diameter of hole (central bolt punch). This drilling is therefore very easy in comparison with the large-diameter cutouts necessary for the passage of deep, added (generally 0 120) or deep-drawn bowls, which practically require the use of a saw. - a single nut, easily accessible, fixes the glass rinser + outlet assembly: in a side discharge device, one of the pipes hinders access to the other, especially as access to the underside of the counter is often difficult due to the presence of refrigeration equipment or storage units. - the drain connection can be rotated 360 ° which facilitates the connection of the discharge tube avoiding bending or bending of the flexible

tube.

¹²³ d) in the case of refrigerated counters, significant reduction in refrigeration losses: by the elimination of a hole and the ease of isolating the single circular opening. Of course various modifications can be made by those skilled in the art to the device which has just been described Only by way of nonlimiting example without departing from the scope of the invention.

¹²⁸ - 1. Glass rinser intended to be mounted in a bowl of a drip tray and provided at its upper part with a cross which by its downward movement causes the opening of the passage of the rinsing water through a central nozzle, characterized in that it essentially comprises a central tubular body (22) inside which is mounted the mechanism (20) for controlling the passage of the rinsing water and outside which is mounted a concentric sleeve (36) between which and the tubular body (22) can flow discharges of liquids.

2.

¹³⁷ Glass rinser according to Claim 1, characterized in that the upper end of the tubular body (22) is provided with a cylindrical shoulder (24) which can bear on the periphery of a flow orifice (16) provided in the bowl (13) of a drip tray (11) and in that the circumference of the shoulder (24) is provided with several radial notches (26) allowing the flow of liquids.

3.

¹⁴⁴ Rinser according to claims 1 and 2, characterized in that the concentric sleeve (36) is mounted on the tubular body (22) using a clamping nut (38) which causes the crushing of a seal (23) between the upper edge of the sleeve (36) and the lower periphery of the flow orifice (16) of the bowl (13).

4.

¹⁵¹ Glass rinser according to claims 1 and 2, characterized in that the lower part of the concentric sleeve (36) is provided with a lateral discharge pipe (40) for waste water.

5.

¹⁵⁶ Glass rinser according to claims 1 and 2, characterized in that O-rings (O-ring) (30 and 34) respectively are provided on the one hand between a knurled nut (28) for mounting the glass rinser mechanism and the tubular body (22) and on the other hand between a push rod (32) and the body (20) of the mechanism for controlling the passage of water. 56. Drip tray for glass rinsers according to Claim 1, characterized in that it comprises a bowl (13) of conical shape, the total depth of which does not exceed the height of the lateral rim (12) of the plate (11). 107. Drip tray according to Claim 6, characterized in that it has, in the center of the bowl (13), a single outlet (16) for the waste water. 8. Drip tray according to Claim 7, characterized in that

the edge bordering the outlet opening (16) for waste water has a slight vertical edge (17). 9.

Glass-rinser / drip tray assembly according to any one of Claims 1 to 8!

166 543 3* 14

Electronic Acknowledgement Receipt

EFS ID:	44858862
Application Number:	17167647
International Application Number:	
Confirmation Number:	3847
Title of Invention:	VESSEL RINSING APPARATUS
First Named Inventor/Applicant Name:	Mark Cipriani
Customer Number:	79958
Filer:	Douglas Alan Yerkeson/Patsy Fonseca
Filer Authorized By:	Douglas Alan Yerkeson
Attorney Docket Number:	DFC-5558-01-02-US
Receipt Date:	31-JAN-2022
Filing Date:	04-FEB-2021
Time Stamp:	08:09:04
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
------------------------	----

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	20220131_DFC-5558-01-02-US_Letter_to_the_PTO_Submitting_IDS.pdf	51407 01f97aa978f843ae33843344ae130d4aa3ba b5af	no	1

Warnings:

Information:					
2	Information Disclosure Statement (IDS) Form (SB08)	20220131_DFC-5558-01-02-US_IDS.pdf	146311	no	2
			244890d0da5671879bf59fa99bfb5c52fbb120a8		
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
3	Foreign Reference	20220131_DFC-5558-01-02-US_Abstract_and_BE896360.pdf	589984	no	13
			d7ddd25b847df25be46b244f3b4d0bbeab231654		
Warnings:					
Information:					
4	Foreign Reference	20220131_DFC-5558-01-02-US_Translation_of_BE896360.pdf	3043086	no	7
			dc41725a64412b1a173cb2047975ff359f93915c		
Warnings:					
Information:					
5	Foreign Reference	20220131_DFC-5558-01-02-US_FR2543426.pdf	442248	no	11
			aa62e43ba30051b8039d63f01435bdb20e35d2ef		
Warnings:					
Information:					
6	Information Disclosure Statement (IDS) Form (SB08)	20220131_DFC-5558-01-02-US_Translation_of_FR2543426.pdf	285433	no	5
			b4abc04aa974f01dae7946146a9d4becf5a57e9f		
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
Total Files Size (in bytes):			4558469		

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 a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

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.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

App. No. : 17/167,647
Inventors : Mark Cipriani et al.
Filed : February 4, 2021
Title : VESSEL RINSING APPARATUS
TC/A.U. : OPAP
Examiner : Not Assigned
Docket No. : DFC-5558-01-02-US
Customer No. : 79958

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This statement is filed in the application identified above pursuant to 37 C.F.R. §§ 1.97 and 1.98. Applicants call attention to the art references within the knowledge of applicants and their attorneys which are listed on the attached form PTO-SB08. No representation is intended that a complete search has been made or that no better art references are available. The filing of this statement shall not be construed to be an admission that the information cited in the statement is, or is considered to be, prior art or material to patentability as defined in 1.56(b).

If any fees are necessary in connection with this document, please charge Deposit Account No. 02-3223, Bose McKinney & Evans LLP.

Respectfully submitted,

/Douglas A. Yerkeson/

Douglas A. Yerkeson, Reg. No. 39,882
Attorney for Applicants
BOSE MCKINNEY & EVANS LLP
111 Monument Circle, Suite 2700
Indianapolis, IN 46204
Telephone: 317-237-5110

Dated: January 31, 2022

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Complete if Known	
				Application Number	17/167,647
				Filing Date	February 4, 2021
				First Named Inventor	Mark Cipriani
				Art Unit	OPAP
Examiner Name	Not Assigned				
Sheet	1	of	2	Attorney Docket Number	DFC-5558-01-02-US

U.S. PATENT AND PATENT PUBLICATION DOCUMENTS					
*EXAMINER INITIAL	Cite No.	DOCUMENT NUMBER	Publication Date MM-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code (if known)			
	AA	708,844	09-1902	Sweeney	
	AB	737,247	08-1903	Kammerer	
	AC	784,755	03-1905	Pein	
	AD	6,612,507	09-2003	Meyer et al.	
	AE	2004/0060109	04/2004	Hensley	
	AF	2004/0168711	09-2004	Dickson, Jr. et al.	
	AG	2008/0142095	06-2008	Van Der Linden	
	AH	2011/0061754	03-2011	Thomas et al.	
	AI	8,646,476	02-2014	Thomas et al.	
	AJ	2014/0215709	08-2014	Nightlinger et al.	
	AK	2017/0172369	06-2017	Gonzalez et al.	
	AL	2018/0092505	04-2018	Simon	
	AM	2020/0087899	03-2020	Cipriani et al.	
	AN	10,914,056	02-2021	Cipriani et al.	
	AO	2021/0052131	02-2021	Cipriani et al.	
	AP				
	AQ				
	AR				
	AS				
	AT				
	AU				
	AV				
	AW				
	AX				
	AY				
	AZ				
	AAA				
	ABB				
	ACC				
Examiner Signature					Date Considered

*EXAMINER: Initial if reference considered whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Complete if Known	
				Application Number	17/167,647
				Filing Date	February 4, 2021
				First Named Inventor	Mark Cipriani
				Art Unit	OPAP
				Examiner Name	Not Assigned
Sheet	2	of	2	Attorney Docket Number	DFC-5558-01-02-US

FOREIGN PATENT DOCUMENTS					
*EXAMINER INITIAL	Cite No.	DOCUMENT NUMBER	Publication Date MM-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code (if known)			
	BA	BE 896360	08-1983	Vervenne & Van Bell S A	English Language Translation
	BB	FR 2543426	05-1984	Vervenne Van Belle	English Language Translation
	BC				
	BD				
	BE				
	BF				
	BG				
	BH				
	BI				
	BJ				
	BK				
	BL				
	BM				
	BN				
	BO				
	BP				
	BQ				
	BR				
	BS				
Examiner Signature				Date Considered	

*EXAMINER: Initial if reference considered whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

**Espacenet****Bibliographic data: BE896360 (A) — 1983-08-01**

Drainer for drinking glasses - is mounted in trough, and consists of central tube with outer concentric sleeve, and inner control valve

Inventor(s):

Applicant(s): VERVENNE & VAN BELL S A ± (VERVENNE & VAN BELL S.A)

Classification: - international: A47L15/00; A47L15/16; B08B9/34; (IPC1-7): A47L
- cooperative: A47L15/0065 (EP); B08B9/34 (EP)

Application number: BE19830210476 19830401

Priority number(s): BE19830210476 19830401 ; BE19830896360 19830401

Abstract of BE896360 (A)

The drinking-glass drainer is mounted in a trough inside a draining board, and has a cross-piece at the top. The drainer consists of a central tubular section inside which is mounted the control for the rinsing water. Outside the tubular section is mounted a concentric sleeve. The top of the tubular section has a cylindrical shoulder (24) with notches resting on the periphery of an outlet hole in the trough. The bottom of the concentric sleeve has a side discharge pipe.



MINISTÈRE DES AFFAIRES ÉCONOMIQUES

N° 896.360

Classif. Internat. :

A47L

Mis en lecture le :

01-08-1983

Le Ministre des Affaires Economiques,

Vu la loi du 24 mai 1854 sur les brevets d'invention :

Vu le procès-verbal dressé le 1 avril 1983 à 14 h. 45
au Service de la Propriété industrielle;

ARRÊTE :

Article 1. — *Il est délivré à la Sté dite : VERVENNE & VAN BELLE Société Anonyme,*
rue Pierre Schlosser, 8-10, Bruxelles,

repr. par le Cabinet Bede à Bruxelles,

un brevet d'invention pour : Rince-verres et plateau-égouttoir équipé d'un tel rince-verres

Article 2. — *Ce brevet lui est délivré sans examen préalable, à ses risques et périls, sans garantie soit de la réalité, de la nouveauté ou du mérite de l'invention, soit de l'exactitude de la description, et sans préjudice du droit des tiers.*

Au présent arrêté demeurera joint un des doubles de la spécification de l'invention (mémoire descriptif et éventuellement dessins) signés par l'intéressé et déposés à l'appui de sa demande de brevet.

Bruxelles, le 29 avril 1983

PAR DÉLÉGATION SPÉCIALE :

Le Directeur Général

R. RAUX

895350

La Société dite : VERVENNE & VAN BELLE Société Anonyme
à B-1070 BRUXELLES (Belgique)

Rince-verres et plateau-égouttoir équipé d'un tel
rince-verres.

La présente invention concerne les rince-verres et leur plateau-égouttoir utilisés particulièrement pour les débits de boissons.

Les plateaux-égouttoirs de ce genre sont généralement réalisés en tôle d'acier inoxydable repliée sur ses bords et comportent souvent un rince-verres placé dans une cuvette. Celle-ci peut être emboutie dans la tôle même, soit rapportée par soudure. Le rince-verres se compose d'un croisillon muni dans son centre d'un gicleur relié à une canalisation d'eau de rinçage généralement réfrigérée. Lorsqu'on applique le bord supérieur d'un verre retourné sur le croisillon, celui-ci se déplace légèrement vers le bas ouvrant ainsi le passage de l'eau de rinçage vers le gicleur.

Les mécanisme de rince-verres actuellement sur le marché sont d'une hauteur telle qu'il est nécessaire d'avoir une partie emboutie ou cuvette profonde débordant largement en dessous de la face inférieure du bord replié du plateau.

Ceci a comme conséquence néfaste qu'une découpe importante, correspondant à la superficie totale de la partie emboutie ou cuvette, doit être effectuée dans la tablette du comptoir ce qui n'est pas toujours acceptable et parfois difficile à réaliser.

D'autre part, le mécanisme rince-verres actuel ne peut pas être monté plus haut étant donné que la partie supérieure ou croisillon ne peut pas dépasser de la surface supérieure du plateau.

Un autre inconvénient de ces plateaux est que la réalisation d'emboutissages profonds pose toujours des problèmes de fabrication et en particulier avec des tôles en acier inoxydable.

Les plateaux-égouttoirs actuels sont munis d'un écoulement de retour d'eau disposé latéralement par rapport au raccordement du rince-verres. Dans le fond des cuvettes, on prévoit donc deux orifices, un pour le rince-verres et un pour l'écoulement, qui sont

souvent prévus avec des logements circulaires en creux destinés à recevoir des joints d'étanchéité. Il en résulte que les liquides peuvent stagner dans le fond de la cuvette et qu'il est malaisé, sinon impossible, de la nettoyer convenablement.

Enfin tous les mécanismes actuellement sur le marché présentent des fuites parasites de l'eau de rinçage, ce qui entraîne :

- une consommation inutile d'eau
- une consommation inutile d'électricité : il faut savoir, en effet, que l'eau de rinçage est généralement réfrigérée par le matériel assurant la réfrigération des boissons.

Les buts de la présente invention sont d'améliorer l'hygiène à l'emploi du rince-verres, de faciliter la fabrication du plateau-égouttoir ainsi que le placement et l'entretien de l'ensemble et enfin de diminuer les pertes d'eau réfrigérée d'où économie d'eau et d'électricité à l'emploi.

A cet effet, le rince-verres, objet de l'invention, comprend essentiellement un corps tubulaire central à l'intérieur duquel est monté le mécanisme de commande du passage de l'eau de rinçage et à l'extérieur duquel est monté un manchon concentrique entre lequel et le corps tubulaire peuvent s'écouler les décharges de liquides.

Un autre objet de l'invention est que l'extrémité supérieure du corps tubulaire est munie d'un épaulement cylindrique pour le maintien en position centrale du corps tubulaire par rapport à l'orifice d'écoulement central de la cuvette, cet épaulement cylindrique étant muni sur sa circonférence de plusieurs entailles radiales permettant l'écoulement des liquides.

D'autres particularités et avantages de l'invention seront décrits ci-après à l'aide d'un exemple

de réalisation non limitatif en se référant aux dessins annexés dans lesquels :

la figure 1 représente une vue en coupe partielle de l'ensemble rince-verres/plateau-égouttoir suivant l'invention ;

la figure 2 est une vue partielle de dessus de l'épaulement du corps tubulaire central.

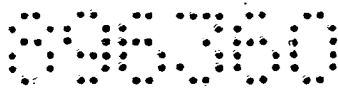
Sur la figure 1 on a montré en 10 la tablette d'un comptoir de débit de boissons, en 11 le plateau-égouttoir avec son rebord latéral 12 et une partie emboutie de forme conique ou cuvette 13. La périphérie de la cuvette 13 est surmontée habituellement d'une grille amovible 14.

Au centre de la grille 14 et à un niveau légèrement plus bas de celle-ci, est disposé un croisillon 15 du genre connu en soi qui est relié au mécanisme de commande 20 du passage de l'eau de rinçage du rince-verres.

Conformément à l'invention, ce mécanisme 20, également connu en soi, est logé à l'intérieur d'un corps tubulaire 22 dont l'extrémité supérieure est pourvue d'un épaulement cylindrique 24. La périphérie de cet épaulement 24 est munie d'entailles radiales 26 (figure 2) qui sont au nombre de quatre dans l'exemple illustré.

L'épaulement 24 prend appui sur le bord de l'orifice d'écoulement 16 de la cuvette 13. De préférence la lisière bordant cet orifice 16 présentera un léger bord vertical 17 afin de rigidifier la tôle, de permettre le centrage facile du corps tubulaire 22 et d'éviter les fuites par rejet d'eau en cas de défaut d'étanchéité au joint 23 dont il sera question plus loin dans la description.

L'intérieur du mécanisme 20 du rince-verres peut être démonté à l'aide d'un écrou molleté 28 qui



sert également de déflecteur de l'eau de rinçage. Entre l'écrou molleté 28 et le corps tubulaire 22 est prévu un joint torique ou "O"-ring 30. Entre une tige de poussée 32 et le corps 20 du mécanisme rince-verres, on prévoit également un joint torique 34.

Cette tige 32 est déplacée vers le bas, comme illustré en pointillé sur la figure 1, lorsqu'on appuie avec un verre sur le croisillon 15 et libère le passage de l'eau de rinçage.

Autour du corps tubulaire 22 est monté, suivant l'invention, un manchon concentrique 36 à l'aide d'un écrou de serrage 38. Le bord supérieur du manchon 36 est muni d'une rainure concentrique dans laquelle est logé le joint 23. Par le serrage de l'écrou 38, le joint 23 est écrasé entre le bord supérieur du manchon 36 et la périphérie inférieure de l'orifice d'écoulement 16 de la cuvette 13.

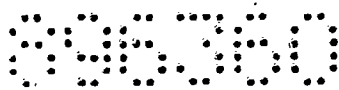
Dans la partie inférieure du manchon 36 est prévu un tuyau d'évacuation latéral 40 des eaux usées. Ce tuyau est avantageusement incliné vers le bas pour faciliter l'écoulement et éviter la stagnation de l'eau dans le fond du manchon 36.

Le mérite de la présente invention réside dans la combinaison de l'écoulement avec l'arrivée d'eau dans un ensemble rince-verres compact dont la réduction de taille a pu être obtenue par un arrangement original des pièces constitutives tel qu'une partie du mécanisme est incorporée dans l'espace réduit que constitue la tubulure d'admission d'eau ainsi que par une étude serrée des dimensions des pièces.

Les avantages propres au rince-verres selon l'invention sont notamment :

a) qu'il est démontable manuellement :

pour démontage, inspection ou réparation, sans utilisation d'outils. L'écrou molleté de grande dimension



peut être facilement manoeuvré à la main. A titre accessoire, la dimension de l'écrou est telle que le démontage peut être effectué sans enlèvement préalable du croisillon;

- 5 b) qu'il est démontable par le haut :
c'est-à-dire par la partie facilement accessible du plateau sans nécessiter une dépose de la canalisation d'arrivée d'eau;
- 10 c) qu'il ne présente pas de pertes d'eau parasites :
un "O" ring étanche la tige de poussée de sorte qu'il n'y a pas d'autre consommation d'eau que celle du gicleur supérieur.
- 15 A noter que ce facteur vient faciliter l'utilisation de plateaux à cuvettes peu profondes : il n'y a pas d'éclaboussures vers l'utilisateur par ricochet des projections d'eau parasites sur les parois de la cuvette.

Les avantages propres à l'égouttoir, selon l'invention, sont que le comptoir ne doit plus être découpé

20 pour laisser passer la cuvette et que son perçage est limité au dégagement nécessaire au passage des tubulures d'arrivée d'eau et d'écoulement, ce qui procure :

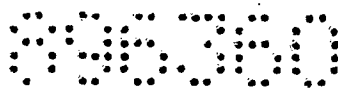
- un gain de temps considérable au placement
- une réduction de la surface abîmée du comptoir
- 25 - une réduction de l'encombrement
- dans le cas de comptoirs réfrigérés : une réduction importante des pertes frigorifiques.

Les avantages propres à l'écoulement, dont les pièces sont disposées de façon concentrique sur la

30 tubulure d'arrivée d'eau du rince-verres, sont :

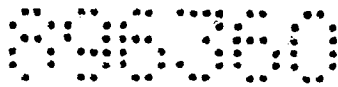
a) amélioration de l'écoulement des liquides, c'est-à-dire facilité d'entretien et meilleure hygiène. La disposition permet de réaliser une cuvette de forme conique favorisant le drainage : une pente continue mène

35 les liquides jusque dans l'orifice d'écoulement sans



rencontrer d'aspérités ou surfaces plates permettant une stagnation.

- b) amélioration de l'étanchéité : la suppression du trou latéral d'écoulement entraîne évidemment une réduction des possibilités de fuite. Du point de vue esthétique également, l'aspect du plateau est sensiblement amélioré.
- c) facilité de placement :
- un seul trou, de diamètre réduit, est nécessaire d'où gain de temps et dégâts limités au comptoir. Il faut remarquer, à ce propos, que le dispositif d'écoulement a la particularité d'avoir été conçu pour pouvoir être introduit dans un trou de Ø 52 mm, ce diamètre correspond au passage nécessaire pour un tube de 1' 1/2", lequel se trouve être celui généralement utilisé pour la fixation sur égouttoir des colonnes de tirage à débits multiples, de sorte que les professionnels disposent généralement du matériel adéquat pour ce diamètre de perçage (emporte-pièce à boulon central). Ce perçage est donc très aisé en comparaison des découpes de grand diamètre nécessaires au passage des cuvettes profondes, rapportées (généralement Ø 120) ou embouties, qui elles, nécessitent pratiquement l'utilisation d'une scie.
 - un seul écrou, facilement accessible, fixe l'ensemble rince-verres + écoulement : dans un dispositif à décharge latérale, l'une des conduites gêne l'accès à l'autre d'autant que l'accès à la face inférieure du comptoir est souvent malaisé du fait de la présence de matériel frigorifique ou de meubles de rangement.
 - le raccord d'écoulement est orientable à 360° ce qui facilite le raccordement du tube de décharge en évitant coude ou pliage du tube souple.



d) dans le cas de comptoirs réfrigérés, réduction sensible des pertes frigorifiques : par la suppression d'un trou et la facilité d'isoler l'unique ouverture circulaire.

5 Bien entendu diverses modifications peuvent être apportées par l'homme de l'art au dispositif qui vient d'être décrit uniquement à titre d'exemple non limitatif sans sortir du cadre de l'invention.

REVENDICATIONS

1. Rince-verres destiné à être monté dans une
cuvette d'un plateau-égouttoir et muni à sa partie
supérieure d'un croisillon qui par son déplacement vers
5 le bas provoque l'ouverture du passage de l'eau de
rinçage au travers d'un gicleur central, caractérisé
en ce qu'il comprend essentiellement un corps tubulaire
central (22) à l'intérieur duquel est monté le mécanisme
(20) de commande du passage de l'eau de rinçage et à
10 l'extérieur duquel est monté un manchon concentrique
(36) entre lequel et le corps tubulaire (22) peuvent
s'écouler les décharges de liquides.

2. Rince-verres suivant la revendication 1,
caractérisé en ce que l'extrémité supérieure du corps
15 tubulaire (22) est munie d'un épaulement cylindrique
(24) pouvant prendre appui sur la périphérie d'un
orifice d'écoulement (16) prévu dans la cuvette (13)
d'un plateau-égouttoir (11) et en ce que la circonfé-
rence de l'épaulement (24) est pourvue de plusieurs
20 entailles radiales (26) permettant l'écoulement des
liquides.

3. Rince-verres suivant les revendications 1 et
2, caractérisé en ce que le manchon concentrique (36)
est monté sur le corps tubulaire (22) à l'aide d'un
25 écrou de serrage (38) lequel provoque l'écrasement d'un
joint d'étanchéité (23) entre le bord supérieur du
manchon (36) et la périphérie inférieure de l'orifice
d'écoulement (16) de la cuvette (13).

4. Rince-verres suivant les revendications 1 et
30 2, caractérisé en ce que la partie inférieure du manchon
concentrique (36) est munie d'un tuyau d'évacuation
latéral (40) des eaux usées.

5. Rince-verres suivant les revendications 1 et
2, caractérisé en ce qu'on prévoit des joints toriques
35 (O-ring) (30 et 34) respectivement d'une part entre un

écrou molleté (28) de montage du mécanisme rince-verres et le corps tubulaire (22) et d'autre part entre une tige de poussée (32) et le corps (20) du mécanisme de commande du passage d'eau.

5 6. Plateau-égouttoir pour rince-verres suivant la revendication 1, caractérisé en ce qu'il comprend une cuvette (13) de forme conique dont la profondeur totale ne dépasse pas la hauteur du rebord latéral (12) du plateau (11).

10 7. Plateau-égouttoir suivant la revendication 6 caractérisé en ce qu'il présente au centre de la cuvette (13) un seul orifice d'écoulement (16) des eaux usées.

15 8. Plateau-égouttoir suivant la revendication 7 caractérisé en ce que la lisière bordant l'orifice d'écoulement (16) des eaux usées présente un léger bord vertical (17).

20 9. Ensemble rince-verres / plateau-égouttoir tel que décrit ci-dessus et revendiqué par les revendications 1 à 8.

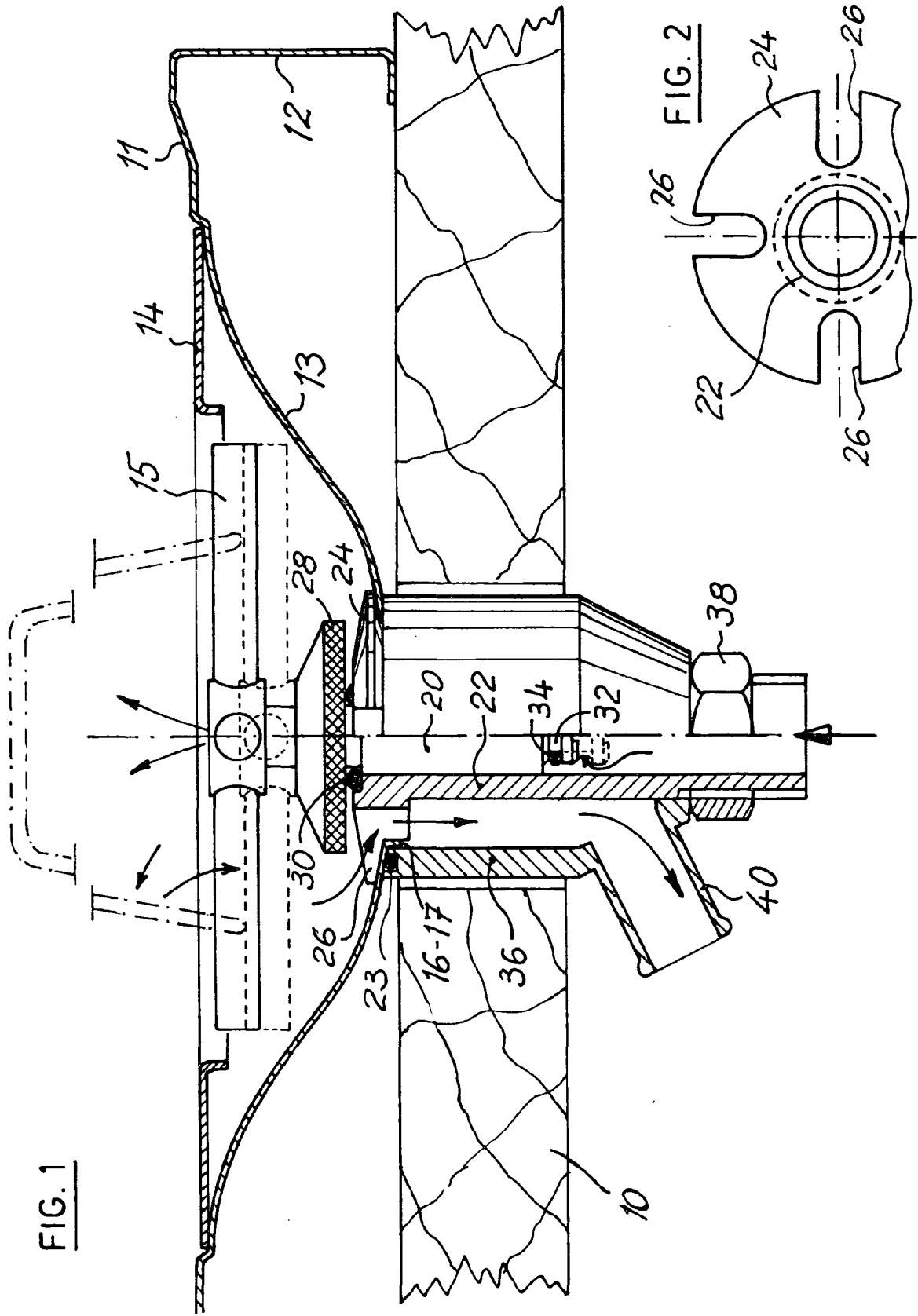
Bruxelles le ~~7~~ AVR. 1983

Ppon.: La société dite :
VERVENNE & VAN BELLE
Société Anonyme

Ppon.: CABINET BEDE, R. van Schoonbeek

S. Hembler

FIG. 1



Bruxelles, le 1 avril 1983
P.Pon. Vervenne & Van Belle S.A.
P.Pon. CABINET BEDE, R. van Schoonbeek

S. Remillieux



Drainer for drinking glasses - is mounted in trough, and consists of central tube with outer concentric sleeve, and inner control valve

Abstract

The drinking-glass drainer is mounted in a trough inside a draining board, and has a cross-piece at the top. The drainer consists of a central tubular section inside which is mounted the control for the rinsing water. Outside the tubular section is mounted a concentric sleeve. The top of the tubular section has a cylindrical shoulder (24) with notches resting on the periphery of an outlet hole in the trough. The bottom of the concentric sleeve has a side discharge pipe.

Classifications

⌘ A47L15/0065 Washing or rinsing machines for crockery or tableware specially adapted for drinking glasses

[View 1 more classifications](#)

BE896360A

Belgium

[Download PDF](#)

[Find Prior Art](#)

[Similar](#)

Other languages: French

Worldwide applications

1983 [BE](#)

Application BE0/210476A events ⓘ

1983-04-01 Application filed by Vervenne & Van Beil S A

1983-04-01 Priority to BE896360

1983-04-01 Priority to BE0/210476A

1983-08-01 Publication of BE896360A

Info: Cited by (3), Legal events, Similar documents, Priority and Related Applications

External links: Espacenet, Global Dossier, Discuss

Claims (1)

[Hide Dependent](#) ^

1. 2. Rinsers glasses according to claim 1, characterized in that the upper end of the tubular body (22) is provided with a cylindrical shoulder (24) which can bear on the periphery of a flow orifice (16) provided in the bowl (13) of a drip tray (11) and in that the circumference of the shoulder (24) is provided several radial notches (26) allowing the flow of liquids.
3. Rinsers glasses according to claims 1 and 2, characterized in that the concentric sleeve (36) is mounted on the tubular body (22) using a clamping nut (38) which causes the crushing of a seal (23) between the upper edge of the sleeve (36) and the lower periphery of the flow opening (16) of the bowl (13).
4. Rinsers glasses according to claims 1 and 2, characterized in that the lower part of the concentric sleeve (36) is provided with a lateral discharge pipe (40) of wastewater.
5. Rinsers glasses according to claims 1 and 2, characterized in that there are provided O-rings (O-ring) (30 and 34) respectively between a knurled nut (28) for mounting the rinsing mechanism and the tubular body (22) and on the other hand between a push rod (32) and the body (20) of the water passage control mechanism.
6. Drip tray for next glass rinse claim 1, characterized in that it comprises a conical bowl (13) whose total depth does not exceed the height of the side rim (12) of the plate (11).
7. Drip tray according to claim 6 characterized in that it has in the center of the bowl (13) a single outlet (16) for waste.
8. Drip tray according to claim 7 characterized in that the edge bordering the flow orifice (16) of the wastewater has a slight vertical edge (17).
9. All glass rinsers / tray-drip tray as described above and claimed by the claims 1 to 8.

Description

Rinser and drip tray equipped with such a rinser.

The present invention relates to glass rinsers and their drip tray used in particular

for drinking places.

Drip trays of this kind are generally made of stainless steel sheet folded over its edges and often include a glass rinser placed in a bowl. This can be stamped in the sheet itself, or added by welding. The rinser consists of a crosspiece provided in its center with a nozzle connected to a pipe of rinsing water, generally refrigerated. When the upper edge of a glass turned over is applied to the crosspiece moves slightly towards the

bottom thus opening the passage of rinsing water to the nozzle.

The current rinsing mechanism

on the market are of such a height that it is necessary to have a deep-drawn part or bowl extending far below the underside of the

folded edge of the tray.

This has the harmful consequence that a large cut, corresponding to the total area

of the stamped part or bowl, must be carried out

in the tablet of the counter which is not always acceptable and sometimes difficult to achieve.

On the other hand, the mechanism for rinsing glasses

current cannot be mounted higher since

the upper part or crosspiece cannot exceed

from the upper surface of the tray.

Another disadvantage of these trays is that

deep drawing always poses

manufacturing problems and in particular with stainless steel sheets.

Current drip trays are fitted

a side return water flow

with respect to the connection of the glass rinse aid. In the

bottom of the bowls, two holes are provided, one

for the glasswashers and one for the drain, which are often provided with recessed circular housings intended to receive seals. As a result, liquids can stagnate in the bottom of the bowl and it is difficult, if not impossible,

to clean it properly.

Finally, all the mechanisms currently on the market have parasitic leaks from the rinsing water, which leads to:

- unnecessary consumption of water
- unnecessary consumption of electricity: it should be known, in fact, that the rinsing water is generally refrigerated by the equipment ensuring the refrigeration of the drinks.

The aims of the present invention are to improve hygiene in the use of the glass rinse aid, to facilitate the manufacture of the drip tray as well as

the placement and maintenance of the assembly and finally to reduce the losses of chilled water hence saving water and electricity for use.

To this end, the rinser, object of the invention, essentially comprises a central tubular body inside which is mounted the mechanism for controlling the passage of the rinsing water and outside which is mounted a sleeve, concentric between which and the tubular body can flow the discharges of liquids.

Another object of the invention is that the upper end of the tubular body is provided with a cylindrical shoulder for maintaining the tubular body in a central position relative to the central flow orifice of the bowl, this cylindrical shoulder being provided on its circumference with several radial notches allowing the flow of liquids.

Other features and advantages of the invention will be described below with the aid of a nonlimiting example of embodiment with reference to the appended drawings in which:

FIG. 1 represents a view in partial section of the glass-rinsing / tray-drainer assembly according to the invention; Figure 2 is a partial top view of the shoulder of the central tubular body.

In FIG. 1, there is shown at 10 the shelf of a beverage outlet counter, at 11 the drip tray with its lateral rim 12 and a stamped part of conical shape or bowl 13. The periphery of the bowl 13 is usually surmounted by '' a removable grid 14.

In the center of the grid 14 and at a slightly lower level thereof, is arranged a cross

15 of the kind known per se which is connected to the control mechanism 20 for the passage of the rinse water of the rinser.

According to the invention, this mechanism 20, also known per se, is housed inside a tubular body 22, the upper end of which is provided with a cylindrical shoulder 24. The periphery of this shoulder 24 is provided with '' radial notches 26 (Figure 2) which are four in number in the example illustrated.

The shoulder 24 is supported on the edge of the flow orifice 16 of the bowl 13. Preferably the selvage bordering this orifice 16 will have

a slight vertical edge 17 in order to stiffen the sheet, to allow easy centering of the tubular body 22 and to avoid leaks by rejection of water in the event of a leak in the seal 23 which will be discussed later in the description .

The interior of the mechanism 20 of the glass rinser can be removed using a knurled nut 28 which also serves as a deflector for the rinsing water. Between the knurled nut 28 and the tubular body 22 is provided

an O-ring or "O" -ring 30. Between a push rod 32 and the body 20 of the glass-rinsing mechanism, an O-ring 34 is also provided.

This rod 32 is moved downward, as shown in dotted lines in FIG. 1, when the crosspiece 15 is pressed with a glass and frees the passage of the rinsing water.

Around the tubular body 22 is mounted, according to the invention, a concentric sleeve 36 using a clamping nut 38. The upper edge of the

sleeve 36

is provided with a concentric groove in which the seal 23 is housed. By tightening the nut 38, the seal 23 is crushed between the upper edge of the sleeve 36

and the lower periphery of the flow hole

Bowl 16 13.

In the lower part of the sleeve 36 is provided a side discharge pipe 40 for the wastewater.

This pipe is advantageously inclined downwards to facilitate the flow and avoid stagnation of

the water in the bottom of the sleeve 36.

The merit of the present invention lies in

the combination of flow with water supply

in a compact rinsing unit whose size reduction has been obtained by an original arrangement of the component parts such that part of the mechanism is incorporated in the reduced space that constitutes the water intake manifold as well as by a close study of the dimensions of the rooms.

The advantages specific to the glass rinse agent according to the invention are in particular:

a) that it can be dismantled manually:

for disassembly, inspection or repair, without the use of tools. The large knurled nut can be easily manipulated by hand. On an ancillary basis, the size of the nut is such that disassembly can be carried out without first removing the spider; b) it can be dismantled from above:

that is to say by the easily accessible part of the plate without requiring removal of the water inlet pipe; c) it does not show any parasitic water losses:

a "Ø" ring seals the push rod so

that there is no other water consumption than that of the upper nozzle.

Note that this factor facilitates the use of shallow bowl trays: there is no splashing towards the user by ricochet of parasitic water projections on the walls of the bowl.

The specific advantages of the drip tray, according to the invention, are that the counter no longer has to be cut to let the bowl pass and that its drilling is limited to the clearance necessary for the passage of the water inlet and outlet pipes. , which provides:

- considerable time savings during placement
- a reduction in the damaged counter surface
- reduced overall dimensions
- in the case of refrigerated counters: a significant reduction in refrigeration losses.

The specific advantages of disposal, including

the parts are arranged concentrically on the water inlet pipe of the glass rinse aid, are:

a) improving the flow of liquids, that is to say ease of maintenance and better hygiene. The arrangement makes it possible to produce a conical bowl favoring drainage: a continuous slope leads the liquids into the drainage orifice without encountering any roughness or flat surfaces allowing stagnation.

b) improved sealing, the elimination of the lateral flow hole obviously leads to a reduction in the possibilities of leakage. Also from an aesthetic point of view, the appearance of the tray is significantly improved. c) ease of placement:
- only one hole, of reduced diameter, is necessary, hence saving time and damage limited to the counter.

It should be noted, in this regard, that the flow device has the distinction of having been designed to be able to be introduced into a hole

<EMI ID = 1.1>

for a 1/2 "tube, which happens to be the one generally used for fixing to the drainer multi-flow pulling columns, so that professionals generally have the material suitable for this drilling diameter (cookie cutter with central bolt). This drilling is therefore very easy in comparison with the cuts

large diameter necessary for the passage of deep, added (generally Ø 120) or deep-drawn bowls, which practically require the use of a saw.

- a single nut, easily accessible, fixes the glass-rinsing + drain assembly: in a lateral discharge device, one of the pipes hinders access to the other as much as access to the underside of the counter is often difficult due to the presence of refrigeration equipment or storage furniture.

- the drain connection can be rotated to 360°, which facilitates the connection of the discharge tube, avoiding bending or bending of the flexible tube. d) in the case of refrigerated counters, significant reduction in refrigeration losses: by the elimination of a hole and the ease of isolating the single circular opening.

Of course various modifications can be made by those skilled in the art to the device which has just been described solely by way of non-limiting example without departing from the scope of the invention.

CLAIMS

1. Glass rinser intended to be mounted in a bowl of a drip tray and provided at its upper part with a spider which by its displacement downwards causes the passage of the rinsing water to pass through d " a central nozzle, characterized

in that it essentially comprises a central tubular body - (22) inside which the mechanism is mounted

(20) for controlling the passage of the rinsing water and outside of which a concentric sleeve is mounted

(36) between which and the tubular body (22) can flow the discharges of liquids.

Cited By (3)

Publication number	Priority date	Publication date	Assignee	Title
FR2606622A1 *	1986-11-19	1988-05-20	Boursier Christian	Glass-rinsing device for wine growers
BE1029325B1 *	2017-06-20	2019-01-28	Ets. Antoine	Glass rinsing device
US10914056B2	2018-09-14	2021-02-09	Delta Faucet Company	Vessel rinsing apparatus
Family To Family Citations				

* Cited by examiner, † Cited by third party, ‡ Family to family citation

Similar Documents

Publication	Publication Date	Title
FR2671845A1	1992-07-24	BEC MADE OF TAP
FR2703895A1	1994-10-21	Cooking apparatus, such as, for example, a fryer comprising a device for condensing cooking vapors
BE896360A	1983-08-01	Drainer for drinking glasses - is mounted in trough, and consists of central tube with outer concentric sleeve, and inner control valve

FR2543425A3	1984-10-05	Glass-rinsing unit and draining board equipped with such a glass rinsing unit
FR2609482A1	1986-07-15	VALVE APPARATUS FOR FILLING A BATHTUB
WO2010040948A1	2010-04-15	Device for dispensing shower water in a closed loop, and shower equipment including such a device
EP0243245A2	1987-10-28	Device for collecting and dispensing with produce, e.g. refuse
FR2676078A1	1992-11-06	Plumbing unit
FR3026420A1	2016-04-01	CANIVEAU AND SHOWER RECEIVER
BE1007305A6	1995-05-16	Screen perforated sheet metal racks for counter of a coating.
FR2565814A1	1985-12-20	Kitchen sink with twin basins
EP0305263A1	1989-03-01	Protecting device against the splashing of liquid cleaning or disinfecting products
FR2942255A1	2010-08-20	Support plane e.g. vanity unit, and container e.g. sink, assembly, has recess and hole both permitting centering, stopping and integration of container such that inner walls of container are in extension of edges of opening
EP1098041A1	2001-05-09	Shower tray comprising a base which can be emptied by its lowest point
EP0036361B1	1984-08-29	Built-in sink
EP3839161A1	2021-06-23	Flushing system for toilet bowl, and toilet bowl and flushing system assembly
BE1025325B1	2019-01-28	Glass rinsing device
EP0429352B1	1995-08-16	Drainsiphon for sanitary apparatus
FR2983555A1	2013-06-07	Domestic cooking fumes exhaust hood for use above cooking surface to e.g. aspire fumes from cooking food on cooking surface, has grease filter placed on level of aspiration opening, and grease recovery device placed below filter's lower end
EP2361498B1	2018-03-21	Assembly comprising at least one lower plate for straining cheese and two moulds suitable for being arranged on said plate
FR2739115A1	1997-03-28	Overflow for bath
FR2627401A1	1989-08-25	Moisture absorber with tiered recesses in base of collector - centering valve and forming seal with water container
FR2858755A1	2005-02-18	Container, comprising system supplying water through lid for cleaning of contents and through side for filling container for cooking
FR2492246A1	1982-04-23	Attachable recipient for culinary mixer and blender - uses flexible sealing ring of rectangular with concave faces, section fitted round base of recipient
FR2938562A1	2010-05-21	Washbasin for use in e.g. organization, has locking unit that is engaged on fixation part of valve and is supported under tray of wall support so as to simultaneously assemble valve, main part of washbasin and wall support

Priority And Related Applications

Priority Applications (2)

Application	Priority date	Filing date	Title
BE896360		1983-04-01	
BEQ/210476A	1983-04-01	1983-04-01	Drainer for drinking glasses - is mounted in trough, and consists of central tube with outer concentric sleeve, and inner control valve

Applications Claiming Priority (1)

Application	Filing date	Title
BEQ/210476A	1983-04-01	Drainer for drinking glasses - is mounted in trough, and consists of central tube with outer concentric sleeve, and inner control valve

Legal Events

Date	Code	Title	Description
2003-04-30	RE20	Patent expired	Owner name: *VERVENNE & VAN BELL S.A. Effective date: 20030401

Concepts

machine-extracted

 Download

Filter table

Name	Image	Sections	Count	Query match
 glasses		title,claims,abstract,description	19	0.000
 drinking		title,description	2	0.000
 drinking		title,description	2	0.000
 feeding behavior		title,description	2	0.000
 water		claims,description	16	0.000
 liquids		claims,description	7	0.000
 wastewater		claims,description	3	0.000
 waste materials		claims	1	0.000
 rinsing water		abstract,description	10	0.000
 resting		abstract	1	0.000

Show all concepts from the description section

Data provided by IFI CLAIMS Patent Services

①9 RÉPUBLIQUE FRANÇAISE
—
INSTITUT NATIONAL
DE LA PROPRIÉTÉ INDUSTRIELLE
—
PARIS
—

①1 N° de publication :
(à n'utiliser que pour les
commandes de reproduction)

2 543 426

②1 N° d'enregistrement national :

84 04791

⑤1 Int Cl⁹ : A 47 L 15/00, 19/04.

⑫

DEMANDE DE CERTIFICAT D'UTILITÉ

A3

②2 Date de dépôt : 20 mars 1984.

③0 Priorité : BE, 1^{er} avril 1983, n° 896.360.

④3 Date de la mise à disposition du public de la
demande : BOPI « Brevets » n° 40 du 5 octobre 1984.

⑥0 Références à d'autres documents nationaux appa-
rentés :

⑦1 Demandeur(s) : Société de droit belge dite : *VERVENNE
& VAN BELLE Société anonyme*. — BE.

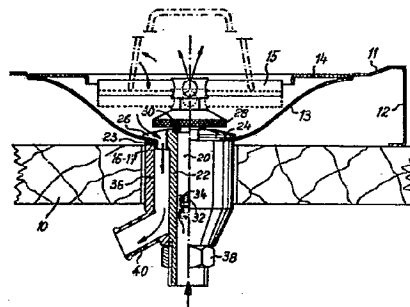
⑦2 Inventeur(s) : Maurice Donald Moeyensoon.

⑦3 Titulaire(s) :

⑦4 Mandataire(s) : Germain et Maureau.

⑤4 Rince-verres et plateau-égouttoir équipé d'un tel rince-verres.

⑤7 Rince-verres destiné à être monté dans une cuvette d'un
plateau-égouttoir caractérisé en ce qu'il comprend un corps
tubulaire central 22 à l'intérieur duquel est monté le méca-
nisme 20 de commande du passage de l'eau de rinçage et à
l'extérieur duquel est monté un manchon concentrique 36
entre lequel et le corps tubulaire 22 peuvent s'écouler les
décharges de liquides.



FR 2 543 426 - A3

"Rince-verres et plateau-égouttoir équipé d'un tel rince-verres"

La présente invention concerne les rince-verres et leur plateau-égouttoir utilisés particulièrement pour les débits de boissons.

Les plateaux-égouttoirs de ce genre sont généralement réalisés en tôle d'acier inoxydable repliée sur ses bords et comportent souvent un rince-verres placé dans une cuvette. Celle-ci peut être emboutie dans la tôle même, soit rapportée par soudure. Le rince-verres se compose d'un croisillon muni dans son centre d'un gicleur relié à une canalisation d'eau de rinçage généralement réfrigérée. Lorsqu'on applique le bord supérieur d'un verre retourné sur le croisillon, celui-ci se déplace légèrement vers le bas ouvrant ainsi le passage de l'eau de rinçage vers le gicleur.

Les mécanismes de rince-verres actuellement sur le marché sont d'une hauteur telle qu'il est nécessaire d'avoir une partie emboutie ou cuvette profonde débordant largement en dessous de la face inférieure du bord replié du plateau.

Ceci a comme conséquence néfaste qu'une découpe importante, correspondant à la superficie totale de la partie emboutie ou cuvette, doit être effectuée dans la tablette du comptoir ce qui n'est pas toujours acceptable et parfois difficile à réaliser.

D'autre part, le mécanisme rince-verres actuel ne peut pas être monté plus haut étant donné que la partie supérieure ou croisillon ne peut pas dépasser de la surface supérieure du plateau.

Un autre inconvénient de ces plateaux est que la réalisation d'emboutissages profonds pose toujours des problèmes de fabrication et en particulier avec des tôles en acier inoxydable.

Les plateaux-égouttoirs actuels sont munis d'un écoulement de retour d'eau disposé latéralement par rapport au raccordement du rince-verres. Dans le fond des cuvettes, on prévoit donc deux orifices, un pour le rince-verres et un pour l'écoulement, qui sont

souvent prévus avec des logements circulaires en creux destinés à recevoir des joints d'étanchéité. Il en résulte que les liquides peuvent stagner dans le fond de la cuvette et qu'il est malaisé, sinon impossible, de la nettoyer convenablement.

Enfin tous les mécanismes actuellement sur le marché présentent des fuites parasites de l'eau de rinçage, ce qui entraîne :

- une consommation inutile d'eau
- 10 - une consommation inutile d'électricité : il faut savoir, en effet, que l'eau de rinçage est généralement réfrigérée par le matériel assurant la réfrigération des boissons.

Les buts de la présente invention sont d'améliorer l'hygiène à l'emploi du rince-verres, de faciliter la fabrication du plateau-égouttoir ainsi que le placement et l'entretien de l'ensemble et enfin de diminuer les pertes d'eau réfrigérée d'où économie d'eau et d'électricité à l'emploi.

A cet effet, le rince-verres, objet de l'invention, comprend essentiellement un corps tubulaire central à l'intérieur duquel est monté le mécanisme de commande du passage de l'eau de rinçage et à l'extérieur duquel est monté un manchon concentrique entre lequel et le corps tubulaire peuvent s'écouler les décharges de liquides.

Un autre objet de l'invention est que l'extrémité supérieure du corps tubulaire est munie d'un épaulement cylindrique pour le maintien en position centrale du corps tubulaire par rapport à l'orifice d'écoulement central de la cuvette, cet épaulement cylindrique étant muni sur sa circonférence de plusieurs entailles radiales permettant l'écoulement des liquides.

D'autres particularités et avantages de l'invention seront décrits ci-après à l'aide d'un exemple

de réalisation non limitatif en se référant aux dessins annexés dans lesquels :

la figure 1 représente une vue en coupe partielle de l'ensemble rince-verres/plateau-égouttoir suivant l'invention ;

la figure 2 est une vue partielle de dessus de l'épaulement du corps tubulaire central.

Sur la figure 1 on a montré en 10 la tablette d'un comptoir de débit de boissons, en 11 le plateau-égouttoir avec son rebord latéral 12 et une partie emboutie de forme conique ou cuvette 13. La périphérie de la cuvette 13 est surmontée habituellement d'une grille amovible 14.

Au centre de la grille 14 et à un niveau légèrement plus bas de celle-ci, est disposé un croisillon 15 du genre connu en soi qui est relié au mécanisme de commande 20 du passage de l'eau de rinçage du rince-verres.

Conformément à l'invention, ce mécanisme 20, également connu en soi, est logé à l'intérieur d'un corps tubulaire 22 dont l'extrémité supérieure est pourvue d'un épaulement cylindrique 24. La périphérie de cet épaulement 24 est munie d'entailles radiales 26 (figure 2) qui sont au nombre de quatre dans l'exemple illustré.

L'épaulement 24 prend appui sur le bord de l'orifice d'écoulement 16 de la cuvette 13. De préférence la lisière bordant cet orifice 16 présentera un léger bord vertical 17 afin de rigidifier la tôle, de permettre le centrage facile du corps tubulaire 22 et d'éviter les fuites par rejet d'eau en cas de défaut d'étanchéité au joint 23 dont il sera question plus loin dans la description.

L'intérieur du mécanisme 20 du rince-verres peut être démonté à l'aide d'un écrou molleté 28 qui

sert également de déflecteur de l'eau de rinçage. Entre l'écrou molleté 28 et le corps tubulaire 22 est prévu un joint torique ou "O"-ring 30. Entre une tige de poussée 32 et le corps 20 du mécanisme rince-verres, on prévoit également un joint torique 34.

Cette tige 32 est déplacée vers le bas, comme illustré en pointillé sur la figure 1, lorsqu'on appuie avec un verre sur le croisillon 15 et libère le passage de l'eau de rinçage.

Autour du corps tubulaire 22 est monté, suivant l'invention, un manchon concentrique 36 à l'aide d'un écrou de serrage 38. Le bord supérieur du manchon 36 est muni d'une rainure concentrique dans laquelle est logé le joint 23. Par le serrage de l'écrou 38, le joint 23 est écrasé entre le bord supérieur du manchon 36 et la périphérie inférieure de l'orifice d'écoulement 16 de la cuvette 13.

Dans la partie inférieure du manchon 36 est prévu un tuyau d'évacuation latéral 40 des eaux usées. Ce tuyau est avantageusement incliné vers le bas pour faciliter l'écoulement et éviter la stagnation de l'eau dans le fond du manchon 36.

Le mérite de la présente invention réside dans la combinaison de l'écoulement avec l'arrivée d'eau dans un ensemble rince-verres compact dont la réduction de taille a pu être obtenue par un arrangement original des pièces constitutives tel qu'une partie du mécanisme est incorporée dans l'espace réduit que constitue la tubulure d'admission d'eau ainsi que par une étude serrée des dimensions des pièces.

Les avantages propres au rince-verres selon l'invention sont notamment :

a) qu'il est démontable manuellement :

pour démontage, inspection ou réparation, sans utilisation d'outils. L'écrou molleté de grande dimension

peut être facilement manoeuvré à la main. A titre accessoire, la dimension de l'écrou est telle que le démontage peut être effectué sans enlèvement préalable du croisillon;

5 b) qu'il est démontable par le haut :
c'est-à-dire par la partie facilement accessible du plateau sans nécessiter une dépose de la canalisation d'arrivée d'eau;

10 c) qu'il ne présente pas de pertes d'eau parasites :
un "O" ring étanche la tige de poussée de sorte qu'il n'y a pas d'autre consommation d'eau que celle du gicleur supérieur.

15 A noter que ce facteur vient faciliter l'utilisation de plateaux à cuvettes peu profondes : il n'y a pas d'éclaboussures vers l'utilisateur par ricochet des projections d'eau parasites sur les parois de la cuvette.

20 Les avantages propres à l'égouttoir, selon l'invention, sont que le comptoir ne doit plus être découpé pour laisser passer la cuvette et que son perçage est limité au dégagement nécessaire au passage des tubulures d'arrivée d'eau et d'écoulement, ce qui procure :

- un gain de temps considérable au placement
- une réduction de la surface abîmée du comptoir
- 25 - une réduction de l'encombrement
- dans le cas de comptoirs réfrigérés : une réduction importante des pertes frigorifiques.

30 Les avantages propres à l'écoulement, dont les pièces sont disposées de façon concentrique sur la tubulure d'arrivée d'eau du rince-verres, sont :

a) amélioration de l'écoulement des liquides, c'est-à-dire facilité d'entretien et meilleure hygiène. La disposition permet de réaliser une cuvette de forme conique favorisant le drainage : une pente continue mène

35 les liquides jusque dans l'orifice d'écoulement sans

rencontrer d'aspérités ou surfaces plates permettant une stagnation.

b) amélioration de l'étanchéité : la suppression du trou latéral d'écoulement entraîne évidemment une réduction des possibilités de fuite. Du point de vue esthétique également, l'aspect du plateau est sensiblement amélioré.

c) facilité de placement :

- un seul trou, de diamètre réduit, est nécessaire d'où gain de temps et dégâts limités au comptoir. Il faut remarquer, à ce propos, que le dispositif d'écoulement a la particularité d'avoir été conçu pour pouvoir être introduit dans un trou de Ø 52 mm, ce diamètre correspond au passage nécessaire pour un tube de 1' 1/2" (38 mm) lequel se trouve être celui généralement utilisé pour la fixation sur égouttoir des colonnes de tirage à débits multiples, de sorte que les professionnels disposent généralement du matériel adéquat pour ce diamètre de perçage (emporte-pièce à boulon central). Ce perçage est donc très aisé en comparaison des découpes de grand diamètre nécessaires au passage des cuvettes profondes, rapportées (généralement Ø 120) ou embouties, qui elles, nécessitent pratiquement l'utilisation d'une scie.

- un seul écrou, facilement accessible, fixe l'ensemble rince-verres + écoulement : dans un dispositif à décharge latérale, l'une des conduites gêne l'accès à l'autre d'autant que l'accès à la face inférieure du comptoir est souvent malaisé du fait de la présence de matériel frigorifique ou de meubles de rangement.

- le raccord d'écoulement est orientable à 360° ce qui facilite le raccordement du tube de décharge en évitant coude ou pliage du tube souple.

d) dans le cas de comptoirs réfrigérés, réduction sensible des pertes frigorifiques : par la suppression d'un trou et la facilité d'isoler l'unique ouverture circulaire.

5 Bien entendu diverses modifications peuvent être apportées par l'homme de l'art au dispositif qui vient d'être décrit uniquement à titre d'exemple non limitatif sans sortir du cadre de l'invention.

REVENDICATIONS

1. Rince-verres destiné à être monté dans une cuvette d'un plateau-égouttoir et muni à sa partie supérieure d'un croisillon qui par son déplacement vers
5 le bas provoque l'ouverture du passage de l'eau de rinçage au travers d'un gicleur central; caractérisé en ce qu'il comprend essentiellement un corps tubulaire central (22) à l'intérieur duquel est monté le mécanisme (20) de commande du passage de l'eau de rinçage et à
10 l'extérieur duquel est monté un manchon concentrique (36) entre lequel et le corps tubulaire (22) peuvent s'écouler les décharges de liquides.

2. Rince-verres suivant la revendication 1, caractérisé en ce que l'extrémité supérieure du corps
15 tubulaire (22) est munie d'un épaulement cylindrique (24) pouvant prendre appui sur la périphérie d'un orifice d'écoulement (16) prévu dans la cuvette (13) d'un plateau-égouttoir (11) et en ce que la circonférence de l'épaulement (24) est pourvue de plusieurs
20 entailles radiales (26) permettant l'écoulement des liquides.

3. Rince-verres suivant les revendications 1 et 2, caractérisé en ce que le manchon concentrique (36) est monté sur le corps tubulaire (22) à l'aide d'un
25 écrou de serrage (38) lequel provoque l'écrasement d'un joint d'étanchéité (23) entre le bord supérieur du manchon (36) et la périphérie inférieure de l'orifice d'écoulement (16) de la cuvette (13).

4. Rince-verres suivant les revendications 1 et
30 2, caractérisé en ce que la partie inférieure du manchon concentrique (36) est munie d'un tuyau d'évacuation latéral (40) des eaux usées.

5. Rince-verres suivant les revendications 1 et 2, caractérisé en ce qu'on prévoit des joints toriques
35 (O-ring) (30 et 34) respectivement d'une part entre un

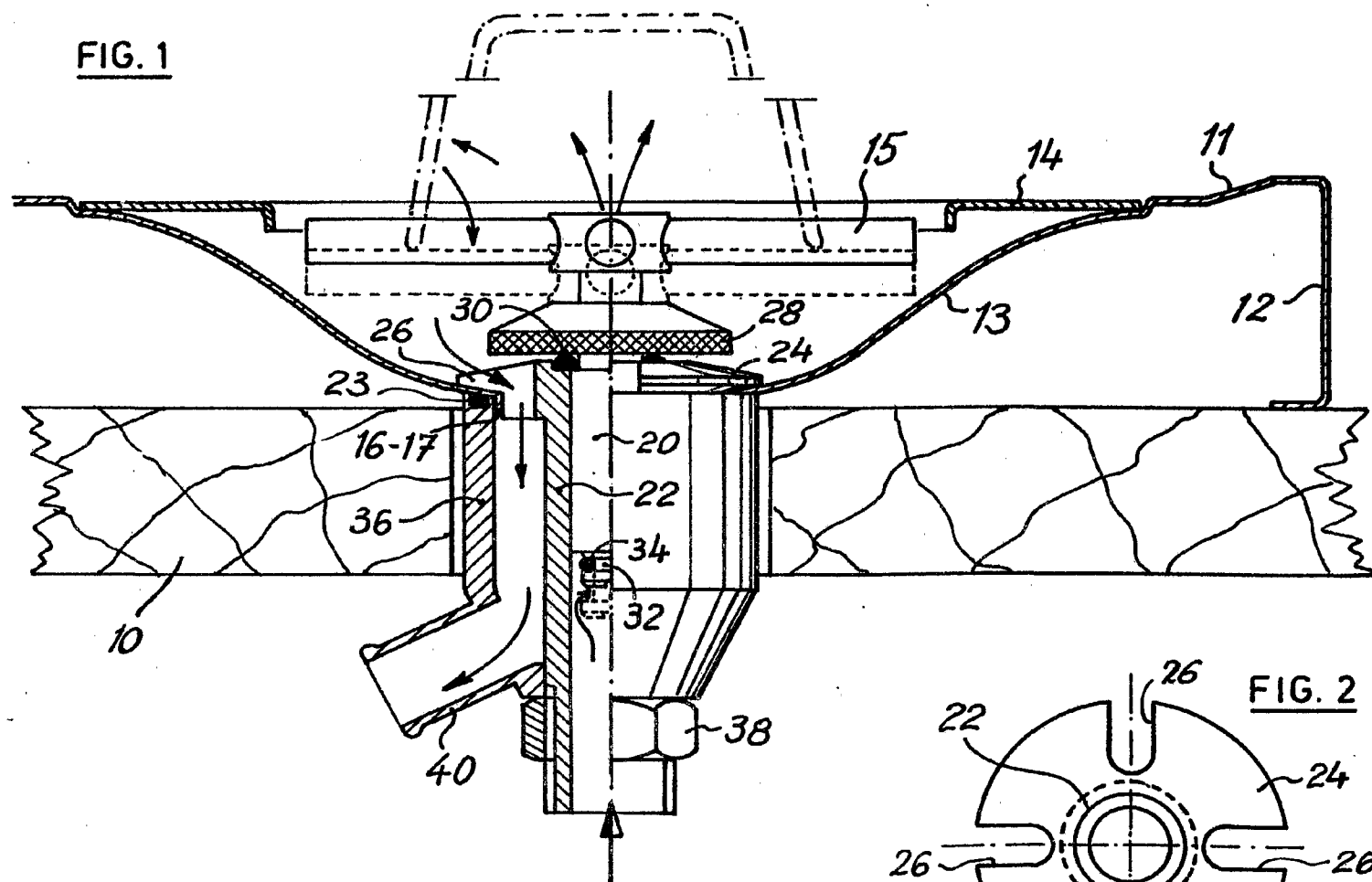
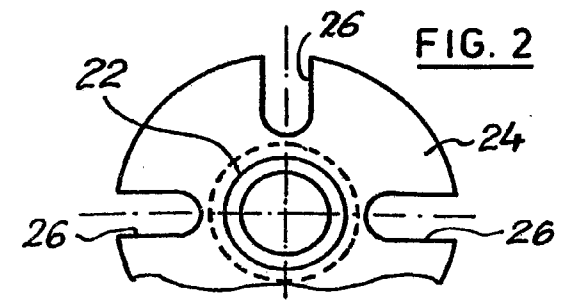
écrou molleté (28) de montage du mécanisme rince-verres et le corps tubulaire (22) et d'autre part entre une tige de poussée (32) et le corps (20) du mécanisme de commande du passage d'eau.

5 6. Plateau-égouttoir pour rince-verres suivant la revendication 1, caractérisé en ce qu'il comprend une cuvette (13) de forme conique dont la profondeur totale ne dépasse pas la hauteur du rebord latéral (12) du plateau (11).

10 7. Plateau-égouttoir suivant la revendication 6 caractérisé en ce qu'il présente au centre de la cuvette (13) un seul orifice d'écoulement (16) des eaux usées.

15 8. Plateau-égouttoir suivant la revendication 7 caractérisé en ce que la lisière bordant l'orifice d'écoulement (16) des eaux usées présente un léger bord vertical (17).

20 9. Ensemble rince-verres / plateau-égouttoir suivant l'une quelconque des revendications 1 à 8



2543428
 11



UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
17/167,647	02/04/2021	Mark Cipriani	DFC-5558-01-02-US

CONFIRMATION NO. 3847

PUBLICATION NOTICE



OC000000125914216

79958
Masco Corporation
Bose McKinney & Evans LLP
111 Monument Circle
Suite 2700
Indianapolis, IN 46204

Title: VESSEL RINSING APPARATUS

Publication No. US-2021-0156125-A1

Publication Date: 05/27/2021

NOTICE OF PUBLICATION OF APPLICATION

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

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

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

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

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

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



UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
17/167,647	02/04/2021	1711	2220	DFC-5558-01-02-US	24	3

CONFIRMATION NO. 3847

FILING RECEIPT



0000000123452695

79958

Masco Corporation
Bose McKinney & Evans LLP
111 Monument Circle
Suite 2700
Indianapolis, IN 46204

Date Mailed: 02/18/2021

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 Cipriani, Carmel, IN;
Anthony Joseph Tentler, Windfall, IN;
Jack William Judge, Indianapolis, IN;
Thad J. Eads, Urbana, IN;
Michael Scot Rosko, Greenwood, IN;
Raoul Labrie, Shelbyville, IN;
Alejandra Lazarini, Carmel, IN;
Michael J. Veros, Carmel, IN;

Applicant(s)

Delta Faucet Company, Indianapolis, IN;

Power of Attorney: None

Domestic Priority data as claimed by applicant

This application is a CON of 16/131,035 09/14/2018 PAT 10914056

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

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

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

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

If Required, Foreign Filing License Granted: 02/17/2021

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 17/167,647**

Projected Publication Date: 05/27/2021

Non-Publication Request: No

Early Publication Request: No

Title

VESSEL RINSING APPARATUS

Preliminary Class

134

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

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

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

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

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

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

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

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

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

GRANTED

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

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

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

NOT GRANTED

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

SelectUSA

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

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

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875						Application or Docket Number 17/167,647				
APPLICATION AS FILED - PART I										
(Column 1)		(Column 2)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY				
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)		RATE(\$)	FEE(\$)			
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	320			
SEARCH FEE (37 CFR 1.16(k), (l), 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(j))	24 minus 20 =	*				x 100 =	400			
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3 minus 3 =	*				x 480 =	0.00			
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).						0.00			
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							0.00			
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL		TOTAL	2220			
APPLICATION AS AMENDED - PART II										
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY		
AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x =			x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =			x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))									
						TOTAL ADD'L FEE			TOTAL ADD'L FEE	
AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x =			x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =			x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))									
						TOTAL ADD'L FEE			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.										

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.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Complete if Known

Sheet	1	of	2	Application Number	
				Filing Date	
				First Named Inventor	Mark Cipriani
				Art Unit	
				Examiner Name	
				Attorney Docket Number	DFC-5558-01-02-US

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
		US- 708,844	09-09-1902	Sweeney	
		US- 737,247	08-25-1903	Krammerer	
		US- 784,755	03-14-1905	Pein	
		US- 6,612,507	09-02-2003	Meyer et al.	
		US- 8,646,476	02-11-2014	Thomas et al.	
		US- 2004/0060109	04-01-2004	Hensley	
		US- 2004/0168711	09-02-2004	Dickson, et al.	
		US- 2008/0142095	06-19-2008	Van Der Linden	
		US- 2011/0061754	03-17-2011	Thomas et al.	
		US- 2014/0215709	08-07-2014	Nightlinger et al.	
		US- 2017/0172369	06-22-2017	Gonzalez et al.	
		US- 2018/0092505	04-05-2018	Simon	
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T ⁶
		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)				
		BE896360	08-01-1983	Vervenne & Van Bell S A		

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

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 2 hours 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, 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 (1-800-786-9199) and select option 2.

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.

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>		Complete if Known	
		Application Number	
		Filing Date	
		First Named Inventor	Mark Cipriani
		Art Unit	
		Examiner Name	
Sheet 2	of 2	Attorney Docket Number	DFC-5558-01-02-US

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	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, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		US Patent Appl. No. 16/997,089, filed August 19, 2020, titled "VESSEL RINSING APPARATUS, DRAIN RECEPTACLE, INTERCHANGEABLE NOZZLE ASSEMBLY, AND FAUCET SYSTEM INCLUDING SAME."	
		Espacenet translation FR2543426A3, Drainer for drinking glasses (Year: 1983).	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.
 1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.
 This collection of information is required by 37 CFR 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 2 hours 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, 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 (1-800-786-9199) and select option 2.

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

Title of Invention	VESSEL RINSING APPARATUS
--------------------	--------------------------

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 16/131,035 filed on September 14, 2018

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.

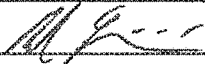
I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

WARNING:

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.

LEGAL NAME OF INVENTOR

Inventor: Mark CIPRIANI Date (Optional): _____

Signature: 

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. 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 1 minute 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.

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

Title of Invention	VESSEL RINSING APPARATUS
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 <u>16/131,035</u>	
filed on <u>September 14, 2018</u>	
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 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.	
WARNING:	
Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.	
LEGAL NAME OF INVENTOR	
Inventor:	Anthony Joseph TENTLER
Date (Optional):	9/30/18
Signature:	ANTHONY JOSEPH TENTLER
Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.	

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. 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 1 minute 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.

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.

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

Title of Invention	VESSEL RINSING APPARATUS
-----------------------	--------------------------

As the below named inventor, I hereby declare that:

This declaration
is directed to:☐

The attached application, or

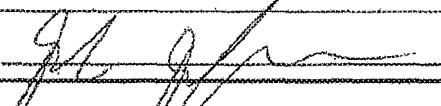
☒United States application or PCT international application number 16/131,035filed on September 14, 2018

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 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.**WARNING:**

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.

LEGAL NAME OF INVENTORInventor: Jack William JUDGEDate (Optional): 10/15/2018Signature: 

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.

This collection of information is required by 35 U.S.C. 116 and 37 CFR 1.63. 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 1 minute 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 this form, call 1-800-PTO-9198 and select option 2.

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.

**DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN
APPLICATION DATA SHEET (37 CFR 1.76)****Title of
Invention****VESSEL RINSING APPARATUS**

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 16/131,035filed on September 14, 2018

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 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.**WARNING:**

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.

LEGAL NAME OF INVENTORInventor: Thad J. EADS

Date (Optional):

9/27/18Signature: Thad J. Eads

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. 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 1 minute 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-8198 and select option 2

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.

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

Title of Invention	VESSEL RINSING APPARATUS
<p>As the below named inventor, I hereby declare that:</p> <p>This declaration is directed to: ☐ The attached application, or</p> <p style="margin-left: 100px;">☒ United States application or PCT international application number <u>16/131,035</u></p> <p style="margin-left: 100px;">filed on <u>September 14, 2018</u></p> <p>The above-identified application was made or authorized to be made by me.</p> <p>I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.</p> <p>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.</p> <p style="text-align: center;">WARNING:</p> <p>Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.</p>	
<p>LEGAL NAME OF INVENTOR</p> <p>Inventor: <u>Michael Scot ROSKO</u> Date (Optional): _____</p> <p>Signature:  _____</p>	
<p><small>Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.</small></p>	

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. 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 1 minute 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.

Title of
Invention

VESSEL RINSING APPARATUS

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 16/131,035

filed on September 14, 2018

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 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.

WARNING:

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.

LEGAL NAME OF INVENTOR

Inventor: Raoul J. Labrie

Date (Optional): 10-31-18

Signature: [Signature]

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. 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 1 minute 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-199 and select option 2.



KASSY MARIE WILSON, Notary Public

Shelby County, State of Indiana

My Commission Expires January 24, 2025

Kassy Marie Wilson

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.

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

Title of Invention	VESSELL RINSING APPARATUS
-----------------------	---------------------------

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 16/131,035filed on September 14, 2018

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.

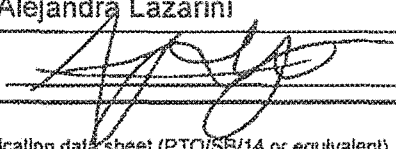
I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

WARNING:

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.

LEGAL NAME OF INVENTORInventor: Alejandra Lazarini

Date (Optional): _____

Signature: 

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. 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 1 minute 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.

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.

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

Title of
Invention

VESSEL RINSING APPARATUS

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 16/131,035filed on September 14, 2018

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 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.

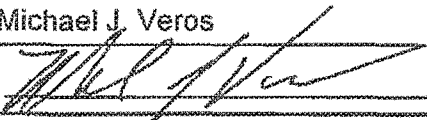
WARNING:

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.

LEGAL NAME OF INVENTOR

Inventor: Michael J. Veros

Date (Optional) : _____

Signature: 

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. 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 1 minute 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.

NON-PROVISIONAL PATENT APPLICATION

of

Mark Cipriani

Anthony Joseph Tentler

Jack William Judge

Thad J. Eads

Michael Scot Rosko

Raoul Labrie

Alejandra Lazarini

and

Michael J. Veros

for

VESSEL RINSING APPARATUS

Attorney Docket DFC-5558-01-02-US
(115-5558-U)

VESSEL RINSING APPARATUS

Cross-Reference to Related Application

[0001] The present application is a continuation of U.S. Patent Application Serial No. 16/131,035, filed September 14, 2018, the disclosure of which is expressly incorporated herein by reference

Background and Summary of the Disclosure

[0002] The present invention related generally to a fluid dispensing system and, more particularly, to a vessel rinsing apparatus for use with fluid vessels or receptacles, such as cups or glasses.

[0003] The interior of glasses, cups, and other small vessels or containers are often difficult to clean by removing dirt and debris after use. Conventional bottle brushes, sponges, rags and other disposable materials are often used to clean such small vessels but may not be effective, for example, as being incapable of fitting inside the vessel, and do not provide water for rinsing. In addition, typical faucets lack directional pressurized water flow required to adequately remove dirt and debris from extremities within the interiors of small vessels.

[0004] There remains a need for a vessel rinsing apparatus capable of being installed in a standard countertop opening, or integrated as part of a faucet escutcheon, which allows for the cleaning of small vessels, such as glasses and cups.

[0005] According to an illustrative embodiment of the present disclosure, a vessel rinsing apparatus includes a mounting base having an upper coupler and a downwardly extending mounting shank defining an opening extending along a longitudinal axis. The upper coupler is configured to be supported above an upper surface of a mounting deck, and the mounting shank is configured to extend through a mounting aperture formed within the mounting deck. A fluid discharge member includes a central body supporting a plurality of nozzles and a trigger extending outwardly from the central body. The central body is received within the opening of the mounting shank and is moveable along the longitudinal axis. A valve shaft is operably coupled to

the fluid discharge member and is configured to move with the trigger to control water flow through the central body to the plurality of nozzles. An escutcheon is supported by the upper coupler of the mounting base and includes an upwardly extending wall defining a drain bowl, and a drain channel extending through the upwardly extending wall. The drain channel is configured to provide fluid communication between the drain bowl and a sink basin supported by the mounting deck.

[0006] According to another illustrative embodiment of the present disclosure, a vessel rinsing apparatus includes a mounting base having a downwardly extending mounting shank defining an opening extending along a longitudinal axis. The mounting shank is configured to extend through a mounting aperture formed within a mounting deck. A fluid discharge member includes a central body supporting a plurality of nozzles and a trigger extending outwardly from the central body. The central body is received within the opening of the mounting shank and is moveable along the longitudinal axis. A valve shaft is operably coupled to the fluid discharge member and is configured to move with the trigger to control water flow through the central body to the plurality of nozzles. A removable plate is supported by the trigger of the fluid discharge member. The removable plate includes one of a strainer having a base and a plurality of circumferentially spaced drain openings, and an elastomeric brush having a plurality of upwardly extending cleaning projections and a plurality of drain openings positioned intermediate adjacent ones of the cleaning projections.

[0007] According to further illustrative embodiment of the present disclosure, a vessel rinsing apparatus includes a mounting base having an upper plate and a downwardly extending mounting shank defining an opening extending along a longitudinal axis, the upper plate configured to be supported above an upper surface of the mounting deck, and the mounting shank configured to extend through a mounting aperture formed within the mounting deck. A fluid discharge member includes a central body supporting a plurality of nozzles and a trigger extending outwardly from the central body. The central body is received within the opening of the mounting shank and is moveable along the longitudinal axis. A valve shaft is operably coupled to the fluid discharge member and is configured to move with the trigger to control water flow through the central body to the plurality of nozzles. An escutcheon is supported by the mounting base and includes an upwardly extending wall and a drain channel extending

through the upwardly extended wall, wherein the upper plate of the mounting face and the upwardly extending wall of the escutcheon define a drain bowl. The drain channel is configured to provide fluid communication between the drain bowl and a sink basin supported by the mounting deck. A removable plate is supported by the trigger of the fluid discharge member.

[0008] Additional features and advantages of the present invention will become apparent to those skilled in the art upon consideration of the following detailed description of the illustrative embodiment exemplifying the best mode of carrying out the invention as presently perceived.

BRIEF DESCRIPTION OF THE DRAWINGS

[0009] The detailed description of the drawings particularly refers to the accompanying figures in which:

[0010] FIG. 1 is a perspective view of an illustrative vessel rinsing apparatus mounted to a sink deck and fluidly coupled to a faucet;

[0011] FIG. 2 is a perspective view of the vessel rinsing apparatus of FIG. 1;

[0012] FIG. 3 is a top exploded perspective view of the vessel rinsing apparatus of FIG. 2;

[0013] FIG. 4 is a bottom exploded perspective view of the vessel rinsing apparatus of FIG. 2;

[0014] FIG. 5 is a cross-sectional view of the vessel rinsing apparatus taken along line 55 of FIG. 2, showing the discharge member in a closed position and a vessel shown in phantom;

[0015] FIG. 6 is a cross-sectional view of the vessel rinsing apparatus similar to FIG. 5, showing the discharge member in an open position and a vessel shown in phantom;

[0016] FIG. 7 is a perspective view of a first removable plate of the vessel rinsing apparatus of FIG. 2 in the form of a strainer;

[0017] FIG. 8 is a perspective view of a second removable plate of the vessel rinsing apparatus of FIG. 2 in the form of a cleaning brush, with a plurality of first cleaning projections;

[0018] FIG. 9 is a perspective view of a third removable plate of the vessel rinsing apparatus of FIG. 2 in the form of a cleaning brush, with a plurality of second cleaning projections;

[0019] FIG. 10 is a perspective view of a fluid discharge member of the vessel rinsing apparatus of FIG. 2;

[0020] FIG. 11 is a perspective view of a valve shaft of the vessel rinsing apparatus of FIG. 2;

[0021] FIG. 12 is a cross-sectional view of the vessel rinsing apparatus taken along line 12-12 of FIG. 1, showing the drain channel in fluid communication with a sink basin;

[0022] FIG. 13 is a perspective view of another illustrative embodiment vessel rinsing apparatus; and

[0023] FIG. 14 is a cross-sectional view similar to FIG. 5 of a further illustrative embodiment vessel rinsing apparatus.

Detailed Description of the Drawings

[0024] For the purposes of promoting an understanding of the principles of the present disclosure, reference will now be made to the embodiments illustrated in the drawings, which are described herein. The embodiments disclosed herein are not intended to be exhaustive or to limit the invention to the precise form disclosed. Rather, the embodiments are chosen and described so that others skilled in the art may utilize their teachings. Therefore, no limitation of the scope of the claimed invention is thereby intended. The present invention includes any alterations and further modifications of the illustrated devices and described methods and further applications of principles in the invention which would normally occur to one skilled in the art to which the invention relates.

[0025] With reference initially to FIGS. 1 and 2, an illustrative vessel rinsing apparatus 10 is shown supported by a conventional mounting deck, such as a sink deck 12 supporting a sink basin 14. A faucet 16 may be supported by the sink deck 12 for discharging water from a water outlet 18 into the sink basin 14. The faucet 16 may be of conventional design, including a delivery spout 20 defining the water outlet 18, and a manual mixing valve 22 for controlling water flow from a hot water supply 24 and a cold water supply 26 to the water outlet 18. The mixing valve 22 includes a valve handle 28 to control the flow rate and the temperature of water delivered to the water outlet 18. A hot water supply tube 30 may fluidly couple the hot water

supply 24 to a first inlet of the mixing valve 22, and a cold water supply tube 32 may fluidly couple the cold water supply 26 to a second inlet of the mixing valve 22. A mixed water outlet tube 34 may fluidly couple an outlet of the mixing valve 22 a diverter valve 36.

[0026] The diverter valve 36 illustratively controls (e.g., toggles) water flow between the outlet 18 of the delivery spout 20 and the vessel rinsing apparatus 10. An illustrative diverter valve 36 is detailed in U.S. Patent 8,646,476, the disclosure of which is expressly incorporated by herein by reference. A spout outlet tube 38 fluidly couples the diverter valve 36 to the outlet 18, while a dispenser tube 40 fluidly couples the diverter valve 36 to the vessel rinsing apparatus 10. As such, the mixing valve 22 may be manipulated by the handle 28 to control the temperature and flow rate of water delivered to the active outlet(s) selected by the diverter valve 36 (e.g., the delivery spout outlet 18 and the glass rinsing apparatus 10). The various water tubes 30, 32, 34, 38 and 40 may be formed of a flexible polymer, such as a cross-linked polyethylene (PEX).

[0027] An escutcheon 42 may be positioned intermediate the sink deck 12 and the delivery spout 20. A plurality of mounting apertures 44 may extend within the sink deck 12, wherein at least some of the apertures 44a, 44b may be used to couple the faucet 16 to the sink deck 12. In the illustrative embodiment, the glass rinsing apparatus 10 is fixed to the mounting aperture 44c that would conventionally support a kitchen side sprayer (not shown) adjacent the sink basin 14. Such positioning facilitates draining of the vessel rinsing apparatus 10 into the sink basin 14.

[0028] With reference to FIGS. 2-4, the illustrative vessel rinsing apparatus 10 includes a mounting base 46 configured to be coupled to the sink deck 12. An escutcheon 48 illustratively cooperates with the mounting base 46 to define a contoured drain receptacle or bowl 52 for the collection and disposal of debris and wastewater. A fluid discharge member 54 is operably coupled to the mounting base 46 and to a valve member 56. A trigger plate 58 is supported by the fluid discharge member 54 and is configured to be engaged by a vessel 60 (e.g., a cup, glass or other container) for activating water flow through the fluid discharge member 54 and into an interior 62 of the vessel 60 (FIGS. 5 and 6).

[0029] The mounting base 46 illustratively includes an upper coupler, such as an upper plate 64, and a downwardly extending mounting shank 66 defining an opening 67 extending along a longitudinal axis 68. The upper plate 64 is configured to be supported above an upper surface 69

of the sink deck 12 and illustratively comprises a disk 70 having a circular peripheral edge 71. The mounting shank 66 is configured to extend through one of the mounting apertures 44c formed within the sink deck 12 and below a lower surface 72 of the sink deck 12. The mounting shank 66 illustratively includes a stepped cylindrical tube 73 having upper external threads 74 configured to threadably couple with a mounting nut 75 for securing the mounting base 46 to the sink deck 12 (FIG. 1). Illustratively, the dispenser tube 40 is fluidly coupled to the mounting shank 66 to provide water from a water supply (illustratively via the mixing valve 22 through the diverter valve 36). More particularly, the cylindrical tube 73 of the mounting shank 66 illustratively includes lower external threads 76 configured to engage with a fitting 78 to fluidly couple the dispenser tube 40 to the mounting shank 66 (FIG. 1).

[0030] With reference to FIGS. 3-6, the fluid discharge member 54 cooperates with the mounting base 50 to deliver water from the dispenser tube 40. The fluid discharge member 54 illustratively includes a central body 80 defining a fluid passageway 82 and having a sprayface 83 supporting a plurality of nozzles 84 in fluid communication with the fluid passageway 82. More particularly, the nozzles 84 may include a center nozzle 84a and a plurality of peripheral nozzles 84b, 84c, 84d, 84e positioned radially outward from the center nozzle 84a. It should be appreciated that the number and placement of the nozzles 84 may vary.

[0031] In one illustrative embodiment, the nozzles 84 may be oriented to direct water in different desired positions within an interior 86 of the vessel 60, as represented by arrows 85 in FIG. 6. For example, the center nozzle 84a may be configured to discharge water upwardly parallel to the longitudinal axis 68. Illustratively, a first peripheral nozzle 84b may be oriented at a first angle from the longitudinal axis 68 for directing water to a distal corner of a mug, a second peripheral nozzle 84c may be oriented at a second angle from the longitudinal axis 68 for directing water to a distal corner of a highball glass, a third peripheral nozzle 84d may be oriented at a third angle from the longitudinal axis 68 for directing water to a distal corner of a tumbler or pint glass, and a fourth peripheral nozzle 84e may be oriented at a fourth angle from the longitudinal axis 68 for directing water to a distal portion of a wine glass.

[0032] The central body 80 of the fluid discharge member 54 is slideably received within the opening 67 of the mounting shank 66 such that it is moveable along the longitudinal axis 68. More particularly, the fluid discharge member 54 is configured to move along the longitudinal

axis 68 between a raised (or rest) position (FIG. 5), and a lowered (or active) position (FIG. 6). A spring 87 may cooperate with the mounting base 46 to bias the discharge member 54 to the upper position. The fluid discharge member 54 may be restrained from rotating relative to the mounting base 50. Illustratively, the central body 80 has an elongated cross section (e.g. oval) thereby preventing rotation within the opening 67. Other rotatable couplers, such as a key received within a keyway, may be substituted therefor.

[0033] A trigger 88 extends outwardly from the central body 80. The trigger 88 illustratively includes a plurality of radially outwardly extending arms or posts 90, each having a first end 92 supported by the central body 80 and a freely supported second end 94.

[0034] The valve member 56 illustratively comprises a valve pin or shaft 96 operably coupled to the fluid discharge member 54 (e.g., via a threaded coupling 97), and is configured to move with the trigger 88 to control water flow through the central body 80 to the plurality of nozzles 84. More particularly, the valve shaft 96 illustratively includes a hollow body 98 defining a fluid passageway 102 in fluid communication with the fluid passageway 82 of the central body 80 via radial openings 104. Upper and lower o-rings 106 and 108 are positioned above and below openings 104, respectively. The valve member 56 may be a separate component from the fluid discharge member 54, or formed integral therewith.

[0035] In the raised position as shown in FIG. 5, the valve shaft 96 blocks water flow from the fluid source (e.g., the mixing valve 22) to the nozzles 84. More particularly, the o-ring 108 seals against a valve seat 109 to prevent water flow from opening 67 to the fluid passageway 102. In the lowered position as shown in FIG. 6, the valve shaft 96 provides fluid communication between the fluid source and the nozzles 84. More particularly, a passageway 110 between the o-ring 108 and the valve seat 109 permits water flow therethrough from opening 67 to fluid passageway 102 through openings 104, and through the fluid passageway 82 to the nozzles 84.

[0036] The escutcheon 48 is supported by the mounting base 50 and illustratively includes an upwardly extending wall 114 and a drain channel 116 extending through the upwardly extending wall 114. As shown in FIGS. 1 and 12, the drain channel 116 is configured to provide fluid communication between the drain bowl 52 and the sink basin 14 supported by the sink deck 12. The upper plate 64 of the mounting base 50 and the upwardly extending wall 114 of the escutcheon 42 illustratively define the drain bowl 52. An o-ring 118 is illustratively supported by

the peripheral edge 71 of the upper plate 64 to releasably retain the escutcheon 48 to the mounting base 50. As such, the escutcheon 48 may be exchanged with other escutcheons with different aesthetic shapes, finishes and/or drain channel 116 dimensions.

[0037] The drain channel 116 illustratively includes a lower wall 122 and opposing side walls 124 and 126. A lip 127 and an associated undercut 128 formed in a lower surface of the lower wall 122 prevents wastewater flowing through the drain channel 116 from running back toward the rear wall 129 of the sink basin 14. More particularly, the undercut 128 cooperates with the lip 127 to direct water downward.

[0038] In an illustrative embodiment, the trigger plate 58 is removably supported by the trigger 88 of the fluid discharge member 54 above the drain bowl 52. More particularly, the removeable trigger plate 58 is illustratively supported by the arms 90 of the trigger 88. Illustratively, a retaining ring 130 concentrically receives and frictionally engages the body 80 to releasably secure the trigger plate 58 to the fluid discharge member 54. The removable trigger plates 58 can be cleaned, replaced and/or exchanged with other trigger plates 58 that may have different cleaning benefits (e.g., characteristics of a brush or sponge).

[0039] Anti-rotation members may be configured to prevent rotation of the removeable trigger plate 58 about the longitudinal axis 68 relative to the fluid discharge member 54. The anti-rotation members may comprise a recess 132 supported by the fluid discharge member, and cooperating tabs 134 supported by the removeable trigger plate 58.

[0040] With reference to FIG. 7, a first removeable trigger plate 58a may comprise a strainer 136 including a base 138 and a plurality of circumferentially spaced drain openings 140 arranged in a plurality of radially spaced rows. As a rim 142 of the glass 60 contacts the upper surface 144 of the strainer 136, a lower surface 146 of the strainer 136 engages the trigger 88 (FIGS. 5 and 6).

[0041] As shown in FIG. 8, a second removeable trigger plate 58b may comprise an elastomeric brush 148 including a plurality of upwardly extending projections or pegs 150 and a plurality of drain openings 152 positioned intermediate adjacent cleaning projections 150. The rim 142 of the glass 60 is configured to be received between adjacent cleaning projections 150 to assist in cleaning the inner and outer surfaces of the rim 142.

[0042] As shown in FIG. 9, a third removable trigger plate 58c may comprise an elastomeric brush 154 similar to that shown in FIG. 8. More particularly, the brush 154 includes a plurality of upwardly extending projections or bristles 156 and a plurality of drain openings 158 positioned intermediate adjacent cleaning projections 156.

[0043] A further illustrative embodiment vessel rinsing apparatus 210 is shown in FIG. 13 as including many of the same elements as the vessel rinsing apparatus 10 detailed above. As such, in the following description, like components are identified with similar reference numbers. The drain channel 216 of the vessel rinsing apparatus 210 includes a movable tray 218 supported by the upper wall 214 of the escutcheon 242. More particularly, the movable tray 218 includes opposing side walls 244, 245 supported by a lower wall 248. The side walls 244, 245 are slidably received within the upper wall 214 of the escutcheon 242, and the lower wall 248 is slidably received within the upper plate 264 of the mounting base 246. As such, the relative position of the drain channel 216 may be adjusted (as shown by arrows 266) to facilitate wastewater discharge into the sink basin 14. More particularly, the removable tray 218 accommodates different dimensions between the mounting aperture 44c and the sink basin 14.

[0044] Another illustrative embodiment vessel rinsing apparatus 310 is shown in FIG. 14 as including many of the same elements as the vessel rinsing apparatus 10 detailed above. As such, in the following description, like components are identified with similar reference numbers. The vessel rinsing apparatus 310 includes a mounting base 346 including a mounting shank 366 and an upper coupler 364. The escutcheon 348 illustratively includes a lower wall 362 and an upwardly extending wall 314 defining the drain bowl 52.

[0045] Although the invention has been described in detail with reference to certain preferred embodiments, variations and modifications exist within the spirit and scope of the invention as described and defined in the following claims.

CLAIMS

What is claimed is:

1. A vessel rinsing apparatus comprising:
a mounting member extending along a longitudinal axis, the mounting member configured to extend through a mounting aperture formed within a mounting deck;
a fluid discharge member including a central body supporting a plurality of nozzles and a trigger, the central body being movable relative to the mounting member;
a valve member operably coupled to the fluid discharge member and configured to control water flow through the central body to the plurality of nozzles in response to movement of the trigger; and
a drain bowl operably coupled to the mounting member, the drain bowl including a lower wall, an upwardly extending wall operably coupled to the lower wall, and a drain channel extending through the upwardly extending wall, the drain channel configured to receive water from the drain bowl and discharge water above and into a sink basin supported by the mounting deck.
2. The vessel rinsing apparatus of claim 1, wherein the mounting member comprises a mounting shank defining an opening extending along the longitudinal axis, and the central body of the fluid discharge member is received within the opening of the mounting shank and movable along the longitudinal axis.
3. The vessel rinsing apparatus of claim 2, wherein the lower wall includes an opening through which the mounting shank extends.
4. The vessel rinsing apparatus of claim 1, wherein the drain bowl is defined by an escutcheon.
5. The vessel rinsing apparatus of claim 1, wherein the drain channel slopes away from the fluid discharge member and the drain bowl.

6. The vessel rinsing apparatus of claim 1, wherein the fluid discharge member is in selective fluid communication with an outlet of a faucet mixing valve.

7. The vessel rinsing apparatus of claim 6, further comprising a diverter valve fluidly coupled intermediate the outlet of the faucet mixing valve and the fluid discharge member.

8. The vessel rinsing apparatus of claim 1, wherein the drain channel includes a channel lower wall, opposing side walls, and an undercut formed in a lower surface of the channel lower wall for preventing water flowing through the drain channel from running back toward a rear wall of the sink basin.

9. The vessel rinsing apparatus of claim 1, wherein the drain channel includes a movable tray, such that a length of the drain channel is adjustable.

10. The vessel rinsing apparatus of claim 1, wherein the trigger of the fluid discharge member includes a plurality of arms extending radially outwardly from the central body of the fluid discharge member.

11. A vessel rinsing apparatus comprising:
a drain bowl including a lower wall, an upwardly extending wall operably coupled to the lower wall, and a drain channel extending through the upwardly extending wall, the drain channel configured to receive water from the drain bowl and discharge water above and into a sink basin supported by a mounting deck;
a mounting member operably coupled to the drain bowl, the mounting member configured to couple the drain bowl to the mounting deck;
a fluid discharge member including a central body supporting a plurality of nozzles and a trigger, the central body being movable relative to the mounting member;
a valve member operably coupled to the fluid discharge member and configured to control water flow through the central body to the plurality of nozzles; and
wherein the drain channel slopes away from the fluid discharge member and the drain bowl to facilitate water drainage into the sink basin.

12. The vessel rinsing apparatus of claim 11, wherein the mounting member extends along a longitudinal axis, the mounting member configured to extend through a mounting aperture formed within the mounting deck.

13. The vessel rinsing apparatus of claim 12, wherein the mounting member comprises a mounting shank defining an opening extending along the longitudinal axis, and the central body of the fluid discharge member is received within the opening of the mounting shank and movable along the longitudinal axis.

14. The vessel rinsing apparatus of claim 11, wherein the valve member comprises a valve shaft configured to move with the trigger.

15. The vessel rinsing apparatus of claim 11, wherein the drain bowl is defined by an escutcheon.

16. The vessel rinsing apparatus of claim 11, wherein the fluid discharge member is in selective fluid communication with an outlet of a faucet mixing valve.

17. The vessel rinsing apparatus of claim 16, further comprising a diverter valve fluidly coupled intermediate the outlet of the faucet mixing valve and the fluid discharge member.

18. The vessel rinsing apparatus of claim 11, wherein the drain channel includes a channel lower wall, opposing side walls, and an undercut formed in a lower surface of the channel lower wall for preventing water flowing through the drain channel from running back toward a rear wall of the sink basin.

19. The vessel rinsing apparatus of claim 11, wherein the drain channel includes a movable tray, such that a length of the drain channel is adjustable.

20. A fluid delivery device comprising:
a vessel rinsing apparatus including:
a drain bowl including a lower wall and an upwardly extending wall, and
a drain channel extending through the upwardly extending wall, the drain channel
configured to receive water from the drain bowl and discharge water above and
into a sink basin supported by a mounting deck;
a mounting member operably coupled to the drain bowl, the mounting
member configured to couple the drain bowl to the mounting deck;
a fluid discharge member including a central body supporting a plurality
of nozzles and a trigger, the central body being movable relative to the mounting
member; and
a valve member operably coupled to the fluid discharge member and
configured to control water flow through the central body to the plurality of
nozzles; and
a faucet including:
a delivery spout having a water outlet;
a valve fluidly coupled to the delivery spout, the valve configured to
control water flow to the water outlet; and
wherein the fluid discharge member of the vessel rinsing apparatus is in
selective fluid communication with the valve of the faucet.

21. The fluid delivery device of claim 20, further comprising a diverter valve fluidly
coupled intermediate the valve of the faucet and the fluid discharge member of the vessel rinsing
apparatus.

22. The fluid delivery device of claim 20, further comprising:
a removable plate supported by the trigger of the fluid discharge member; and
wherein the removable plate comprises one of a strainer including a base and a
plurality of circumferentially spaced drain openings, and an elastomeric brush including a

plurality of upwardly extending cleaning projections and a plurality of drain openings positioned intermediate adjacent ones of the cleaning projections.

23. The vessel rinsing apparatus of claim 20, wherein the mounting member extends along a longitudinal axis, the mounting member configured to extend through a mounting aperture formed within the mounting deck.

24. The vessel rinsing apparatus of claim 23, wherein the mounting member comprises a mounting shank defining an opening extending along the longitudinal axis, and the central body of the fluid discharge member is received within the opening of the mounting shank and movable along the longitudinal axis.

ABSTRACT

A vessel rinsing apparatus including a mounting base, a fluid discharge member including a plurality of nozzles, a valve member operably coupled to the fluid discharge member and configured to control water flow through the nozzles, and an escutcheon supported by the mounting base.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

App. No. :
Inventor : Mark Cipriani
Filed : Herewith
Title : VESSEL RINSING APPARATUS
TC/A.U. : Not Assigned
Examiner : Not Assigned
Docket No. : DFC-5558-01-02-US
Customer No. : 79958

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This statement is filed in the application identified above pursuant to 37 C.F.R. §§ 1.97 and 1.98. Applicants call attention to the art references within the knowledge of applicants and their attorneys which are listed on the attached form PTO-SB08. No representation is intended that a complete search has been made or that no better art references are available. The filing of this statement shall not be construed to be an admission that the information cited in the statement is, or is considered to be, prior art or material to patentability as defined in 1.56(b).

Pursuant to 37 C.F.R. § 1.98(d), copies are not provided of references previously submitted to, or cited by, the Office in U.S. Patent Application Serial No. 16/131,035, filed September 14, 2018, which is relied on for an earlier effective filing date under 35 U.S.C. § 120.

If any fees are necessary in connection with this document, please charge Deposit
Account No. 02-3223, Bose McKinney & Evans LLP.

Respectfully submitted,

Dated: February 4, 2021

/Douglas A. Yerkeson/

Douglas A. Yerkeson, Reg. No. 39,882

Attorney for Applicants

BOSE MCKINNEY & EVANS LLP

111 Monument Circle, Suite 2700

Indianapolis, IN 46204

Telephone: 317-237-5110

Electronic Patent Application Fee Transmittal

Application Number:				
Filing Date:				
Title of Invention:	VESSEL RINSING APPARATUS			
First Named Inventor/Applicant Name:	Mark Cipriani			
Filer:	Douglas Alan Yerkeson/Patsy Fonseca			
Attorney Docket Number:	DFC-5558-01-02			
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
UTILITY APPLICATION FILING	1011	1	320	320
UTILITY SEARCH FEE	1111	1	700	700
UTILITY EXAMINATION FEE	1311	1	800	800
Pages:				
Claims:				
CLAIMS IN EXCESS OF 20	1202	4	100	400
Miscellaneous-Filing:				
Petition:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				2220

Electronic Acknowledgement Receipt

EFS ID:	41838181
Application Number:	17167647
International Application Number:	
Confirmation Number:	3847
Title of Invention:	VESSEL RINSING APPARATUS
First Named Inventor/Applicant Name:	Mark Cipriani
Customer Number:	79958
Filer:	Douglas Alan Yerkeson/Patsy Fonseca
Filer Authorized By:	Douglas Alan Yerkeson
Attorney Docket Number:	DFC-5558-01-02
Receipt Date:	04-FEB-2021
Filing Date:	
Time Stamp:	15:56:05
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$ 2220
RAM confirmation Number	E202124F56451285
Deposit Account	023223
Authorized User	Patsy Fonseca

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

37 CFR 1.17 (Patent application and reexamination processing fees)

37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Application Data Sheet	20210204_DFC-5558-01-02-US_ADS.pdf	3358103	no	10
			1a326a67eb814dc0d8a871e97bec0eabe22272e1		
Warnings:					
Information:					
This is not an USPTO supplied ADS fillable form					
2	Drawings-only black and white line drawings	20210204_DFC-5558-01-02-US_Drawings.pdf	1009352	no	12
			549bd9414615b4287105430ade28417b1c555283		
Warnings:					
Information:					
3	Information Disclosure Statement (IDS) Form (SB08)	20210204_DFC-5558-01-02-US_IDS.pdf	145644	no	2
			19fea43e5fb1050ea5ac104432760185977c8e80		
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
4	Oath or Declaration filed	20210204_DFC-5558-01-02-US_Declarations.pdf	1256326	no	8
			b89b46b32ae523113ecedddbe8f04ecf24ba8368		
Warnings:					
Information:					
5		20210204_DFC-5558-01-02-US_Patent_Application.pdf	1587846	yes	16
			bdaff94961b185f751cc0cd890141d4d1b3ff6833		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Specification		1	10	
	Claims		11	15	
Sanitary Ware - Ex. 1003 - Page 348					

	Abstract		16	16
Warnings:				
Information:				
6	Miscellaneous Incoming Letter	20210204_DFC-5558-01-02-US_IDS_Letter.pdf	102091 558d97875e8eee90845306279ede5a45d06754da	no 2
Warnings:				
Information:				
7	Fee Worksheet (SB06)	fee-info.pdf	36421 1834c592a5098503c1b0ce56df63b71c77aa2354	no 2
Warnings:				
Information:				
Total Files Size (in bytes):			7495783	
<p>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.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>				

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

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	DFC-5558-01-02-US
		Application Number	
Title of Invention	VESSEL RINSING APPARATUS		
<p>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.</p> <p>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.</p>			

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		Cipriani		
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service					
City	Carmel	State/Province	IN	Country of Residence	US
Mailing Address of Inventor:					
Address 1	14104 James Dean Drive				
Address 2					
City	Carmel	State/Province	IN		
Postal Code	46033	Country	US		
Inventor 2					Remove
Legal Name					
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Anthony	Joseph	Tentler		
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service					
City	Windfall	State/Province	IN	Country of Residence	US
Mailing Address of Inventor:					
Address 1	6302 E 500 N				
Address 2					
City	Windfall	State/Province	IN		
Postal Code	46076	Country	US		
Inventor 3					Remove
Legal Name					
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Jack	William	Judge		
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service					

Application Data Sheet 37 CFR 1.76		Attorney Docket Number		DFC-5558-01-02-US	
		Application Number			
Title of Invention		VESSEL RINSING APPARATUS			

City	Indianapolis	State/Province	IN	Country of Residence	US
------	--------------	----------------	----	----------------------	----

Mailing Address of Inventor:

Address 1	1947 Pin Oak Court				
Address 2					
City	Indianapolis	State/Province	IN		
Postal Code	46260	Country	US		
Inventor 4 Remove					
Legal Name					
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Thad	J.	Eads		
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service					
City	Urbana	State/Province	IN	Country of Residence	US

Mailing Address of Inventor:

Address 1	3276 N 500 E				
Address 2					
City	Urbana	State/Province	IN		
Postal Code	46990	Country	US		
Inventor 5 Remove					
Legal Name					
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Michael	Scot	Rosko		
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service					
City	Greenwood	State/Province	IN	Country of Residence	US

Mailing Address of Inventor:

Address 1	1120 Falkirk Court				
Address 2					
City	Greenwood	State/Province	IN		
Postal Code	46143	Country	US		
Inventor 6 Remove					
Legal Name					
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Raoul		Labrie		
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service					
City	Shelbyville	State/Province	IN	Country of Residence	US

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	DFC-5558-01-02-US
		Application Number	
Title of Invention	VESSEL RINSING APPARATUS		

Mailing Address of Inventor:

Address 1	2449 N. Richard Dr.		
Address 2			
City	Shelbyville	State/Province	IN
Postal Code	46176	Country i	US
Inventor 7			Remove
Legal Name			
Prefix	Given Name	Middle Name	Family Name
	Alejandra		Lazarini
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service			
City	Carmel	State/Province	IN
Country of Residence i		US	

Mailing Address of Inventor:

Address 1	568 Arbor Dr.		
Address 2			
City	Carmel	State/Province	IN
Postal Code	46032	Country i	US
Inventor 8			Remove
Legal Name			
Prefix	Given Name	Middle Name	Family Name
	Michael	J.	Veros
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service			
City	Carmel	State/Province	IN
Country of Residence i		US	

Mailing Address of Inventor:

Address 1	14595 Jason Street		
Address 2			
City	Carmel	State/Province	IN
Postal Code	46033	Country i	US
All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the Add button. Add			

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below. For further information see 37 CFR 1.33(a).	
☐ An Address is being provided for the correspondence Information of this application.	
Customer Number	79958

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	DFC-5558-01-02-US
		Application Number	
Title of Invention	VESSEL RINSING APPARATUS		

Email Address	pfonseca@boselaw.com	Add Email	Remove Email
Email Address	Dyerkeson@boselaw.com	Add Email	Remove Email

Application Information:

Title of the Invention	VESSEL RINSING APPARATUS		
Attorney Docket Number	DFC-5558-01-02-US	Small Entity Status Claimed	☐
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	12	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.

Representative Information:

<p>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.</p>			
Please Select One:	☒ Customer Number	☐ US Patent Practitioner	☐ Limited Recognition (37 CFR 11.9)
Customer Number	79958		

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	DFC-5558-01-02-US
		Application Number	
Title of Invention	VESSEL RINSING APPARATUS		

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	16131035	2018-09-14
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the Add button.			

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).

			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.			

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.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	DFC-5558-01-02-US
		Application Number	
Title of Invention	VESSEL RINSING APPARATUS		

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.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	DFC-5558-01-02-US
		Application Number	
Title of Invention	VESSEL RINSING APPARATUS		

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			
<p>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.</p>			
<input type="button" value="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: <input type="text"/>			
If the Applicant is an Organization check here. ☒			
Organization Name	Delta Faucet Company		
Mailing Address Information For Applicant:			
Address 1	55 East 111th Street		
Address 2			
City	Indianapolis	State/Province	IN
Country	US	Postal Code	46280
Phone Number		Fax Number	
Email Address			
Additional Applicant Data may be generated within this form by selecting the Add button.			

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.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	DFC-5558-01-02-US
		Application Number	
Title of Invention	VESSEL RINSING APPARATUS		

Assignee 1

Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.

If the Assignee or Non-Applicant Assignee is an Organization check here. ☐

Prefix	Given Name	Middle Name	Family Name	Suffix

Mailing Address Information For Assignee including Non-Applicant Assignee:

Address 1			
Address 2			
City		State/Province	
Country ⁱ		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.

Signature:

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

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

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

Signature	/Douglas A. Yerkeson/		Date (YYYY-MM-DD)	2021-02-04
First Name	Douglas A.	Last Name	Yerkeson	Registration Number 39,882

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

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	DFC-5558-01-02-US
		Application Number	
Title of Invention	VESSEL RINSING APPARATUS		

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.**

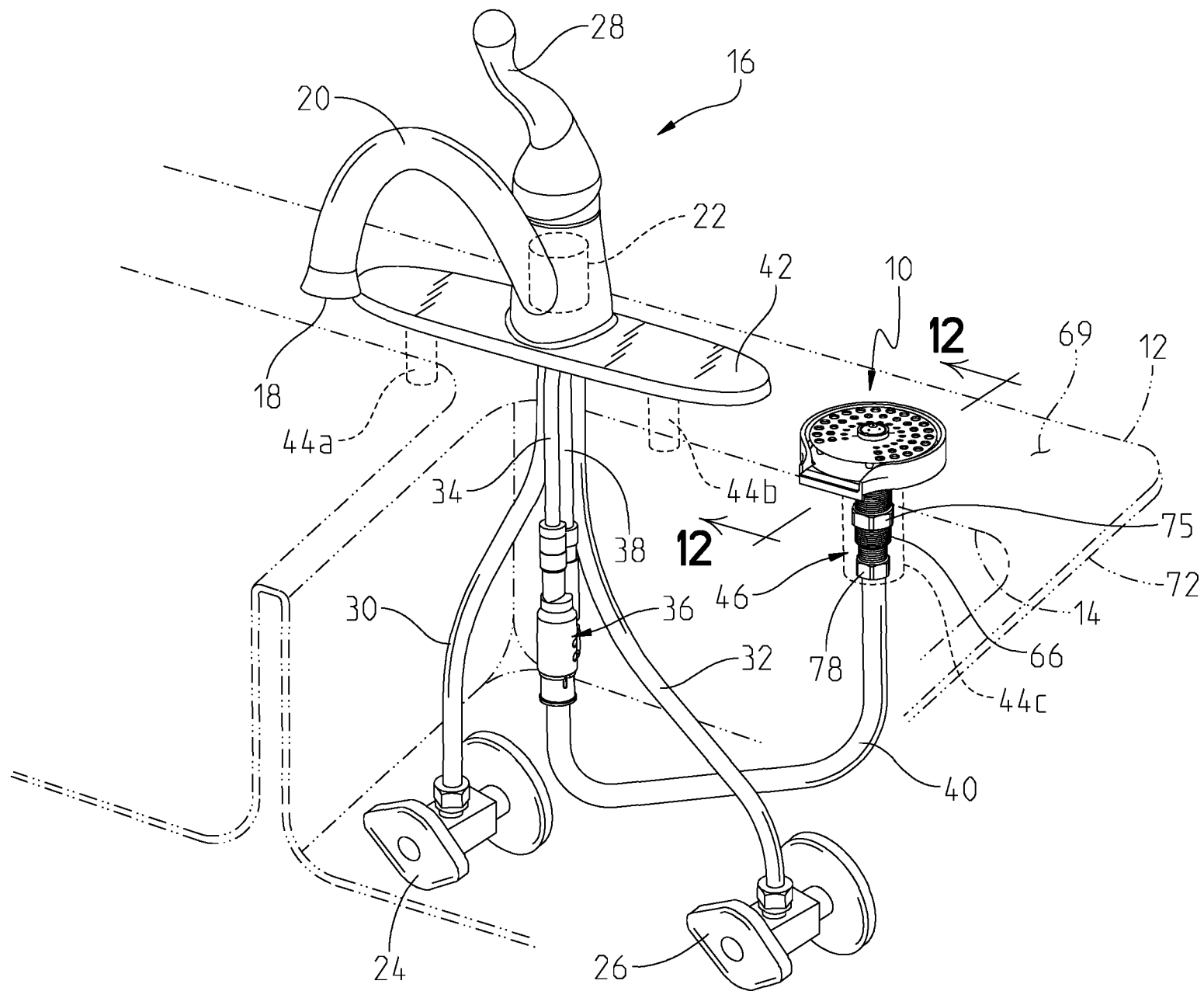
Privacy Act Statement

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.
- 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 inspections 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.

Fig. 1



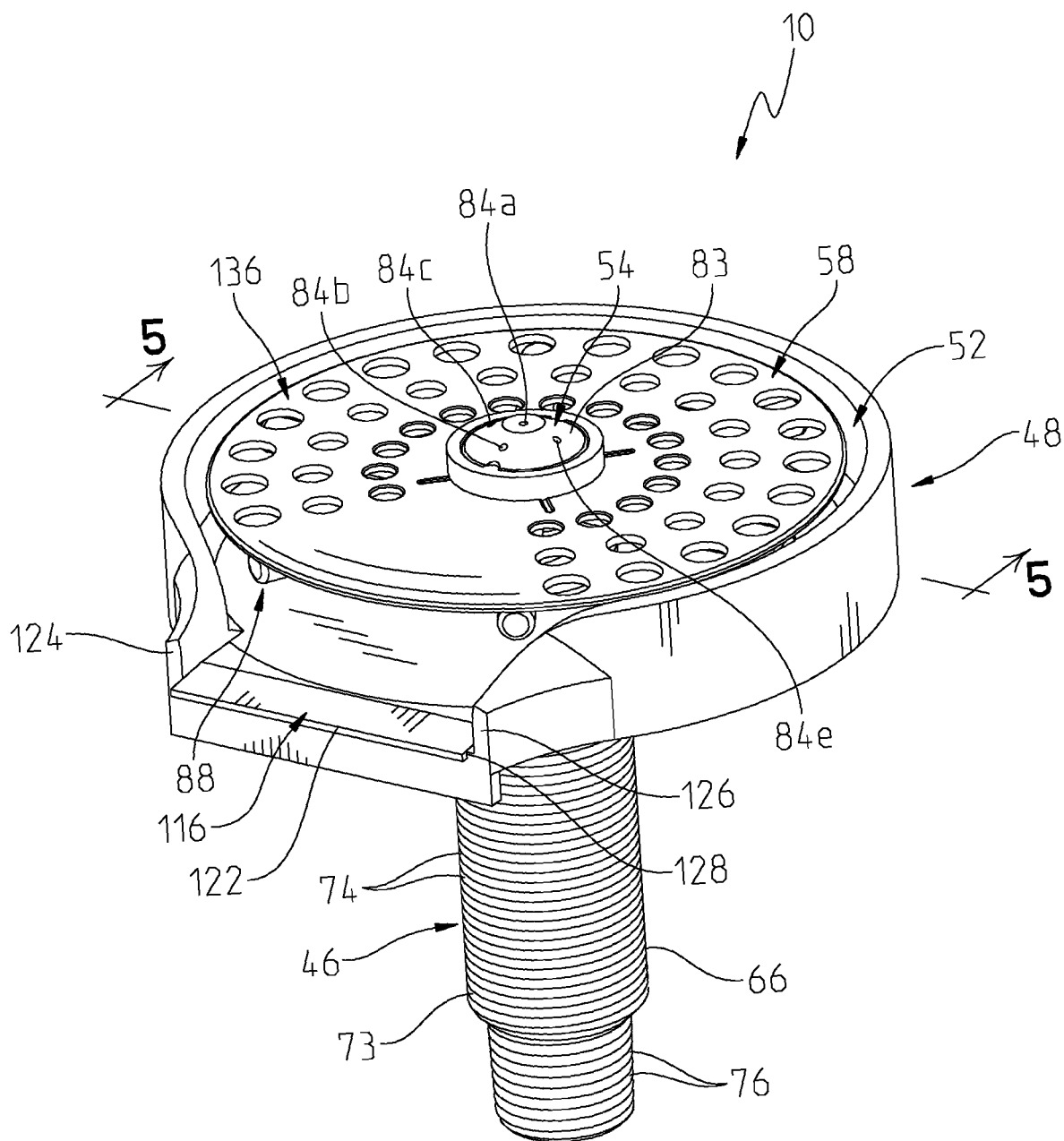


Fig. 2

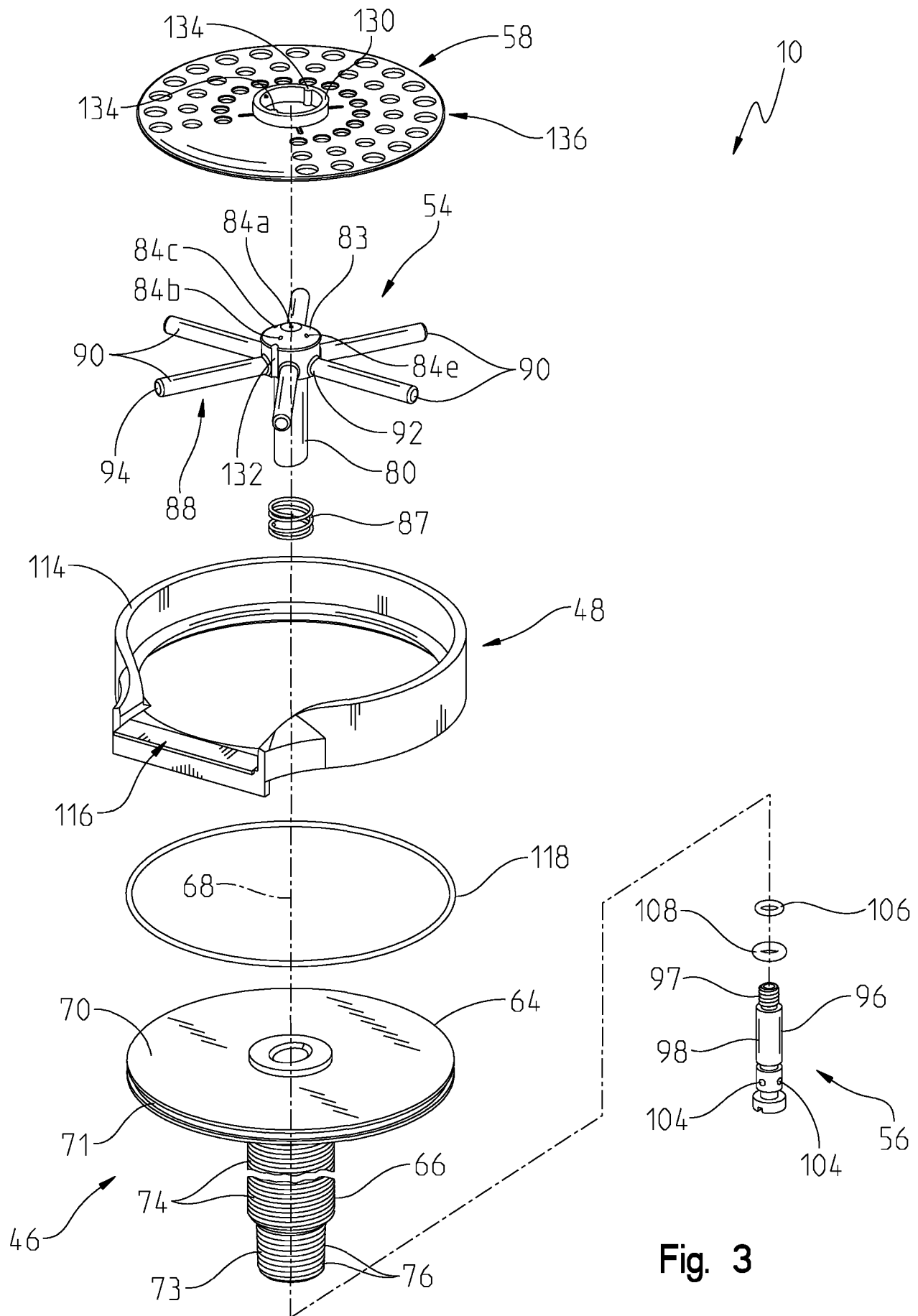


Fig. 3

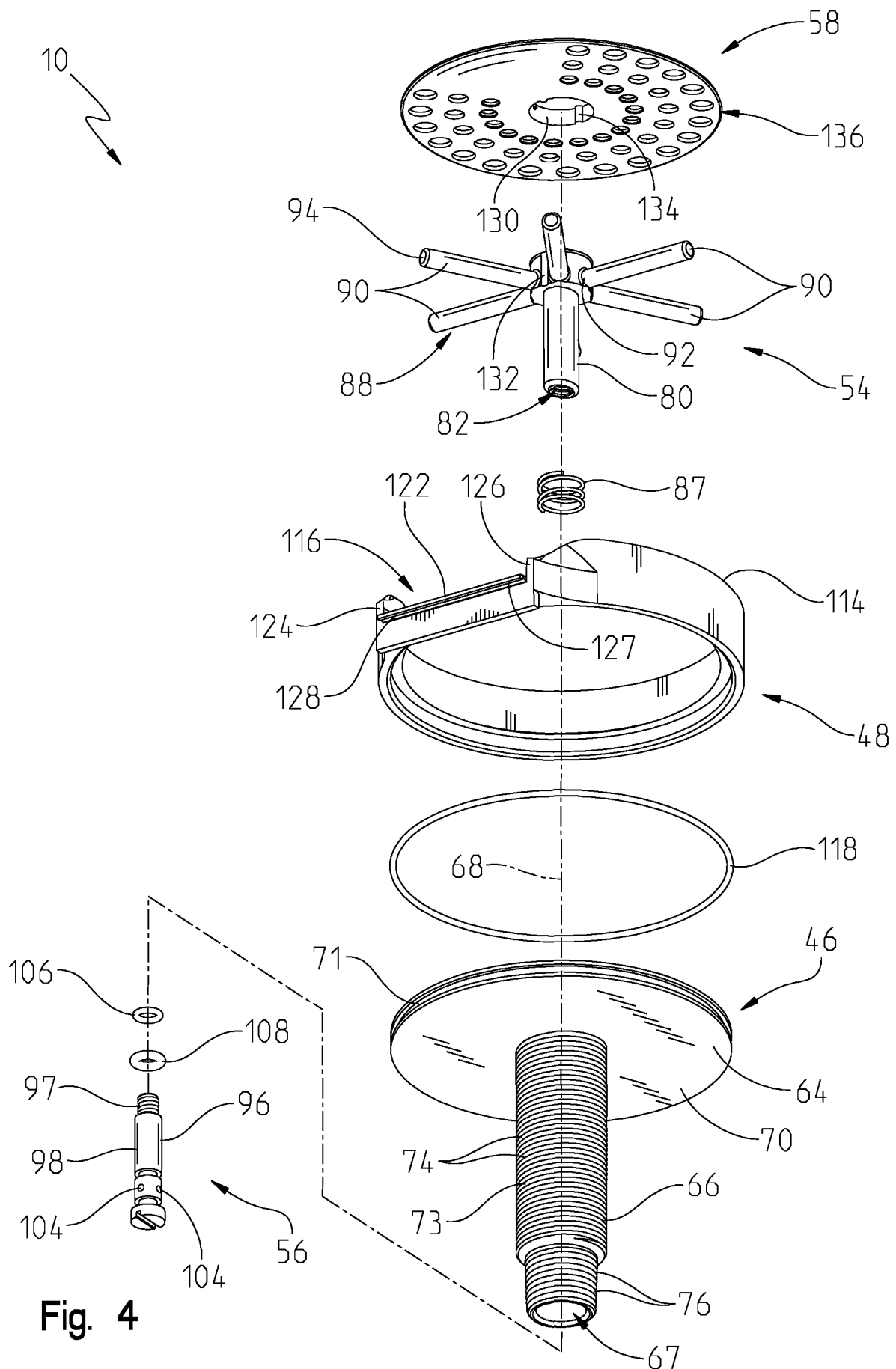


Fig. 4

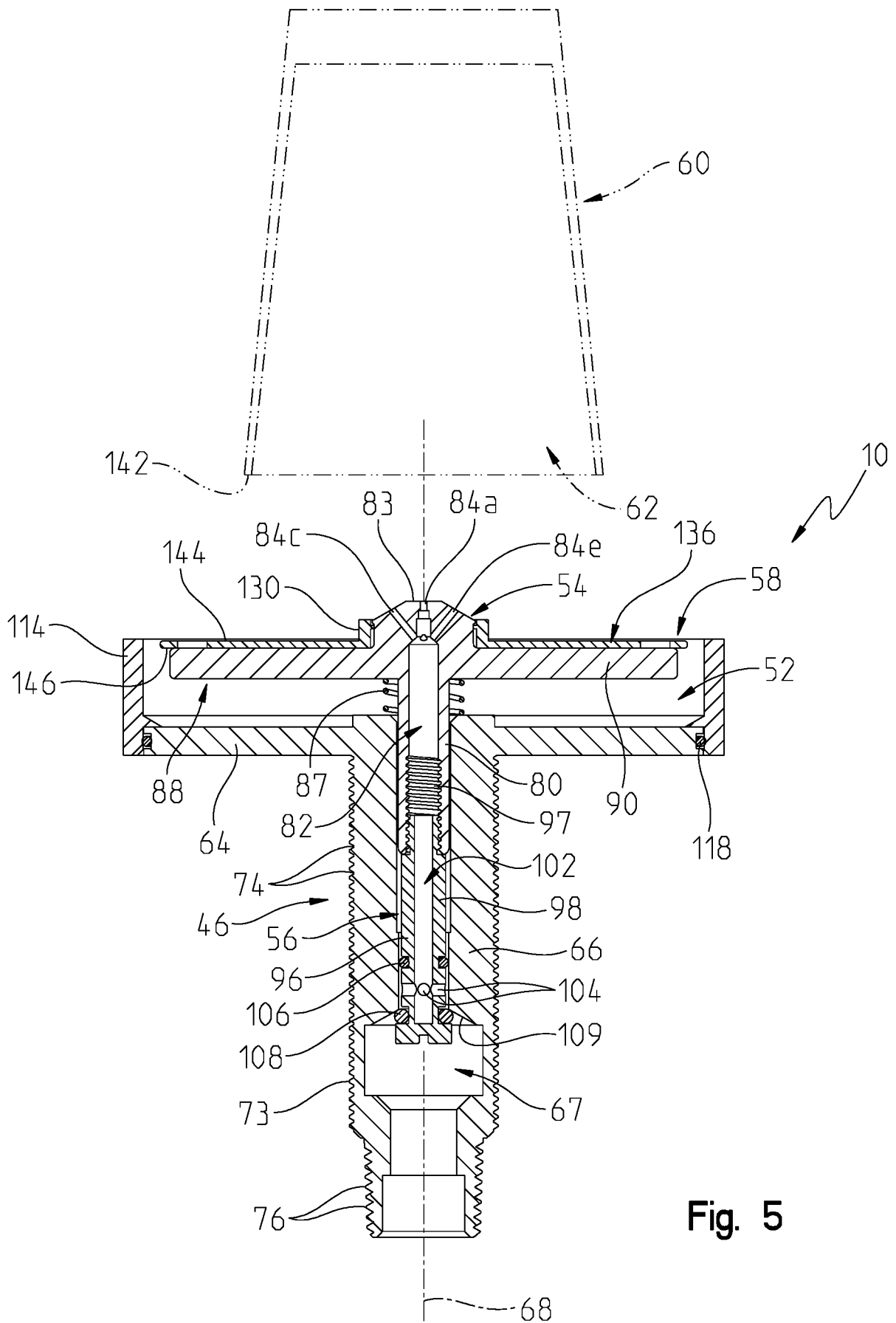


Fig. 5



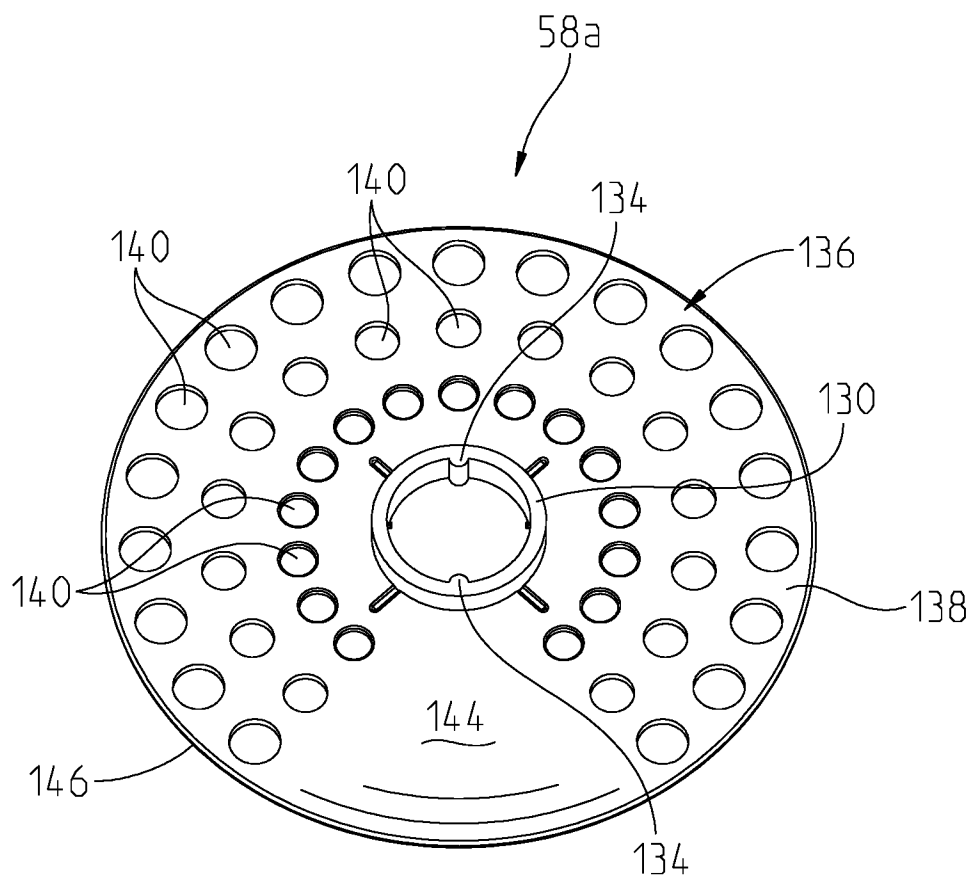


Fig. 7

Fig. 8

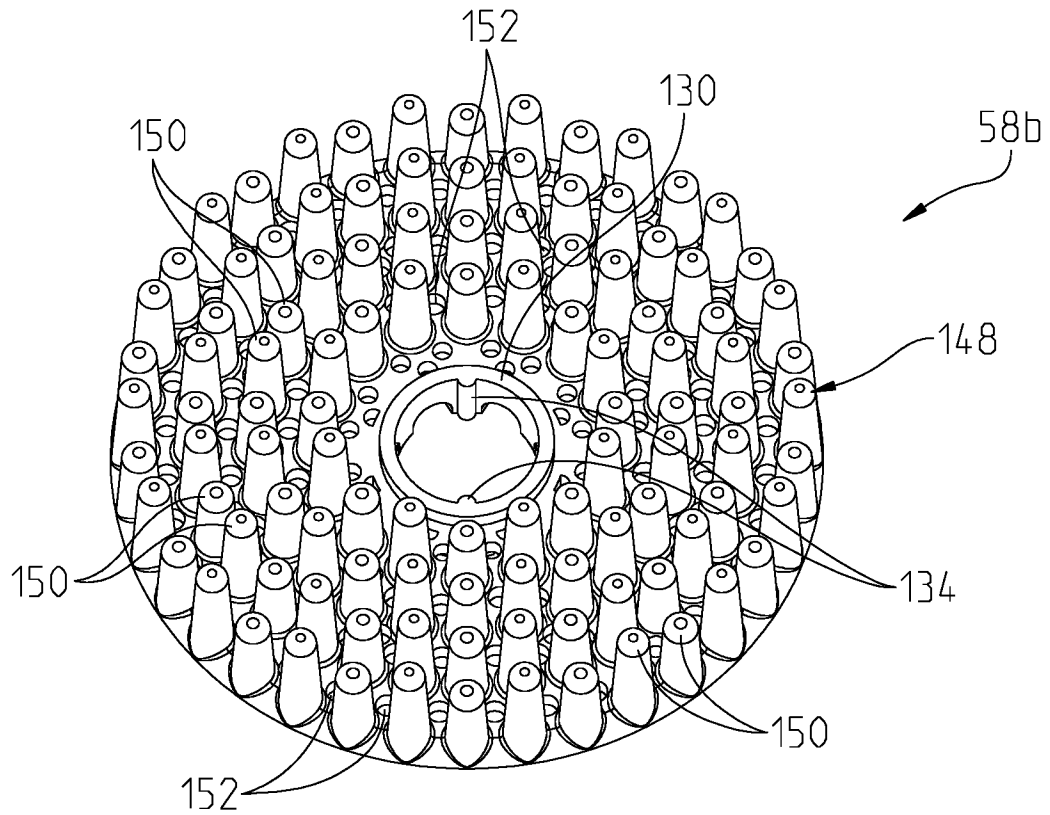
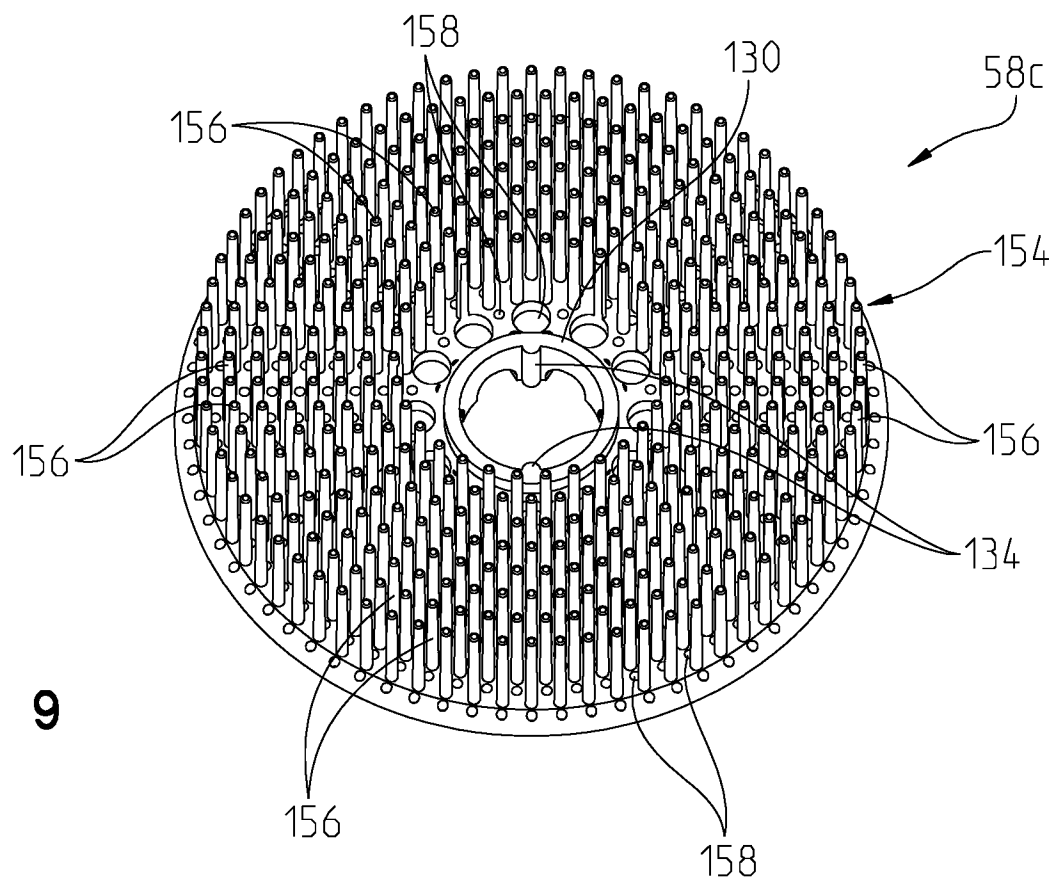


Fig. 9



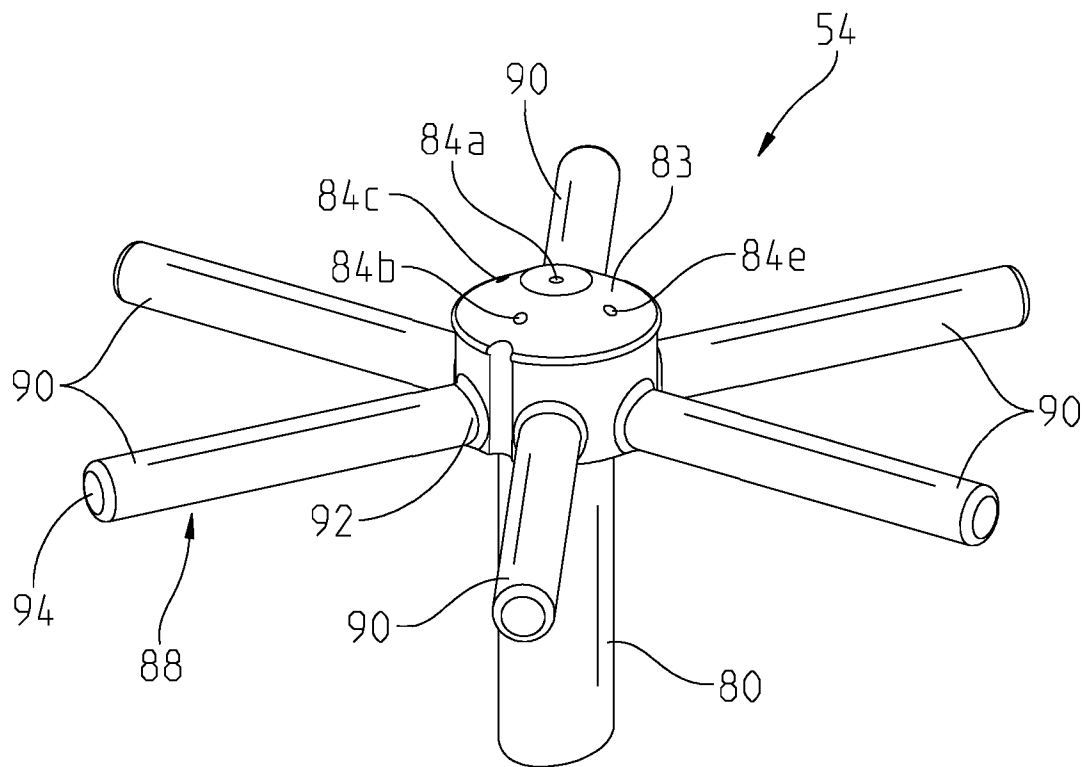


Fig. 10

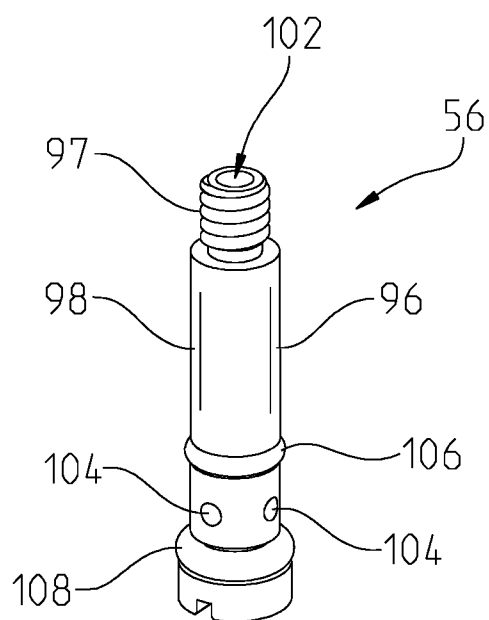


Fig. 11

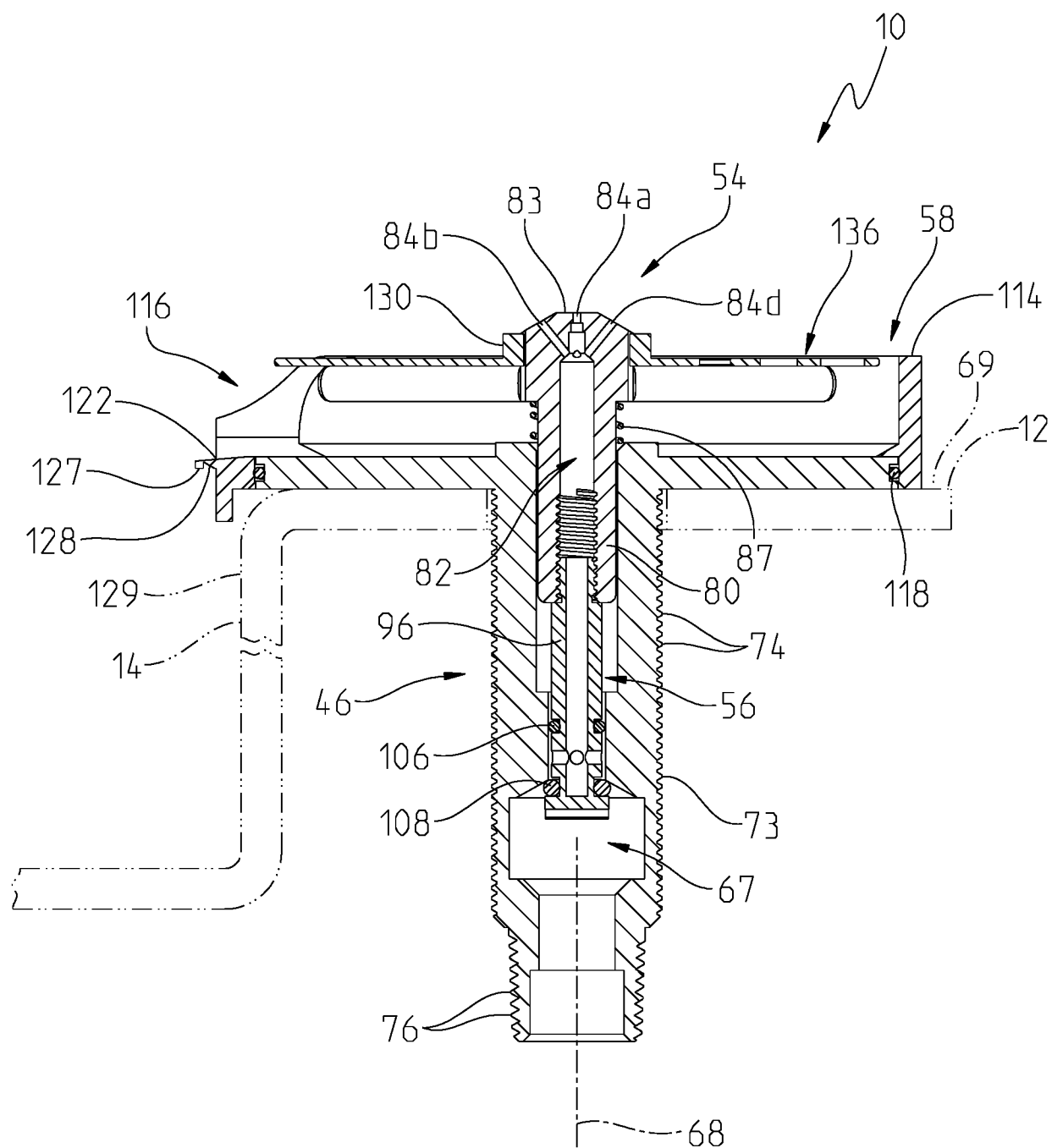


Fig. 12

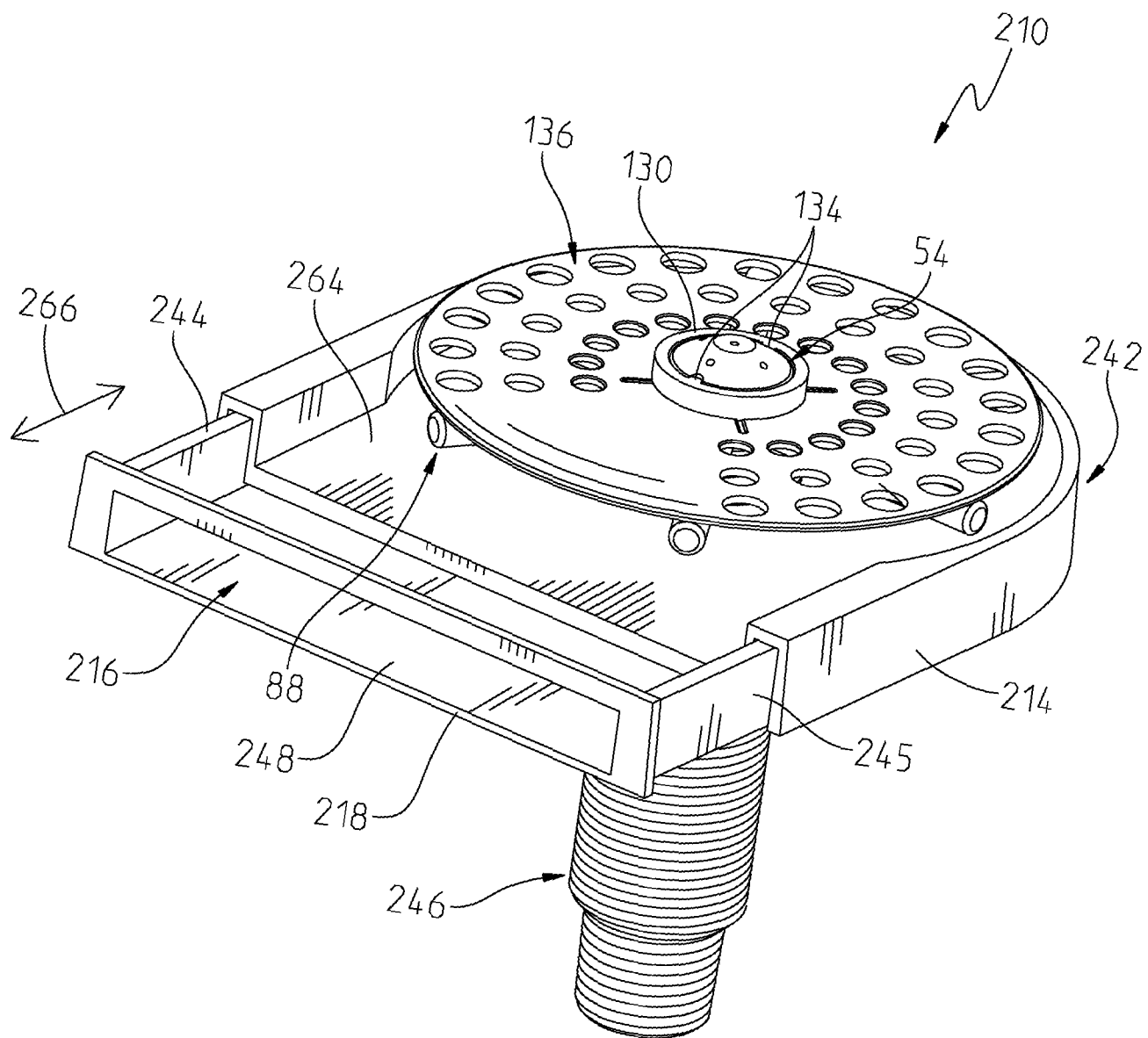


Fig. 13

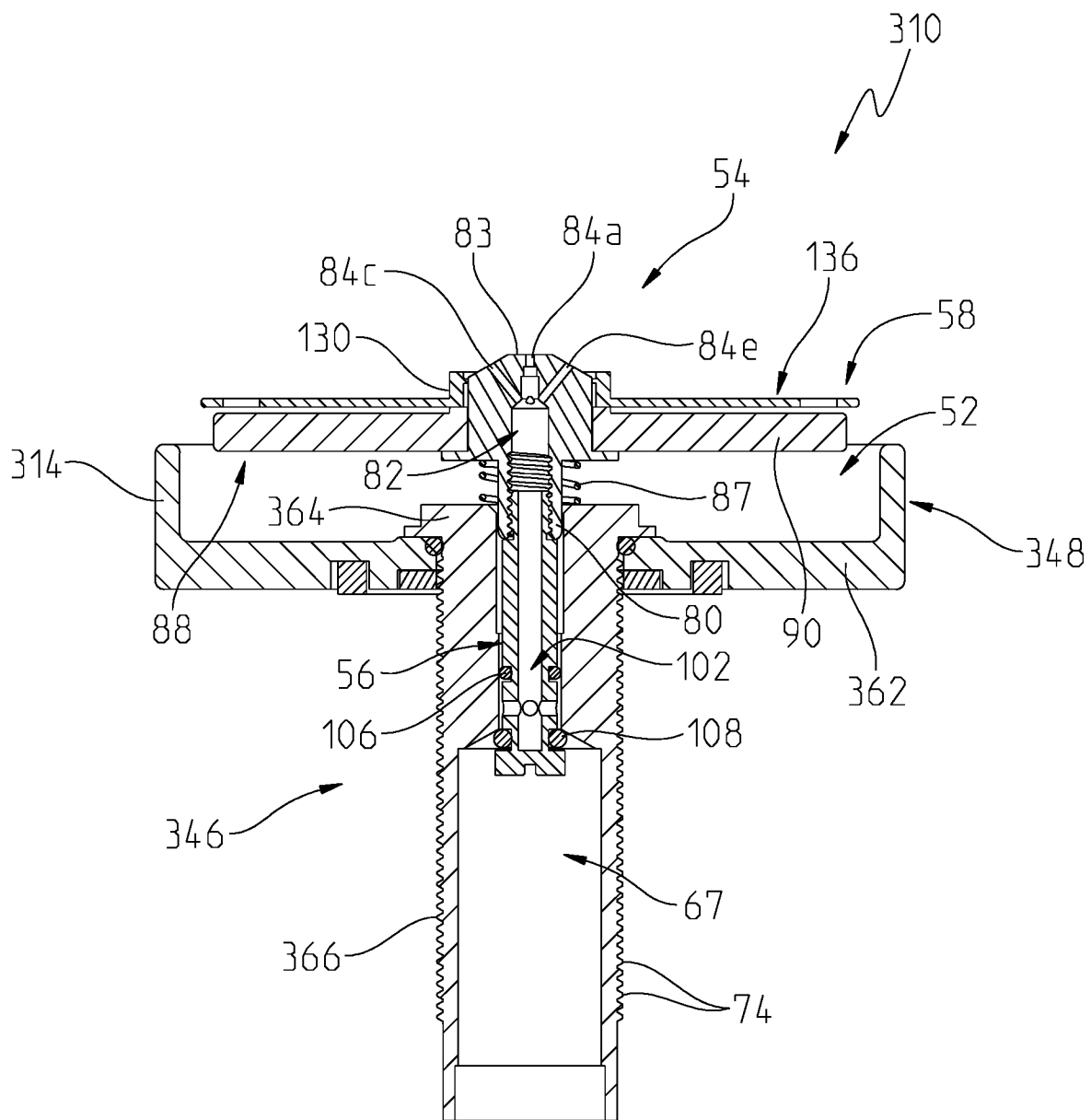


Fig. 14