

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

☐ In re application of: Schuster et al.

Group No.

Serial No.: 10/958,797

Examiner:

Filed: October 5, 2004

For: TOILET FILL VALVE WITH ADJUSTABLE BOWL FILL FLOW

☒ Patent No.* 7,743,436

Issued: June 29, 2010

***NOTE:** Insert name of inventor(s) and title also for patent. Where notification is with respect to a maintenance fee payment, also insert application serial number and filing date, and add Box M. Fee to address

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

NOTIFICATION OF LOSS OF ENTITLEMENT OF SMALL ENTITY STATUS
(37 C.F.R. §1.28(b))

NOTE: Notification of any change in status resulting in loss of entitlement to small entity status must be filed in an application or patent prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate, pursuant to § 1.9 of this Part. The notification of change in status may be signed by the applicant, any person authorized to sign on behalf of the assignee, or any attorney or agent of record or acting in a representative capacity pursuant to §1.34(a) of this part. 37 C.F.R. §1.28(b).

NOTE: From the above portion of 37 C.F.R. §1.28(b), it is only a change in status "resulting in loss of entitlement to small entity status" that must be filed, and a change from one small entity status to another small entity status requires no notification.

CERTIFICATE OF MAILING (37 CFR 1.8)

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being

☐ deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope to the:
Commissioner For Patents, P.O. Box 1450
Alexandria, VA 22313-1450

☒ transmitted by facsimile to the Patent and Trademark Office.

/Emily Tillman/

Emily Tillman

Date: October 22, 2013

Applicant hereby notifies the Patent and Trademark Office that it is no longer entitled to status as a small entity, and that the claim for small entity status is hereby withdrawn.

Date: October 22, 2013

/Michael J. D'Aurelio/
Michael J. D'Aurelio; Reg. No. 40,977
Practitioner of Record

THOMAS | HORSTEMEYER, LLP
400 Interstate North Parkway, Suite 1500
Atlanta, Georgia 30339-5948
Tel. No.: 770-933-9500



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.
10/958,797	06/29/2010	7743436	171901-1031	1704

24504 7590 06/09/2010
THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP
600 GALLERIA PARKWAY, S.E.
STE 1500
ATLANTA, GA 30339-5994

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 502 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 Data Management (ODM) at (571)-272-4200.

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

Michael J. Schuster, Joliet, IL;
Larry Schneider, Wadsworth, IL;

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or **Fax (571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

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

24504 7590 02/19/2010

THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP
600 GALLERIA PARKWAY, S.E.
STE 1500
ATLANTA, GA 30339-5994

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

Certificate of Mailing or Transmission

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

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/958,797	10/05/2004	Michael J. Schuster	171901-1031	1704

TITLE OF INVENTION: TOILET FILL VALVE WITH ADJUSTABLE BOWL FILL FLOW

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$755	\$0	\$0	\$755	05/19/2010

EXAMINER	ART UNIT	CLASS-SUBCLASS
NGUYEN, TUAN N	3751	004-415000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively,
- (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

- 1 Thomas, Kayden,
2 Horstemeyer & Risley, LLP
3

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

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

(A) NAME OF ASSIGNEE

MJSI, Inc.

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

Shorewood, Illinois

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

4a. The following fee(s) are submitted:

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

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

- ☐ A check is enclosed.
- ☒ Payment by credit card. Form PTO-2038 is attached.
- ☒ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number 20-0778 (enclose an extra copy of this form).

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

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature /Micheal J. D'Aurelio/

Date May 18, 2010

Typed or printed name Michael J. D'Aurelio

Registration No. 40977

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of:

Confirmation: 1704

Michael J. Schuster et al.

Art Unit: 3751

Application Number: 10/958,797

Examiner: Nguyen, Tuan N.

Filing Date: October 5, 2004

Docket No.: 171901-1031

Title: **TOILET FILL VALVE WITH ADJUSTABLE BOWL FILL FLOW**

COMMENTS ON STATEMENT OF REASONS FOR ALLOWANCE

Mail Stop Issue Fee
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

With regard to the Reasons for Allowance accompanying the Notice of Allowance and Fees Due mailed on February 19, 2010 in the above-referenced patent application, Applicants submit the following Comments.

Applicants concur with the statement that the art of record does not teach or reasonably suggest the combination of elements of independent claim 19, and specifically the elements of "the amendment" that have "overcome the prior art rejection" as set forth in the Reasons for Allowance. However, Applicants note that claim 19 recites other elements that are not shown or suggested in the art of record for reasons other than those noted in the Reasons for Allowance.

Applicants assert that the present claim 19 is allowable for at least the reason that the art of record does not show or suggest all of the recited elements of the claim 19. Thus, Applicants assert that claim 19 is allowable in view of the complete language

recited therein, as well as equivalents. Applicants respectfully assert that the scope of claim 19, as allowed, is to be determined from the actual claim language, including all equivalents.

Respectfully Submitted,

/Michael J. D'Aurelio/

Michael J. D'Aurelio
Reg. No. 40,977

Thomas, Kayden, Horstemeyer & Risley, L.L.P.

600 Galleria Parkway, S.E.

Suite 1500

Atlanta, Georgia 30339-5948

Phone: (770) 933-9500

Fax: (770) 951-0933

Electronic Patent Application Fee Transmittal				
Application Number:		10958797		
Filing Date:		05-Oct-2004		
Title of Invention:		TOILET FILL VALVE WITH ADJUSTABLE BOWL FILL FLOW		
First Named Inventor/Applicant Name:		Michael J. Schuster		
Filer:		Michael D Aurelio/Sofia Safina		
Attorney Docket Number:		171901-1031		
Filed as Small Entity				
Utility under 35 USC 111(a) Filing Fees				
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	2501	1	755	755
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Total in USD (\$)				755

Electronic Acknowledgement Receipt	
EFS ID:	7632741
Application Number:	10958797
International Application Number:	
Confirmation Number:	1704
Title of Invention:	TOILET FILL VALVE WITH ADJUSTABLE BOWL FILL FLOW
First Named Inventor/Applicant Name:	Michael J. Schuster
Customer Number:	24504
Filer:	Michael D Aurelio/Sofia Safina
Filer Authorized By:	Michael D Aurelio
Attorney Docket Number:	171901-1031
Receipt Date:	18-MAY-2010
Filing Date:	05-OCT-2004
Time Stamp:	13:18:15
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$755
RAM confirmation Number	10395
Deposit Account	200778
Authorized User	D'AURELIO,MICHAEL J
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 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)	01152712.PDF	459131	no	1
			9802e3007e902e0c3251f23760b6c6e5b1d474f9		
Warnings:					
Information:					
2	Miscellaneous Incoming Letter	01155001.PDF	84675	no	2
			cb03fd4fd4fb4bad62d766cb2d9ea3b76dcf9ab		
Warnings:					
Information:					
3	Fee Worksheet (PTO-875)	fee-info.pdf	29737	no	2
			91d75f4126714f31f230b78c236ba5e50065bdd6		
Warnings:					
Information:					
Total Files Size (in bytes):			573543		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					



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

24504 7590 02/19/2010

THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP
600 GALLERIA PARKWAY, S.E.
STE 1500
ATLANTA, GA 30339-5994

EXAMINER

NGUYEN, TUAN N

ART UNIT

PAPER NUMBER

3751

DATE MAILED: 02/19/2010

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/958,797	10/05/2004	Michael J. Schuster	171901-1031	1704

TITLE OF INVENTION: TOILET FILL VALVE WITH ADJUSTABLE BOWL FILL FLOW

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$755	\$0	\$0	\$755	05/19/2010

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 SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

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

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

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or **Fax (571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

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

24504 7590 02/19/2010

THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP
600 GALLERIA PARKWAY, S.E.
STE 1500
ATLANTA, GA 30339-5994

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

Certificate of Mailing or Transmission

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

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/958,797	10/05/2004	Michael J. Schuster	171901-1031	1704

TITLE OF INVENTION: TOILET FILL VALVE WITH ADJUSTABLE BOWL FILL FLOW

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$755	\$0	\$0	\$755	05/19/2010

EXAMINER	ART UNIT	CLASS-SUBCLASS
NGUYEN, TUAN N	3751	004-415000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
3 _____

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

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

(A) NAME OF ASSIGNEE

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

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

4a. The following fee(s) are submitted:

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

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

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

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

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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UNITED STATES PATENT AND TRADEMARK OFFICE

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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/958,797	10/05/2004	Michael J. Schuster	171901-1031	1704
24504	7590	02/19/2010	EXAMINER	
THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP 600 GALLERIA PARKWAY, S.E. STE 1500 ATLANTA, GA 30339-5994			NGUYEN, TUAN N	
			ART UNIT	PAPER NUMBER
			3751	
DATE MAILED: 02/19/2010				

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

The Patent Term Adjustment to date is 226 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 226 day(s).

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 Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

REASONS FOR ALLOWANCE

1. The following is an examiner's statement of reasons for allowance: The amendment has overcome the prior art rejection which, therefore, overcomes the double patenting rejection.

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."

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan N. Nguyen whose telephone number is 571-272-4892. The examiner can normally be reached on Monday-Friday (10:00-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Huson can be reached on (571) 272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TN

/Tuan N Nguyen/
Primary Examiner, Art Unit 3751

Search Notes 	Application/Control No. 10958797	Applicant(s)/Patent Under Reexamination SCHUSTER ET AL.
	Examiner Tuan N Nguyen	Art Unit 3751

SEARCHED			
Class	Subclass	Date	Examiner
4	331,324,366,415,675	2/1/10	TN
137	15.26,432,434,436,437,441-444	2/1/10	TN
285	91	2/1/10	TN

SEARCH NOTES		
Search Notes	Date	Examiner
EAST BRS TEXT SEARCH ATTACHED	2/1/10	TN

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner
USPGPUB	INTERFERENCE TEXT SEARCH ATTACHED	2/1/10	TN

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BIB DATA SHEET

CONFIRMATION NO. 1704

SERIAL NUMBER 10/958,797	FILING or 371(c) DATE 10/05/2004 RULE	CLASS 004	GROUP ART UNIT 3751	ATTORNEY DOCKET NO. 171901-1031		
APPLICANTS Michael J. Schuster, Joliet, IL; Larry Schneider, Wadsworth, IL; ** CONTINUING DATA ***** This application is a CIP of 10/798,606 03/11/2004 PAT 6,823,889 ** FOREIGN APPLICATIONS ***** ** IF REQUIRED, FOREIGN FILING LICENSE GRANTED *** SMALL ENTITY ** 11/18/2004						
Foreign Priority claimed ☐ Yes ☒ No 35 USC 119(a-d) conditions met ☐ Yes ☒ No Verified and /TUAN N NGUYEN/ Acknowledged Examiner's Signature		☐ Met after Allowance Initials	STATE OR COUNTRY IL	SHEETS DRAWINGS 3	TOTAL CLAIMS 10	INDEPENDENT CLAIMS 3
ADDRESS THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP 600 GALLERIA PARKWAY, S.E. STE 1500 ATLANTA, GA 30339-5994 UNITED STATES						
TITLE Toilet fill valve with adjustable bowl fill flow						
FILING FEE RECEIVED 420	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:		☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit			

EAST Search History**EAST Search History (Prior Art)**

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	111	toilet and bowl and fill and valve and (connection coupling) and groove and (seal sealing) and ring	USPAT; EPO; JPO; DERWENT	OR	ON	2010/02/01 10:50

2/ 1/ 10 10:54:23 AM**C:\ Documents and Settings\ TNguyen25\ My Documents\ EAST\ workspaces
 \ 10958797.w sp**

EAST Search History**EAST Search History (I nterference)**

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L2	35	toilet and bowl and fill and valve and (connection coupling) and groove and (seal sealing) and ring	US-PGPUB; UPAD	OR	ON	2010/02/01 10:51

2/ 1/ 10 10:54:32 AM**C:\ Documents and Settings\ TNguyen25\ My Documents\ EAST\ workspaces
 \ 10958797.wsp**

Receipt date: 11/16/2007

10958797, GAU: 3751

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	10958797
	Filing Date	2004-10-05
	First Named Inventor	Michael J. Schuster et al.
	Art Unit	3751
	Examiner Name	Nguyen, Tuan N.
	Attorney Docket Number	171901-1031

U.S. PATENTS							Remove	
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear		
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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.					T ⁵	

Receipt date: 11/16/2007 INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		10958797 10958797 - GAU: 3751
	Filing Date		2004-10-05
	First Named Inventor	Michael J. Schuster et al.	
	Art Unit	3751	
	Examiner Name	Nguyen, Tuan N.	
	Attorney Docket Number	171901-1031	

/T.N./	1	Selected Documents from the File History of US Patent 6,823,889 (Parent Patent to this Application) including Examiner Search Strategy and Results, Index of Claims, Search Notes, Non-final Office Action, Issue Classification, Interview Summaries, Notice of Allowance with Examiner's Amendment, Supplemental Notice of Allowance with Supplemental Examiner's Amendment, Bibliographic Data Sheet, Request for Certificate of Correction, Certificate of Correction. (dated from years 2004-2005)	☐
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If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

Examiner Signature	/Tuan Nguyen/	Date Considered	02/03/2010
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*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.

Doc code: RCEX

Doc description: Request for Continued Examination (RCE)

PTO/SB/30EFS (07-09)

Approved for use through 07/31/2012. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL **(Submitted Only via EFS-Web)**

Application Number	10958797	Filing Date	2004-10-05	Docket Number (if applicable)	171901-1031	Art Unit	3751
First Named Inventor	Michael J. Schuster et al.			Examiner Name	Nguyen, Tuan N.		

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.

Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV

SUBMISSION REQUIRED UNDER 37 CFR 1.114

Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

☐ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____

☐ Other _____

☒ Enclosed

☒ Amendment/Reply

☐ Information Disclosure Statement (IDS)

☐ Affidavit(s)/ Declaration(s)

☒ Other _____
 Request for Withdrawal of Appeal / Notice of Filing Request for Continued Examination (RCE)

MISCELLANEOUS

☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months _____
 (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

☐ Other _____

FEES

The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.

☒ The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to
 Deposit Account No 200778

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

☒ Patent Practitioner Signature

☐ Applicant Signature

Doc code: RCEX

Doc description: Request for Continued Examination (RCE)

PTO/SB/30EFS (07-09)

Approved for use through 07/31/2012. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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Signature of Registered U.S. Patent Practitioner			
Signature	/Michael J. D'Aurelio/	Date (YYYY-MM-DD)	2009-12-22
Name	Michael J. D'Aurelio	Registration Number	40977

This collection of information is required by 37 CFR 1.114. 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.

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 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.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of:

Confirmation: 1704

Michael J. Schuster et al.

Art Unit: 3751

Application Number: 10/958,797

Examiner: Nguyen, Tuan N.

Filing Date: October 5, 2004

Docket No.: 171901-1031

Title: **TOILET FILL VALVE WITH ADJUSTABLE FILL FLOW**

REQUEST FOR WITHDRAWAL OF APPEAL

**NOTICE OF FILING OF REQUEST FOR CONTINUED EXAMINATION (RCE)
(37 C.F.R. § 1.114)**

Board of Patent Appeals and Interferences
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Applicants hereby notify the Board of Appeals that a Request for Continued Examination has been filed in this application.

Withdrawal of this appeal is made and it is requested that no decision be rendered in this appeal.

Respectfully submitted,

/Michael J. D'Aurelio/

Michael J. D'Aurelio
Registration Number: 40,977

**Thomas, Kayden, Horstemeyer
& Risley, L.L.P.**
600 Galleria Parkway, S.E.
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Atlanta, Georgia 30339-5948
Phone: (770) 933-9500
Fax: (770) 951-0933

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of:

Confirmation: 1704

Michael J. Schuster et al.

Art Unit: 3751

Application Number: 10/958,797

Examiner: Nguyen, Tuan N.

Filing Date: October 5, 2004

Docket No.: 171901-1031

Title: **TOILET FILL VALVE WITH ADJUSTABLE BOWL FILL FLOW**

SUPPLEMENTAL RESPONSE TO FINAL OFFICE ACTION OF APRIL 28, 2009

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In regard to the outstanding final Office Action mailed on April 28, 2009, the following Response is submitted. Consideration of the remarks and amendments contained herein is respectfully requested.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required therefor (including fees for net addition of claims) are hereby authorized to be charged to Deposit Account No. 20-0778.

Please amend the application as follows:

IN THE CLAIMS:

1-18. (Canceled)

19. (Currently Amended) A method for providing an adjustable bowl fill water flow in a toilet fill valve, comprising the steps of:

operatively coupling an integrally molded bowl fill outlet port to a water inlet of the toilet fill valve;

radially extending the integrally molded bowl fill outlet port from a portion of a body of the toilet fill valve, the integrally molded bowl fill outlet port comprising an integrally molded portion of the body of the toilet fill valve;

coupling an integrally molded bowl fill valve inlet port comprising an integrally molded portion of a bowl fill valve directly to the integrally molded bowl fill outlet port by establishing direct contact between the integrally molded bowl fill outlet port and the integrally molded bowl fill valve inlet port, the integrally molded bowl fill valve inlet port being compatible with the integrally molded bowl fill outlet port, the integrally molded bowl fill valve being configured to provide for the adjustable bowl fill water flow out a bowl fill valve outlet port of the integrally molded bowl fill valve for filling a toilet bowl during a flush cycle of a toilet; ~~and~~

providing for a configuration of the coupling between the integrally molded bowl fill valve inlet port and the integrally molded bowl fill outlet port that withstands a repeated pressure head created at the integrally molded bowl fill valve inlet port during a life cycle of the toilet fill valve without separation;

wherein the step of coupling of the integrally molded bowl fill valve inlet port of the bowl fill valve directly to the integrally molded bowl fill outlet port further comprises the steps of:

 mating at least one locking ear with a corresponding at least one locking groove, respectively, the at least one locking ear being situated in a locking position of the at least one locking groove, the locking groove comprising a J formation; and

compressing a sealing ring between an end of the integrally molded bowl fill valve inlet port and a seat of the integrally molded bowl fill outlet port, wherein the compression of the sealing ring pushes the at least one locking ear into the locking position.

20-26. (Canceled)

REMARKS

Upon entry of this Response, claim 19 remains pending in the present patent application. Claims 20-25 have been canceled, and claim 19 has been amended. The present Response is presented with a Request for Continued Examination to present claims of differing scope, thereby withdrawing the Appeal filed in this case. Applicants request reconsideration of the present application in view of the following remarks.

To begin, in item 3 of the Office Action, claims 19 and 24 have been rejected under 35 USC § 103(a) as being allegedly unpatentable over US Patent 5,715,860 issued to Horad (hereafter "*Horad*"). A prima facie case of obviousness is established only when the prior art teaches or suggests all of the elements of the claims. *MPEP* §2143.03, *In re Rijckaert*, 9 F.3d 1531, 28 U.S.P.Q2d 1955, 1956 (Fed. Cir. 1993). Claim 24 has been canceled herein, thereby rendering this rejection moot with respect to claim 24. In addition, claim 19 has been amended to state as follows:

19. A method for providing an adjustable bowl fill water flow in a toilet fill valve, comprising the steps of:

operatively coupling an integrally molded bowl fill outlet port to a water inlet of the toilet fill valve;

radially extending the integrally molded bowl fill outlet port from a portion of a body of the toilet fill valve, the integrally molded bowl fill outlet port comprising an integrally molded portion of the body of the toilet fill valve;

coupling an integrally molded bowl fill valve inlet port comprising an integrally molded portion of a bowl fill valve directly to the integrally molded bowl fill outlet port by establishing direct contact between the integrally molded bowl fill outlet port and the integrally molded bowl fill valve inlet port, the integrally molded bowl fill valve inlet port being compatible with the integrally molded bowl fill outlet port, the integrally molded bowl fill valve being configured to provide for the adjustable bowl fill water flow out a bowl fill valve outlet port of the

integrally molded bowl fill valve for filling a toilet bowl during a flush cycle of a toilet;

providing for a configuration of the coupling between the integrally molded bowl fill valve inlet port and the integrally molded bowl fill outlet port that withstands a repeated pressure head created at the integrally molded bowl fill valve inlet port during a life cycle of the toilet fill valve without separation;

wherein the step of coupling of the integrally molded bowl fill valve inlet port of the bowl fill valve directly to the integrally molded bowl fill outlet port further comprises the steps of:

mating at least one locking ear with a corresponding at least one locking groove, respectively, the at least one locking ear being situated in a locking position of the at least one locking groove, the locking groove comprising a J formation; and

compressing a sealing ring between an end of the integrally molded bowl fill valve inlet port and a seat of the integrally molded bowl fill outlet port, wherein the compression of the sealing ring pushes the at least one locking ear into the locking position.

As set forth above, claim 19 has been amended to specify that the step of coupling the integrally molded bowl fill valve inlet port of the bowl fill valve directly to the integrally molded bowl fill outlet port further comprises the steps of mating at least one locking ear with a corresponding at least one locking groove, respectively, where the at least one locking ear is situated in a locking position of the at least one locking groove, and the locking groove comprises a J formation. Also, claim 19 has been amended to recite the step of compressing a sealing ring between an end of the integrally molded bowl fill valve inlet port and a seat of the integrally molded bowl fill outlet port, where the compression of the sealing ring pushes the at least one locking ear into the locking position. Applicant respectfully asserts that *Horad* fails to show the specific steps

employed in linking the integrally molded bowl fill valve inlet port of the bowl fill valve directly to the integrally molded bowl fill outlet port as claimed. Accordingly, Applicant requests that the rejection of claim 19 be withdrawn.

Next, in item 4 of the Office Action, claims 19 and 21 have been rejected under 35 USC § 103(a) as being allegedly unpatentable over US Patent 5,708,991 issued to DeMarco (hereafter "*DeMarco*"). A prima facie case of obviousness is established only when the prior art teaches or suggests all of the elements of the claims. *MPEP* §2143.03, *In re Rijckaert*, 9 F.3d 1531, 28 U.S.P.Q2d 1955, 1956 (Fed. Cir. 1993). Claim 21 has been canceled herein, thereby rendering this rejection moot with respect to claim 21. In addition, claim 19 has been amended to recite as set forth above. Applicants assert that DeMarco fails to show or suggest each of the elements of claim 19 as amended herein. Accordingly, Applicant requests that the rejection of claim 19 be withdrawn.

In addition, claims 20 and 22-25 stand rejected under 35 U.S.C. §103(a) as being unpatentable over either one of DeMarco or Horad, in view of one of Robinson et al., Bjerke, or Mueller et al. as set forth in the Office Action. Claims 20 and 22-25 have been canceled herein, thereby rendering the rejection of these claims moot.

Next, in item 6 of the Office Action, claims 19-25 have been rejected on the ground of nonstatutory obviousness-type double patenting over claims 1-10 of U.S. Patent 6,823,889 issued to Schuster (hereafter "*Schuster*") in view of *Horad* or *DeMarco*. Applicant requests that the rejection of claim 19 on the ground of nonstatutory obviousness-type double patenting be held in abeyance until an indication of allowance in the present application, whereupon Applicant shall file a terminal disclaimer to overcome the rejection.

CONCLUSION

It is requested that all outstanding objections and rejections be withdrawn and that this application and all presently pending claims be allowed to issue. If the Examiner has any questions or comments regarding this Response, the Examiner is encouraged to telephone the undersigned counsel of Applicants.

Respectfully submitted,

/Michael J. D'Aurelio/

Michael J. D'Aurelio
Registration Number: 40,977

Thomas, Kayden, Horstemeyer & Risley, L.L.P.

600 Galleria Parkway, S.E.
Suite 1500
Atlanta, Georgia 30339-5948
Phone: (770) 933-9500
Fax: (770) 951-0933

Electronic Patent Application Fee Transmittal				
Application Number:		10958797		
Filing Date:		05-Oct-2004		
Title of Invention:		Toilet fill valve with adjustable bowl fill flow		
First Named Inventor/Applicant Name:		Michael J. Schuster		
Filer:		Michael D Aurelio/Rhonda Zaffino		
Attorney Docket Number:		171901-1031		
Filed as Small Entity				
Utility under 35 USC 111(a) Filing Fees				
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:				
Request for continued examination	2801	1	405	405
Total in USD (\$)				405

Electronic Acknowledgement Receipt	
EFS ID:	6686457
Application Number:	10958797
International Application Number:	
Confirmation Number:	1704
Title of Invention:	Toilet fill valve with adjustable bowl fill flow
First Named Inventor/Applicant Name:	Michael J. Schuster
Customer Number:	24504
Filer:	Michael D Aurelio/Rhonda Zaffino
Filer Authorized By:	Michael D Aurelio
Attorney Docket Number:	171901-1031
Receipt Date:	22-DEC-2009
Filing Date:	05-OCT-2004
Time Stamp:	14:11:22
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$405
RAM confirmation Number	574
Deposit Account	
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
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1	Request for Continued Examination (RCE)	01069482.PDF	769965	no	3
			4a3b42d87eae69991c4ed6fa8bb29182113bdf9c		
Warnings:					
Information:					
2	Request to Withdraw Appeal by Appellant	01069481.PDF	71312	no	1
			8cb6b3875f03b7ebbc0429fcb0268e4d1ae121a		
Warnings:					
Information:					
3	Amendment Submitted/Entered with Filing of CPA/RCE	01069477.PDF	108039	no	7
			5fb264335a2926c062036611ef363eb84e7df2ff		
Warnings:					
Information:					
4	Fee Worksheet (PTO-875)	fee-info.pdf	29975	no	2
			93f9aa92e0ca685ea9ff42e60400ab4df7905087		
Warnings:					
Information:					
Total Files Size (in bytes):			979291		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					

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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875					Application or Docket Number 10/958,797		Filing Date 10/05/2004		☐ To be Mailed	
APPLICATION AS FILED – PART I										
(Column 1)			(Column 2)			SMALL ENTITY ☒ OR		OTHER THAN SMALL ENTITY		
FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)	OR	RATE (\$)	FEE (\$)			
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A				
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A				
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A				
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X \$ =		OR	X \$ =				
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X \$ =			X \$ =				
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 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			TOTAL							
APPLICATION AS AMENDED – PART II										
(Column 1)			(Column 2)			SMALL ENTITY OR		OTHER THAN SMALL ENTITY		
AMENDMENT	12/22/2009	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR	RATE (\$)	ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(o))	* 1	Minus	** 20	= 0	X \$26 =	0	OR	X \$ =	
	Independent (37 CFR 1.16(h))	* 1	Minus	*** 3	= 0	X \$110 =	0	OR	X \$ =	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))									
						TOTAL ADD'L FEE	0	OR	TOTAL ADD'L FEE	
AMENDMENT	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR	RATE (\$)	ADDITIONAL FEE (\$)		
	Total (37 CFR 1.16(o))	*	Minus	**	=	X \$ =	OR	X \$ =		
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X \$ =	OR	X \$ =		
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))									
					TOTAL ADD'L FEE	OR	TOTAL ADD'L FEE			
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.										
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".										
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".										
The "Highest Number Previously Paid For" (Total or Independent) is the highest 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.

NOTICE OF APPEAL FROM THE EXAMINER TO THE BOARD OF PATENT APPEALS AND INTERFERENCES		Docket Number (Optional) 171901-1031										
I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)] on _____ Signature _____ Typed or printed name _____	<table border="1" style="width: 100%; border-collapse: collapse;"><tr><td colspan="2" style="padding: 5px;">In re Application of Michael J. Schuster</td></tr><tr><td style="width: 50%; padding: 5px;">Application Number 10958797</td><td style="width: 50%; padding: 5px;">Filed 2004-10-05</td></tr><tr><td colspan="2" style="padding: 5px;">For Toilet Fill Valve With Adjustable Bowl Fill Flow</td></tr><tr><td style="padding: 5px;">Art Unit 3751</td><td style="padding: 5px;">Examiner Nguyen, Tuan N.</td></tr></table>		In re Application of Michael J. Schuster		Application Number 10958797	Filed 2004-10-05	For Toilet Fill Valve With Adjustable Bowl Fill Flow		Art Unit 3751	Examiner Nguyen, Tuan N.		
In re Application of Michael J. Schuster												
Application Number 10958797	Filed 2004-10-05											
For Toilet Fill Valve With Adjustable Bowl Fill Flow												
Art Unit 3751	Examiner Nguyen, Tuan N.											
Applicant hereby appeals to the Board of Patent Appeals and Interferences from the last decision of the examiner. The fee for this Notice of Appeal is (37 CFR 41.20(b)(1)) \$ <u>540.00</u> ☒ Applicant claims small entity status. See 37 CFR 1.27. Therefore, the fee shown above is reduced by half, and the resulting fee is: \$ <u>270.00</u> ☐ A check in the amount of the fee is enclosed. ☒ Payment by credit card. ~~Form PTO-2038 is enclosed.~~ ☐ The Director has already been authorized to charge fees in this application to a Deposit Account. ☒ The Director is hereby authorized to charge any ^{additional} fees which may be required, or credit any overpayment to Deposit Account No. <u>20-0778</u>. ☒ A petition for an extension of time under 37 CFR 1.136(a) ~~(PTO-3822)~~ is enclosed. 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. I am the <table style="width: 100%;"><tr><td style="width: 50%;">☐ applicant/inventor.</td><td style="width: 50%; text-align: right;">/Michael J. D'Aurelio/</td></tr><tr><td></td><td style="text-align: right;">_____ Signature</td></tr><tr><td>☐ assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)</td><td style="text-align: right;">Michael J. D'Aurelio _____ Typed or printed name</td></tr><tr><td>☒ attorney or agent of record. Registration number <u>40977</u></td><td style="text-align: right;">(770) 933-9500 _____ Telephone number</td></tr><tr><td>☐ attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34. _____</td><td style="text-align: right;">October 27, 2009 _____ Date</td></tr></table> NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.			☐ applicant/inventor.	/Michael J. D'Aurelio/		_____ Signature	☐ assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)	Michael J. D'Aurelio _____ Typed or printed name	☒ attorney or agent of record. Registration number <u>40977</u>	(770) 933-9500 _____ Telephone number	☐ attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34. _____	October 27, 2009 _____ Date
☐ applicant/inventor.	/Michael J. D'Aurelio/											
	_____ Signature											
☐ assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)	Michael J. D'Aurelio _____ Typed or printed name											
☒ attorney or agent of record. Registration number <u>40977</u>	(770) 933-9500 _____ Telephone number											
☐ attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34. _____	October 27, 2009 _____ Date											
☒ *Total of <u>2</u> forms are submitted.												

This collection of information is required by 37 CFR 41.31. 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, 1.14 and 41.6. 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.

PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a) FY 2006 <i>(Fees pursuant to the Consolidated Appropriations act, 2005 (H.R. 4818).)</i>		Docket No. 171901-1031
Application Number: 10/958,797	Filed: October 5, 2004	
For: Toilet Fill Valve With Adjustable Bowl Fill Flow		
Art Unit: 3751	Examiner: Nguyen, Tuan N.	
This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above identified application.		
The requested extension and fee are as follows (check time period desired and enter the appropriate fee below):		
	<u>Fees</u>	<u>Small Entity</u>
		<u>Fees</u>
☐ One month (37 CFR 1.17(a)(1))	\$130	\$65 \$_____
☐ Two months (37 CFR 1.17(a)(2))	\$490	\$245 \$_____
☒ Three months (37 CFR 1.17(a)(3))	\$1110	\$555 <u>\$555.00</u>
☐ Four months (37 CFR 1.17(a)(4))	\$1730	\$865 \$_____
☐ Five months (37 CFR 1.17(a)(5))	\$2350	\$1175 \$_____
☒ Applicant claims small entity status. See 37 CFR 1.27		
☐ A check in the amount of the fee is enclosed.		
☒ Payment by credit card.		
☐ The Director has already been authorized to charge fees in this application to a Deposit Account.		
☒ The Commissioner is hereby authorized to charge any deficiencies in fees which may be required, or credit any overpayment to Deposit Account No. 20-0778.		
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.		
I am the		
☐ applicant/inventor.		
☐ assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed (Form PTO/SB/96).		
☒ attorney or agent of record. Registration Number: 40,977		
☐ attorney or agent under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34:		
_____ Michael J. D'Aurelio, Reg. No. 40,977	_____ October 27, 2009 Date _____ 770-933-9500 Telephone Number	

The collection of information is required by CFR 1.136(a). 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 USC 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 6 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, US Patent and Trademark Office, US Department of Commerce, PO Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, PO Box 1450 Alexandria, VA 22313-1450.

Electronic Patent Application Fee Transmittal				
Application Number:		10958797		
Filing Date:		05-Oct-2004		
Title of Invention:		Toilet fill valve with adjustable bowl fill flow		
First Named Inventor/Applicant Name:		Michael J. Schuster		
Filer:		Michael D Aurelio/Rhonda Zaffino		
Attorney Docket Number:		171901-1031		
Filed as Small Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Notice of appeal	2401	1	270	270
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension - 3 months with \$0 paid	2253	1	555	555
Miscellaneous:				
Total in USD (\$)				825

Electronic Acknowledgement Receipt	
EFS ID:	6336661
Application Number:	10958797
International Application Number:	
Confirmation Number:	1704
Title of Invention:	Toilet fill valve with adjustable bowl fill flow
First Named Inventor/Applicant Name:	Michael J. Schuster
Customer Number:	24504
Filer:	Michael D Aurelio/Rhonda Zaffino
Filer Authorized By:	Michael D Aurelio
Attorney Docket Number:	171901-1031
Receipt Date:	27-OCT-2009
Filing Date:	05-OCT-2004
Time Stamp:	13:15:50
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$825
RAM confirmation Number	8824
Deposit Account	
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
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1	Notice of Appeal Filed	01041227.PDF	62488 5ce47ca015da0a82418fa197d342fa2619fe4db6	no	1
Warnings:					
Information:					
2	Extension of Time	01041210.PDF	126706 7f3c70481c280638232322017dc657bd59475927	no	1
Warnings:					
Information:					
3	Fee Worksheet (PTO-875)	fee-info.pdf	31923 d547274361d82b4ecf55f07df7dc9d59383890ec	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			221117		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					



UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/958,797	10/05/2004	Michael J. Schuster	171901-1031	1704
24504 7590 04/28/2009 THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP 600 GALLERIA PARKWAY, S.E. STE 1500 ATLANTA, GA 30339-5994			EXAMINER NGUYEN, TUAN N	
			ART UNIT 3751	PAPER NUMBER
			MAIL DATE 04/28/2009	DELIVERY MODE PAPER

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

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

Office Action Summary	Application No.	Applicant(s)	
	10/958,797	SCHUSTER ET AL.	
	Examiner	Art Unit	
	Tuan N. Nguyen	3751	

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

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

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

Status

1) ☒ Responsive to communication(s) filed on 23 January 2009.

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

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

Disposition of Claims

4) ☒ Claim(s) 19-25 is/are pending in the application.

 4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 19-25 is/are rejected.

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

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

Application Papers

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

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

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

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

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

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

a) ☐ All b) ☐ Some * c) ☐ None of:

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

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

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

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

Attachment(s)

1) ☐ Notice of References Cited (PTO-892) 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.	4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____. 5) ☐ Notice of Informal Patent Application 6) ☐ Other: _____.
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DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 2/20/08 have been fully considered but they are not persuasive as indicated in the rejection below. Applicant's argument against the Horad and DeMarco references are fully speculation. Applicant does not offer any evidence to support such speculation. However, the configuration of the coupling between the integrally molded bowl fill valve inlet port and the integrally molded bowl fill outlet port is met by the Horad inlet port (where 76 is mounted thereto, see Fig. 5) and outlet port (the end where 54 is pointing to where 76 is mounted thereto, see Fig. 5) which are integrally molded with its bowl fill valve; it is also met by the DeMarco inlet port (where 43 is pointing and where 44 is mounted thereto, see Fig. 2) and outlet port (where 45 is pointing to and where 46 is mounted thereto, see Fig. 2) which are integrally molded with its bowl fill valve.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 19 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horad (as discussed in the previous office action).

The configuration of the coupling between the integrally molded bowl fill valve inlet port and the integrally molded bowl fill outlet port as claimed is met by the Horad

inlet port (where 76 is mounted thereto, see Fig. 5) and outlet port (the end where 54 is pointing to where 76 is mounted thereto, see Fig. 5) which are integrally molded with its bowl fill valve

4. Claims 19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeMarco (as discussed in the previous office action).

The DeMarco inlet port (where 43 is pointing and where 44 is mounted thereto, see Fig. 2) and outlet port (where 45 is pointing to and where 46 is mounted thereto, see Fig. 2) which are integrally molded with its bowl fill valve. Claims 20 and 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over either one of DeMarco or Horad in view of either one of Robinson et al., Bjerke, or Mueller et al as set forth in the previous office action.

Double Patenting

5. 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 obviousness-type 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); and *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 a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 19-25 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-10 of U.S. Patent No. 6,823,889 in view of Horad or DeMarco. Claims 19-25 different from claims 1-10 of U.S. Patent No. 6,823,889 in that the bowl fill valve inlet port is coupling to the bowl fill outlet port instead of integrally connected thereto as set forth in the parent patent. However, that deficiency is taught by Horad and DeMarco as discussed in the respond to argument and rejections above, which can obviously be incorporated to the claimed invention of claims 1-10 of U.S. Patent No. 6,823,889.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan N. Nguyen whose telephone number is 571-272-4892. The examiner can normally be reached on Monday-Friday (10:00-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Huson can be reached on (571) 272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TN

/Tuan Nguyen/
Primary Examiner, Art Unit 3751

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of:

Confirmation: 1704

Michael J. Schuster et al.

Art Unit: 3751

Application Number: 10/958,797

Examiner: Nguyen, Tuan N.

Filing Date: October 5, 2004

Docket No.: 171901-1031

Title: **TOILET FILL VALVE WITH ADJUSTABLE BOWL FILL FLOW**

RESPONSE TO OFFICE ACTION OF JULY 25, 2008

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In regard to the outstanding Office Action mailed on July 25, 2008, the following Response is submitted. Consideration of the remarks and amendments contained herein is respectfully requested.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required therefor (including fees for net addition of claims) are hereby authorized to be charged to Deposit Account No. 20-0778.

Please amend the application as follows:

IN THE CLAIMS:

1-18. (Canceled)

19. (Currently Amended) A method for providing an adjustable bowl fill water flow in a toilet fill valve, comprising the steps of:

operatively coupling an integrally molded bowl fill outlet port to a water inlet of the toilet fill valve;

radially extending the integrally molded bowl fill outlet port from a portion of a body of the toilet fill valve, the integrally molded bowl fill outlet port comprising an integrally molded portion of the body of the toilet fill valve; ~~and~~

coupling an integrally molded bowl fill valve inlet port comprising an integrally molded portion of a bowl fill valve directly to the integrally molded bowl fill outlet port by establishing direct contact between the integrally molded bowl fill outlet port and the integrally molded bowl fill valve inlet port, the integrally molded bowl fill valve inlet port being compatible with the integrally molded bowl fill outlet port, the integrally molded bowl fill valve being configured to provide for the adjustable bowl fill water flow out a bowl fill valve outlet port of the integrally molded bowl fill valve for filling a toilet bowl during a flush cycle of a toilet; and

providing for a configuration of the coupling between the integrally molded bowl fill valve inlet port and the integrally molded bowl fill outlet port that withstands a repeated pressure head created at the integrally molded bowl fill valve inlet port during a life cycle of the toilet fill valve without separation.

20. (Previously Presented) The method of claim 19, wherein the step of coupling of the integrally molded bowl fill valve inlet port of the bowl fill valve directly to the integrally molded bowl fill outlet port further comprises the step of mating a rib with a groove, thereby preventing rotation of the bowl fill valve with respect to the integrally molded bowl fill outlet port.

21. (Previously Presented) The method of claim 19, wherein the step of coupling of the integrally molded bowl fill valve inlet port of the bowl fill valve directly to the integrally molded bowl fill outlet port further comprises the step of mating an annular protrusion with an annular groove, thereby affixing the bowl fill valve to the integrally molded bowl fill outlet port.

22. (Previously Presented) The method of claim 19, wherein the step of coupling of the integrally molded bowl fill valve inlet port of the bowl fill valve directly to the integrally molded bowl fill outlet port further comprises the step of mating at least one locking ear with a corresponding at least one locking groove, respectively, the at least one locking ear being situated in a locking position of the at least one locking groove.

23. (Previously Presented) The method of claim 22, further comprising the step of clamping a sealing ring between a portion of the integrally molded bowl fill valve inlet port and a portion of the integrally molded bowl fill outlet port.

24. (Previously Presented) The method of claim 19, wherein the step of coupling of the integrally molded bowl fill valve inlet port of the bowl fill valve directly to the integrally molded bowl fill outlet port further comprises the step of mating a first thread associated with the integrally molded bowl fill outlet port with a second thread associated with the integrally molded bowl fill valve inlet port, wherein the integrally molded bowl fill valve inlet port is coupled to the integrally molded bowl fill outlet port via the first and second threads.

25. (Previously Presented) The method of claim 24, further comprising the step of clamping a sealing ring between a portion of the integrally molded bowl fill valve inlet port and a portion of the integrally molded bowl fill outlet port.

26. (Canceled)

REMARKS

Upon entry of this Response, claims 19-25 remain pending in the present patent application. Claim 19 has been amended. Applicants request reconsideration of the pending claims in view of the following remarks.

To begin, in item 3 of the Office Action, claims 19 and 24 have been rejected under 35 USC § 103(a) as being allegedly unpatentable over US Patent 5,715,860 issued to Horad (hereafter "*Horad*"). A prima facie case of obviousness is established only when the prior art teaches or suggests all of the elements of the claims. *MPEP* §2143.03, *In re Rijckaert*, 9 F.3d 1531, 28 U.S.P.Q2d 1955, 1956 (Fed. Cir. 1993). For the reasons that follow, Applicant requests that the rejection of these claims be withdrawn.

To begin, claim 19 as amended recites as follows:

19. A method for providing an adjustable bowl fill water flow in a toilet fill valve, comprising the steps of:
operatively coupling an integrally molded bowl fill outlet port to a water inlet of the toilet fill valve;
radially extending the integrally molded bowl fill outlet port from a portion of a body of the toilet fill valve, the integrally molded bowl fill outlet port comprising an integrally molded portion of the body of the toilet fill valve; ~~and~~
coupling an integrally molded bowl fill valve inlet port comprising an integrally molded portion of a bowl fill valve directly to the integrally molded bowl fill outlet port by establishing direct contact between the integrally molded bowl fill outlet port and the integrally molded bowl fill valve inlet port, the integrally molded bowl fill valve inlet port being compatible with the integrally molded bowl fill outlet port, the integrally molded bowl fill valve being configured to provide for the adjustable bowl fill water flow out a bowl fill valve outlet port of the integrally molded bowl fill valve for filling a toilet bowl during a flush cycle of a toilet; and
providing for a configuration of the coupling between the integrally molded bowl fill valve inlet port and the integrally molded bowl fill outlet port that withstands a repeated pressure head created at the integrally molded bowl fill valve inlet port during a life cycle of the toilet fill valve without separation.

With respect to claim 19, the Office Action states:

Horad discloses the claimed invention except for the bowl fill outlet port, the inlet port, and a portion of the toilet fill valve being

integrally molded. It would have been obvious to one having ordinary skill in the art at the time the invention was made to integrally mold forming those parts as claimed, since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893).

Office Action, page 2.

Applicant respectfully asserts that *Horad* fails to show or suggest each of the elements of claim 19 as amended. Claim 19 specifies that the configuration of the coupling between the integrally molded bowl fill valve inlet port and the integrally molded bowl fill outlet port withstands a repeated pressure head created at the integrally molded bowl fill valve inlet port during a life cycle of the toilet fill valve without separation. Applicants assert that *Horad* fails to show or suggest at least this element. Specifically, over time, the buildup of a pressure head in a hose, such as the hose 18 of *Horad*, will cause an end of the hose to work off of one of the nipples to which the hose is attached. This is especially the case given that hoses may become brittle over time, thereby increasing the probability that a given hose will work off of the nipples to which it is attached.

If the hose 18 works itself off of the toilet fill valve as described by *Horad*, then there will be no bowl fill water flow while the toilet tank fills at the end of a flush cycle. This would result in a relatively empty toilet bowl allowing sewage gases to back up through the trap of the toilet and into the environment around the toilet. Also, the resulting lower amount of water in the toilet bowl increases the likelihood that the toilet will become clogged during the next flush. Further, while the tank refills, the water that exits out of the bowl fill nipple of the toilet fill valve or a loose end of a hose attached to the nipple may spray over the sides of the toilet tank under the lid. This can result in serious water damage to a dwelling or other site. This might result in financial liability for a plumbing contractor that installed the fill valve.

Further, the linkage between the between the integrally molded bowl fill outlet port and the integrally molded bowl fill valve inlet port is not susceptible to being loosened due to vibration that may be imparted to a toilet fill valve each time a toilet is flushed. Such vibration may result from the flow of water and other mechanical

vibration associated with the operation of the toilet fill valve. Also, during maintenance of the equipment within a toilet tank, it is possible that an individual may bump or otherwise move the bowl fill valve and cause additional movement of the hose 18 relative to the nipples, thereby further encouraging separation of the hose from the nipples. Such movement is exasperated as hoses become brittle over time.

Further, Applicants assert that *Horad* teaches away from attaching the integrally molded bowl fill outlet port and the integrally molded bowl fill valve inlet port. Specifically, *Horad* appears to assume that the hose linkage will withstand the repeated pressure head created in the hose from the repeated cycling of the fill valve. As a consequence, one is led to believe that eventual separation of the hose from the respective nipple is not a concern. Thus, one is not motivated in light of *Horad* to integrate the bowl fill valve with the toilet fill valve.

Accordingly, for the foregoing reasons, Applicant respectfully asserts that *Horad* fails to show or suggest each of the elements of claim 19 as amended above. In addition, Applicant requests that the rejection of claims 20-25 be withdrawn as depending from claim 19.

Next, in item 4 of the Office Action, claims 19 and 21 have been rejected under 35 USC § 103(a) as being allegedly unpatentable over US Patent 5,708,991 issued to DeMarco (hereafter "*DeMarco*"). A prima facie case of obviousness is established only when the prior art teaches or suggests all of the elements of the claims. MPEP §2143.03, *In re Rijckaert*, 9 F.3d 1531, 28 U.S.P.Q2d 1955, 1956 (Fed. Cir. 1993). For the reasons that follow, Applicant respectfully requests that the rejection of these claims be withdrawn.

As mentioned above, claim 19 has been amended to recite that the configuration of the coupling between the integrally molded bowl fill valve inlet port and the integrally molded bowl fill outlet port withstands a repeated pressure head created at the integrally molded bowl fill valve inlet port during a life cycle of the toilet fill valve without separation. Applicant asserts that the same reasoning set forth above with respect to *Horad* applies equally to the rejection of claims 19 and 21 in view of *DeMarco* given that the "member 22" as described by *DeMarco* is a hose. Specifically, in column 3, line 23, *DeMarco* identifies the "member 22" as a "reseal hose." Accordingly, *DeMarco*

essentially shows the same structure as described by *Horad*. Thus, Applicant asserts that *DeMarco* fails to show or suggest each of the elements of independent claim 19 as amended for the same reasons described above with respect to *Horad*. Also, Applicant requests that the rejection of claim 21 be withdrawn as depending from claim 19.

Finally, in item 6 of the Office Action, claims 20 and 22-25 have been rejected under 35 USC § 103(a) as being unpatentable over either one of *DeMarco* or *Horad* in view of either one of US Patent 6,409,221 issued to *Robinson et al.*, US Patent 5,926,868 issued to *Bjerke*, or US Patent 5,624,073 issued to *Mueller et al.* A prima facie case of obviousness is established only when the prior art teaches or suggests all of the elements of the claims. MPEP §2143.03, In re Rijckaert, 9 F.3d 1531, 28 U.S.P.Q2d 1955, 1956 (Fed. Cir. 1993). Applicant notes that claims 20 and 22-25 depend from claim 19. Accordingly, Applicant respectfully asserts that the cited combination of references fails to show or suggest each of the elements of claims 20 and 22-25 as depending from either claim 19 for at least the reasons set forth above. Accordingly, Applicant requests that the rejection of claims 20 and 22-25 be withdrawn.

Finally, the Examiner is invited to call the undersigned if the Examiner believes that a telephonic interview would expedite the earliest issuance of the present application.

CONCLUSION

It is requested that all outstanding objections and rejections be withdrawn and that this application and all presently pending claims be allowed to issue. If the Examiner has any questions or comments regarding this Response, the Examiner is encouraged to telephone the undersigned counsel of Applicants.

Respectfully submitted,

/Michael J. D'Aurelio/

Michael J. D'Aurelio
Registration Number: 40,977

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Electronic Patent Application Fee Transmittal				
Application Number:		10958797		
Filing Date:		05-Oct-2004		
Title of Invention:		Toilet fill valve with adjustable bowl fill flow		
First Named Inventor/Applicant Name:		Michael J. Schuster		
Filer:		Michael D Aurelio/Rhonda Zaffino		
Attorney Docket Number:		171901-1031		
Filed as Small Entity				
Utility under 35 USC 111(a) Filing Fees				
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:				
Extension - 3 months with \$0 paid	2253	1	555	555

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Total in USD (\$)				555

Electronic Acknowledgement Receipt	
EFS ID:	4663255
Application Number:	10958797
International Application Number:	
Confirmation Number:	1704
Title of Invention:	Toilet fill valve with adjustable bowl fill flow
First Named Inventor/Applicant Name:	Michael J. Schuster
Customer Number:	24504
Filer:	Michael D Aurelio/Rhonda Zaffino
Filer Authorized By:	Michael D Aurelio
Attorney Docket Number:	171901-1031
Receipt Date:	23-JAN-2009
Filing Date:	05-OCT-2004
Time Stamp:	13:33:32
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$555
RAM confirmation Number	8113
Deposit Account	
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
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1	Extension of Time	00851762.PDF	126716 d5d327afac77b26e66f327fd7c0d53e0df5bfc99	no	1
Warnings:					
Information:					
2	Amendment/Req. Reconsideration-After Non-Final Reject	00851932.PDF	95062 ccd53c17396e7fa779580b778078b78ba0d258b7	no	9
Warnings:					
Information:					
3	Fee Worksheet (PTO-06)	fee-info.pdf	29971 0156dba49d274c24bdc63223f88122400ea0f768	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			251749		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					

PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a) FY 2006 <i>(Fees pursuant to the Consolidated Appropriations act, 2005 (H.R. 4818).)</i>		Docket No. 171901-1031																												
Application Number: 10/958,797	Filed: October 5, 2004																													
For: Toilet Fill Valve With Adjustable Bowl Fill Flow																														
Art Unit: 3751	Examiner: Nguyen, Tuan N.																													
This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above identified application. The requested extension and fee are as follows (check time period desired and enter the appropriate fee below): <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;"></th> <th style="width: 15%; text-align: center;"><u>Fees</u></th> <th style="width: 15%; text-align: center;"><u>Small Entity</u></th> <th style="width: 30%;"></th> </tr> <tr> <th></th> <th></th> <th style="text-align: center;"><u>Fees</u></th> <th></th> </tr> </thead> <tbody> <tr> <td>☐ One month (37 CFR 1.17(a)(1))</td> <td style="text-align: center;">\$130</td> <td style="text-align: center;">\$65</td> <td style="text-align: center;">\$_____</td> </tr> <tr> <td>☐ Two months (37 CFR 1.17(a)(2))</td> <td style="text-align: center;">\$490</td> <td style="text-align: center;">\$245</td> <td style="text-align: center;">\$_____</td> </tr> <tr> <td>☒ Three months (37 CFR 1.17(a)(3))</td> <td style="text-align: center;">\$1110</td> <td style="text-align: center;">\$555</td> <td style="text-align: center;">\$<u>555.00</u></td> </tr> <tr> <td>☐ Four months (37 CFR 1.17(a)(4))</td> <td style="text-align: center;">\$1730</td> <td style="text-align: center;">\$865</td> <td style="text-align: center;">\$_____</td> </tr> <tr> <td>☐ Five months (37 CFR 1.17(a)(5))</td> <td style="text-align: center;">\$2350</td> <td style="text-align: center;">\$1175</td> <td style="text-align: center;">\$_____</td> </tr> </tbody> </table> ☒ Applicant claims small entity status. See 37 CFR 1.27 ☐ A check in the amount of the fee is enclosed. ☒ Payment by credit card. ☐ The Director has already been authorized to charge fees in this application to a Deposit Account. ☒ The Commissioner is hereby authorized to charge any deficiencies in fees which may be required, or credit any overpayment to Deposit Account No. 20-0778.				<u>Fees</u>	<u>Small Entity</u>				<u>Fees</u>		☐ One month (37 CFR 1.17(a)(1))	\$130	\$65	\$_____	☐ Two months (37 CFR 1.17(a)(2))	\$490	\$245	\$_____	☒ Three months (37 CFR 1.17(a)(3))	\$1110	\$555	\$ <u>555.00</u>	☐ Four months (37 CFR 1.17(a)(4))	\$1730	\$865	\$_____	☐ Five months (37 CFR 1.17(a)(5))	\$2350	\$1175	\$_____
	<u>Fees</u>	<u>Small Entity</u>																												
		<u>Fees</u>																												
☐ One month (37 CFR 1.17(a)(1))	\$130	\$65	\$_____																											
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☒ Three months (37 CFR 1.17(a)(3))	\$1110	\$555	\$ <u>555.00</u>																											
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☐ Five months (37 CFR 1.17(a)(5))	\$2350	\$1175	\$_____																											
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. I am the ☐ applicant/inventor. ☐ assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed (Form PTO/SB/96). ☒ attorney or agent of record. Registration Number: 40,977 ☐ attorney or agent under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34: _____																														
/Michael J. D'Aurelio/ Michael J. D'Aurelio, Reg. No. 40,977	January 23, 2009 _____ Date 770-933-9500 _____ Telephone Number																													

The collection of information is required by CFR 1.136(a). 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 USC 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 6 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, US Patent and Trademark Office, US Department of Commerce, PO Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, PO Box 1450 Alexandria, VA 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.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875					Application or Docket Number 10/958,797		Filing Date 10/05/2004		☐ To be Mailed	
APPLICATION AS FILED – PART I										
(Column 1)			(Column 2)			SMALL ENTITY ☒ OR		OTHER THAN SMALL ENTITY		
FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)	OR	RATE (\$)	FEE (\$)			
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A				
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A				
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A				
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X \$ =		OR	X \$ =				
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X \$ =			X \$ =				
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 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			TOTAL							
APPLICATION AS AMENDED – PART II										
(Column 1)			(Column 2)			SMALL ENTITY OR		OTHER THAN SMALL ENTITY		
AMENDMENT	01/23/2009	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR	RATE (\$)	ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	* 7	Minus	** 20	= 0	X \$26 =	0	OR	X \$ =	
	Independent (37 CFR 1.16(h))	* 1	Minus	*** 3	= 0	X \$110 =	0	OR	X \$ =	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))									
						TOTAL ADD'L FEE	0	OR	TOTAL ADD'L FEE	
AMENDMENT	Total (37 CFR 1.16(i))	*	Minus	**	=	X \$ =		OR	X \$ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X \$ =		OR	X \$ =	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))									
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.										

Legal Instrument Examiner:
/KIMBERLY COOPER/

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.**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/958,797	10/05/2004	Michael J. Schuster	171901-1031	1704
24504 7590 07/25/2008 THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP 600 GALLERIA PARKWAY, S.E. STE 1500 ATLANTA, GA 30339-5994			EXAMINER NGUYEN, TUAN N	
			ART UNIT 3751	PAPER NUMBER
			MAIL DATE 07/25/2008	DELIVERY MODE PAPER

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

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

Office Action Summary	Application No.	Applicant(s)	
	10/958,797	SCHUSTER ET AL.	
	Examiner	Art Unit	
	Tuan N. Nguyen	3751	

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

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on 08 July 2008.

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

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

Disposition of Claims

4) ☒ Claim(s) 19-25 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 19-25 is/are rejected.

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

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

Application Papers

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

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

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

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

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

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

a) ☐ All b) ☐ Some * c) ☐ None of:

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

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

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

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

Attachment(s)

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

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

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

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 7/8/08 have been fully considered but they are not persuasive as indicated in the rejection below.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 19 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horad (as discussed in the previous office action).

Horad discloses the claimed invention except for the bowl fill outlet port, the inlet port, and a portion of body of the toilet fill valve being integrally molded. It would have been obvious to one having ordinary skill in the art at the time the invention was made to integrally mold forming those parts as claimed, since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893).

4. Claims 19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeMarco (as discussed in the previous office action).

DeMarco discloses the claimed invention except for the bowl fill outlet port, the inlet port, and a portion of body of the toilet fill valve being integrally molded. It would have been obvious to one having ordinary skill in the art at the time the invention was

made to integrally mold forming those parts as claimed, since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893).

5. Claims 20 and 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over either one of DeMarco or Horad in view of either one of Robinson et al., Bjerke, or Mueller et al as set forth in the previous office action.

Double Patenting

6. 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 obviousness-type 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); and *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 a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 19-25 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-10 of U.S. Patent No. 6,823,889 in view of Horad or DeMarco. Claims 19-25 different from claims 1-10 of U.S. Patent

No. 6,823,889 in that the bowl fill valve inlet port is coupling to the bowl fill outlet port instead of integrally connected thereto as set forth in the parent patent. However, that deficiency is taught by Horad and DeMarco as discussed in the respond to argument and rejections above, which can obviously be incorporated to the claimed invention of claims 1-10 of U.S. Patent No. 6,823,889.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan N. Nguyen whose telephone number is 571-272-4892. The examiner can normally be reached on Monday-Friday (10:00-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Huson can be reached on (571) 272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tuan Nguyen/
Primary Examiner, Art Unit 3751

TN

REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL **(Submitted Only via EFS-Web)**

Application Number	10958797	Filing Date	2004-10-05	Docket Number (if applicable)	171901-1031	Art Unit	3751
First Named Inventor	Michael J. Schuster et al.			Examiner Name	Nguyen, Tuan N.		

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.

Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV

SUBMISSION REQUIRED UNDER 37 CFR 1.114

Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

☐ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____

☐ Other _____

☒ Enclosed

☒ Amendment/Reply

☐ Information Disclosure Statement (IDS)

☐ Affidavit(s)/ Declaration(s)

☐ Other _____

MISCELLANEOUS

☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months _____
 (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

☒ Other _____
 Petition for Two-Month Extension of Time

FEES

The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.

☒ The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to
 Deposit Account No 200778

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

☒ Patent Practitioner Signature

☐ Applicant Signature

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.

Signature of Registered U.S. Patent Practitioner			
Signature	/Michael J. D'Aurelio/	Date (YYYY-MM-DD)	2008-07-08
Name	Michael J. D'Aurelio	Registration Number	40977

This collection of information is required by 37 CFR 1.114. 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.

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 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.

PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a) FY 2006 <i>(Fees pursuant to the Consolidated Appropriations act, 2005 (H.R. 4818).)</i>		Docket No. 171901-1031
Application Number: 10/958,797	Filed: October 5, 2004	
For: Toilet Fill Valve With Adjustable Bowl Fill Flow		
Art Unit: 3751	Examiner: Nguyen, Tuan N.	
This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above identified application.		
The requested extension and fee are as follows (check time period desired and enter the appropriate fee below):		
	<u>Fees</u>	<u>Small Entity</u>
		<u>Fees</u>
☐ One month (37 CFR 1.17(a)(1))	\$120	\$60 \$_____
☒ Two months (37 CFR 1.17(a)(2))	\$460	\$230 <u>\$230.00</u>
☐ Three months (37 CFR 1.17(a)(3))	\$1050	\$525 \$_____
☐ Four months (37 CFR 1.17(a)(4))	\$1640	\$820 \$_____
☐ Five months (37 CFR 1.17(a)(5))	\$2230	\$1115 \$_____
☒ Applicant claims small entity status. See 37 CFR 1.27		
☐ A check in the amount of the fee is enclosed.		
☒ Payment by credit card.		
☐ The Director has already been authorized to charge fees in this application to a Deposit Account.		
☒ The Commissioner is hereby authorized to charge any deficiencies in fees which may be required, or credit any overpayment to Deposit Account No. 20-0778.		
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.		
I am the		
☐ applicant/inventor.		
☐ assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed (Form PTO/SB/96).		
☒ attorney or agent of record. Registration Number: 40,977		
☐ attorney or agent under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34:		
_____ /Michael J. D'Aurelio/ Michael J. D'Aurelio, Reg. No. 40,977	_____ July 8, 2008 Date _____ 770-933-9500 Telephone Number	

The collection of information is required by CFR 1.136(a). 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 USC 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 6 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, US Patent and Trademark Office, US Department of Commerce, PO Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, PO Box 1450 Alexandria, VA 22313-1450.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of:

Confirmation: 1704

Michael J. Schuster et al.

Art Unit: 3751

Application Number: 10/958,797

Examiner: Nguyen, Tuan N.

Filing Date: October 5, 2004

Docket No.: 171901-1031

Title: **TOILET FILL VALVE WITH ADJUSTABLE BOWL FILL FLOW**

RESPONSE TO FINAL OFFICE ACTION OF FEBRUARY 20, 2008

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In regard to the outstanding final Office Action mailed on February 20, 2008, the following Response is submitted. Consideration of the remarks and amendments contained herein is respectfully requested. In accordance with 37 U.S.C. §1.114, a Request for Continued Examination is filed concurrently with this Response to the final Office Action.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required therefor (including fees for net addition of claims) are hereby authorized to be charged to Deposit Account No. 20-0778.

Please amend the application as follows:

IN THE CLAIMS:

1-18. (Canceled)

19. (Currently Amended) A method for providing an adjustable bowl fill water flow in a toilet fill valve, comprising the steps of:

operatively coupling ~~a~~ an integrally molded bowl fill outlet port to a water inlet of the toilet fill valve;

radially extending the integrally molded bowl fill outlet port from a portion of a body of the toilet fill valve, the integrally molded bowl fill outlet port comprising an integrally molded portion of the body of the toilet fill valve; and

coupling ~~a~~ an integrally molded bowl fill valve inlet port comprising an integrally molded portion of a bowl fill valve directly to the integrally molded bowl fill outlet port by establishing direct contact between the integrally molded bowl fill outlet port and the integrally molded bowl fill valve inlet port, the integrally molded bowl fill valve inlet port being compatible with the integrally molded bowl fill outlet port, the integrally molded bowl fill valve being configured to provide for the adjustable bowl fill water flow out a bowl fill valve outlet port of the integrally molded bowl fill valve for filling a toilet bowl during a flush cycle of a toilet.

20. (Currently Amended) The method of claim 19, wherein the step of coupling of the integrally molded bowl fill valve inlet port of the bowl fill valve directly to the integrally molded bowl fill outlet port further comprises the step of mating a rib with a groove, thereby preventing rotation of the bowl fill valve with respect to the integrally molded bowl fill outlet port.

21. (Currently Amended) The method of claim 19, wherein the step of coupling of the integrally molded bowl fill valve inlet port of the bowl fill valve directly to the integrally molded bowl fill outlet port further comprises the step of mating an annular protrusion with an annular groove, thereby affixing the bowl fill valve to the integrally molded bowl fill outlet port.

22. (Currently Amended) The method of claim 19, wherein the step of coupling of the integrally molded bowl fill valve inlet port of the bowl fill valve directly to the integrally molded bowl fill outlet port further comprises the step of mating at least one locking ear with a corresponding at least one locking groove, respectively, the at least one locking ear being situated in a locking position of the at least one locking groove.

23. (Currently Amended) The method of claim 22, further comprising the step of clamping a sealing ring between a portion of the integrally molded bowl fill valve inlet port and a portion of the integrally molded bowl fill outlet port.

24. (Currently Amended) The method of claim 19, wherein the step of coupling of the integrally molded bowl fill valve inlet port of the bowl fill valve directly to the integrally molded bowl fill outlet port further comprises the step of mating a first thread associated with the integrally molded bowl fill outlet port with a second thread associated with the integrally molded bowl fill valve inlet port, wherein the integrally molded bowl fill valve inlet port is coupled to the integrally molded bowl fill outlet port via the first and second threads.

25. (Currently Amended) The method of claim 24, further comprising the step of clamping a sealing ring between a portion of the integrally molded bowl fill valve inlet port and a portion of the integrally molded bowl fill outlet port.

26. (Canceled)

REMARKS

Upon entry of this Response, claims 19-25 remain pending in the present patent application. Claims 1-18 and 26 have been canceled, and claims 19-25 have been amended. Applicants expressly reserve the right to pursue the subject matter of claims 1-18 and 26 in a continuation or divisional application. Applicants request reconsideration of the pending claims in view of the following remarks.

To begin, in item 4 of the Office Action, claims 19 and 24 have been rejected under 35 USC § 102(b) as being anticipated by US Patent 5,715,860 issued to Horad (hereafter "*Horad*"). Anticipation under §102 "requires the disclosure in a single prior art reference of each element of the claim under construction." W.L. Gore & Associates, Inc. v. Garlock, Inc., 220 USPQ 303, 313 (Fed. Cir. 1983). For the reasons that follow, Applicant requests that the rejection of these claims be withdrawn.

To begin, claim 19 as amended recites as follows:

19. A method for providing an adjustable bowl fill water flow in a toilet fill valve, comprising the steps of:
operatively coupling ~~a~~ an integrally molded bowl fill outlet port to a water inlet of the toilet fill valve;
radially extending the integrally molded bowl fill outlet port from a portion of a body of the toilet fill valve, the integrally molded bowl fill outlet port comprising an integrally molded portion of the body of the toilet fill valve; and
coupling ~~a~~ an integrally molded bowl fill valve inlet port comprising an integrally molded portion of a bowl fill valve directly to the integrally molded bowl fill outlet port by establishing direct contact between the integrally molded bowl fill outlet port and the integrally molded bowl fill valve inlet port, the integrally molded bowl fill valve inlet port being compatible with the integrally molded bowl fill outlet port, the integrally molded bowl fill valve being configured to provide for the adjustable bowl fill water flow out a bowl fill valve outlet port of the integrally molded bowl fill valve for filling a toilet bowl during a flush cycle of a toilet.

With respect to claim 19, the Office Action states:

Horad discloses a toilet fill valve (Fig. 1) comprising a water inlet; a first water outlet configured to supply water to a toilet tank; a bowl fill outlet port-radially extending from a portion of a body of the toilet fill valve, the bowl fill outlet port being operatively coupled to the water inlet; a bowl fill valve (40) having a bowl fill valve inlet port and a bowl fill valve outlet port, wherein the bowl fill valve inlet port is compatible with the bowl fill outlet

port and the bowl fill valve inlet port being coupled to the bowl fill outlet port; a hose (22) having a first end attached to the bowl fill valve outlet port and a second end directed into an overflow hose in the toilet tank, wherein a flow of water into the overflow hose is directed to a toilet bowl of the toilet; and the bowl fill valve being configured to supply an adjustable flow of water out the bowl fill outlet port for filling a toilet bowl during a flush cycle of a toilet. The bowl fill valve extends beyond the bowl fill outlet port in a radial direction with respect to a portion of the body of the toilet fill valve. The bowl fill outlet port (18) further comprises a female receptacle; and the bowl fill valve inlet port further comprises a male end compatible with the female receptacle. The bowl fill valve inlet port further comprises a female receptacle (about 31); and the bowl fill outlet port further comprises a male end (about 76) compatible with the female receptacle. The toilet fill valve further comprises a float (17); an actuating arm coupled to the float, the actuating arm radially extending in an orthogonal direction relative to a longitudinal axis of the toilet fill valve; and the bowl fill valve extending in an orthogonal direction relative to the longitudinal axis of the toilet fill valve, wherein the actuating arm is angularly offset relative to the bowl fill valve, thereby preventing an interference with the bowl fill valve and a translational stem extending from the float to a free end of the actuating arm. The bowl fill valve outlet port further comprises a nipple (see Fig. 2) adapted to mate with an end of a hose (22). The bowl fill valve further comprises a number of biased positions that is rotatable to select different flow rate output. The toilet fill valve further comprises a first thread on a side wall of the bowl fill outlet port (about 76); and a second thread on a side, wall of the bowl fill valve inlet port, wherein the bowl fill valve inlet port is coupled to the bowl fill outlet port via the first and second threads. The method as claimed would be inherent during normal assembly of the Horad device.

Office Action, pages 2-4.

Applicant respectfully asserts that *Horad* fails to show or suggest each of the elements of claim 19 as amended. Claim 19 specifies that the bowl fill outlet port is an integrally molded portion of the body of the toilet fill valve. Also, claim 19 specifies that the bowl fill valve inlet port is an integrally molded portion of the bowl fill valve. Further, claim 19 specifies the step of directly coupling the integrally molded bowl fill outlet port to the integrally molded bowl fill valve inlet port by establishing direct contact between the respective integrally molded ports. Further, claim 19 specifies that the integrally molded bowl fill valve inlet port is compatible with the integrally molded bowl fill outlet port.

As mentioned in prior responses, one advantage of the linkage between the integrally molded bowl fill outlet port and the integrally molded bowl fill valve inlet port is that any pressure head developed at the integrally molded bowl fill valve inlet port will not cause the separation of the linkage. This is in contrast with the configuration depicted in *Horad*. Specifically, over time, the buildup of a pressure head in a hose, such as the hose 18 of *Horad*, will cause an end of the hose to work off of one of the nipples to which the hose is attached. This is especially the case given that hoses may become brittle over time, thereby increasing the probability that a given hose will work off of the nipples to which it is attached.

If the hose 18 works itself off of the toilet fill valve as described by *Horad*, then there will be no bowl fill water flow while the toilet tank fills at the end of a flush cycle. This would result in a relatively empty toilet bowl allowing sewage gases to back up through the trap of the toilet and into the environment around the toilet. Also, the resulting lower amount of water in the toilet bowl increases the likelihood that the toilet will become clogged during the next flush. Further, while the tank refills, the water that exits out of the bowl fill nipple of the toilet fill valve or a loose end of a hose attached to the nipple may spray over the sides of the toilet tank under the lid. This can result in serious water damage to a dwelling or other site. This might result in financial liability for a plumbing contractor that installed the fill valve.

Further, the linkage between the between the integrally molded bowl fill outlet port and the integrally molded bowl fill valve inlet port is not susceptible to being loosened due to vibration that may be imparted to a toilet fill valve each time a toilet is flushed. Such vibration may result from the flow of water and other mechanical vibration associated with the operation of the toilet fill valve. Also, during maintenance of the equipment within a toilet tank, it is possible that an individual may bump or otherwise move the bowl fill valve and cause additional movement of the hose 18 relative to the nipples, thereby further encouraging separation of the hose from the nipples. Such movement is exasperated as hoses become brittle over time.

In addition, in response to the arguments presented in Applicants prior Response, the Office Action states:

With respect to the applicant's argument against claim 19 that the "valve inlet port of the bowl fill valve is directly coupled to the bowl fill outlet port of the toilet fill valve, the examiner disagrees with the applicant's interpretation of the references due to the fact that the examiner considers the outlet of the hose, where valve inlet port of the bowl fill valve is directly coupled, is the bowl fill outlet port. Since the claims fail to set forth the specific structures to distinguish therefrom, the examiner's interpretation is within reason given the broadest reasonable interpretation of the applied reference.

Office Action, page 2.

Applicants note that claim 19 has been amended above, thereby reciting the specific structures that distinguish from the cited references for the reasons set forth above.

Accordingly, for the foregoing reasons, Applicant respectfully asserts that *Horad* fails to show or suggest each of the elements of claim 19 as amended above. In addition, Applicant requests that the rejection of claims 20-25 be withdrawn as depending from claim 19.

Next, in item 4 of the Office Action, claims 19 and 21 have been rejected under 35 USC § 102(b) as allegedly being anticipated by US Patent 5,708,991 issued to DeMarco (hereafter "*DeMarco*"). Anticipation under §102 "requires the disclosure in a single prior art reference of each element of the claim under construction." W.L. Gore & Associates, Inc. v. Garlock, Inc., 220 USPQ 303, 313 (Fed. Cir. 1983). Claim 21 has been amended so as to be compatible with the amendments to claim 19. For the reasons that follow, Applicant respectfully requests that the rejection of this claim be withdrawn.

Applicant notes that, as depicted by *DeMarco*, a bowl fill valve 36 is coupled to a fill valve 18 by way of a hose 22. With respect to this structure, the office action states:

The bowl fill valve extends beyond the bowl fill outlet port in a radial direction with respect to a portion of the body of the toilet fill valve. The bowl fill outlet port further comprises a female receptacle (the right side of the left member 22 of Fig. 1); and the bowl fill valve inlet port (about 44) further comprises a male end compatible with the female receptacle. The bowl fill valve inlet port further comprises a female receptacle (the left side of the left member 22 of Fig. 1); and the bowl fill outlet port further comprises a male end (see Fig. 1) compatible with the female receptacle.

Office Action, pages 4-5.

Applicant respectfully asserts ***that the “member 22” as described by DeMarco is, in fact, a hose***. Specifically, in column 3, line 23, *DeMarco* identifies the “member 22” as a “reseal hose.” Accordingly, *DeMarco* essentially shows the same structure as described by *Horad*. Thus, Applicant asserts that *DeMarco* fails to show or suggest each of the elements of independent claim 19 for the same reasons described above with respect to *Horad*. Also, Applicant requests that the rejection of claim 21 be withdrawn as depending from claim 19.

Finally, in item 6 of the Office Action, claims 20 and 22-25 have been rejected under 35 USC § 103(a) as being unpatentable over either one of *DeMarco* or *Horad* in view of either one of US Patent 6,409,221 issued to *Robinson et al.*, US Patent 5,926,868 issued to *Bjerke*, or US Patent 5,624,073 issued to *Mueller et al.* A prima facie case of obviousness is established only when the prior art teaches or suggests all of the elements of the claims. MPEP §2143.03, In re Rijckaert, 9 F.3d 1531, 28 U.S.P.Q2d 1955, 1956 (Fed. Cir. 1993). Claims 20 and 22-25 have been amended so as to be compatible with the amendments to claim 19. Applicant further notes that claims 20 and 22-25 depend from claim 19. Accordingly, Applicant respectfully asserts that the cited combination of references fails to show or suggest each of the elements of claims 20 and 22-25 as depending from either claim 19 for at least the reasons set forth above. Accordingly, Applicant requests that the rejection of claims 20 and 22-25 be withdrawn.

Finally, the Examiner is invited to call the undersigned if the Examiner believes that a telephonic interview would expedite the earliest issuance of the present application.

CONCLUSION

It is requested that all outstanding objections and rejections be withdrawn and that this application and all presently pending claims be allowed to issue. If the Examiner has any questions or comments regarding this Response, the Examiner is encouraged to telephone the undersigned counsel of Applicants.

Respectfully submitted,

/Michael J. D'Aurelio/

Michael J. D'Aurelio
Registration Number: 40,977

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Electronic Patent Application Fee Transmittal				
Application Number:		10958797		
Filing Date:		05-Oct-2004		
Title of Invention:		Toilet fill valve with adjustable bowl fill flow		
First Named Inventor/Applicant Name:		Michael J. Schuster		
Filer:		Michael D Aurelio/Rhonda Zaffino		
Attorney Docket Number:		171901-1031		
Filed as Small Entity				
Utility Filing Fees				
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:				
Extension - 2 months with \$0 paid	2252	1	230	230

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Request for continued examination	2801	1	405	405
Total in USD (\$)				635

Electronic Acknowledgement Receipt

EFS ID:	3579891
Application Number:	10958797
International Application Number:	
Confirmation Number:	1704
Title of Invention:	Toilet fill valve with adjustable bowl fill flow
First Named Inventor/Applicant Name:	Michael J. Schuster
Customer Number:	24504
Filer:	Michael D Aurelio/Rhonda Zaffino
Filer Authorized By:	Michael D Aurelio
Attorney Docket Number:	171901-1031
Receipt Date:	08-JUL-2008
Filing Date:	05-OCT-2004
Time Stamp:	12:49:02
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$ 635
RAM confirmation Number	8140
Deposit Account	
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes) /Message Digest	Multi Part /.zip	Pages (if appl.)
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1	Request for Continued Examination (RCE)	00742504.PDF	667438 5697d9b4110d105ea8ca17274a5309c85b4ceb92	no	3
Warnings:					
Information:					
2	Extension of Time	00742649.PDF	126792 0b8772f191c344e303acd4607ece0358084735a9	no	1
Warnings:					
Information:					
3	Amendment Submitted/Entered with Filing of CPA/RCE	00742653.PDF	115782 8c3547127c72d0e001717462d508aaddf17736d7	no	10
Warnings:					
Information:					
4	Fee Worksheet (PTO-06)	fee-info.pdf	8314 691223b8d4d2a2c62a8d0f66fd0a56cedf145ca	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			918326		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					

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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875					Application or Docket Number 10/958,797		Filing Date 10/05/2004		☐ To be Mailed			
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				
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))		N/A	N/A		N/A			N/A				
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))		N/A	N/A		N/A			N/A				
TOTAL CLAIMS (37 CFR 1.16(i))		minus 20 =	*		X \$ =		OR	X \$ =				
INDEPENDENT CLAIMS (37 CFR 1.16(h))		minus 3 =	*		X \$ =			X \$ =				
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))		If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 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.												
APPLICATION AS AMENDED – PART II												
(Column 1)			(Column 2)			(Column 3)			SMALL ENTITY OR		OTHER THAN SMALL ENTITY	
AMENDMENT	07/08/2008	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)		RATE (\$)	ADDITIONAL FEE (\$)		
	Total (37 CFR 1.16(o))	* 7	Minus	** 26	= 0	X \$25 =	0	OR	X \$ =			
	Independent (37 CFR 1.16(h))	* 1	Minus	*** 3	= 0	X \$105 =	0	OR	X \$ =			
	☐ Application Size Fee (37 CFR 1.16(s))											
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))											
						TOTAL ADD'L FEE	0	OR	TOTAL ADD'L FEE			
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)		RATE (\$)	ADDITIONAL FEE (\$)		
	Total (37 CFR 1.16(o))	*	Minus	**	=	X \$ =		OR	X \$ =			
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X \$ =		OR	X \$ =			
	☐ Application Size Fee (37 CFR 1.16(s))											
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))											
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE			
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.												

Legal Instrument Examiner:
/LASHAWN MORGAN/

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.**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/958,797	10/05/2004	Michael J. Schuster	171901-1031	1704
24504 7590 02/20/2008 THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP 600 GALLERIA PARKWAY, S.E. STE 1500 ATLANTA, GA 30339-5994			EXAMINER NGUYEN, TUAN N	
			ART UNIT 3751	PAPER NUMBER
			MAIL DATE 02/20/2008	DELIVERY MODE PAPER

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

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

Office Action Summary	Application No.		Applicant(s)	
	10/958,797		SCHUSTER ET AL.	
	Examiner		Art Unit	
	Tuan N. Nguyen		3751	

515

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

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

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

Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 1-18 and 26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

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

Attachment(s)

- | | |
|--|---|
| 1) ☐ Notice of References Cited (PTO-892) | 4) ☐ Interview Summary (PTO-413) |
| 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) ☒ Information Disclosure Statement(s) (PTO/SB/08) | 5) ☐ Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/16/07</u> . | 6) ☐ Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 11/16/07 have been fully considered but they are not persuasive. The amendment to claims 1 and 18 have set claims 1-18 and 26 directed to the non-elected species Fig. 1 as filed 5/4/07. Accordingly, claims 1-18 and 26 are hereby withdrawn from further consideration.
2. With respect to the applicant's argument against claim 19 that the "valve inlet port of the bowl fill valve is directly coupled to the bowl fill outlet port of the toilet fill valve, the examiner disagrees with the applicant's interpretation of the references do to the fact that the examiner considers the outlet of the hose, where valve inlet port of the bowl fill valve is directly coupled, is the bowl fill outlet port. Since the claims fail to set forth the specific structures to distinguish therefrom, the examiner's interpretation is within reason given the broadest reasonable interpretation of the applied reference.

Claim Rejections - 35 USC § 102

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

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 19 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Horad.

Horad discloses a toilet fill valve (Fig. 1) comprising a water inlet; a first water outlet configured to supply water to a toilet tank; a bowl fill outlet port-radially extending

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from a portion of a body of the toilet fill valve, the bowl fill outlet port being operatively coupled to the water inlet; a bowl fill valve (40) having a bowl fill valve inlet port and a bowl fill valve outlet port, wherein the bowl fill valve inlet port is compatible with the bowl fill outlet port and the bowl fill valve inlet port being coupled to the bowl fill outlet port; a tube (22) having a first end attached to the bowl fill valve outlet port and a second end directed into an overflow tube in the toilet tank, wherein a flow of water into the overflow tube is directed to a toilet bowl of the toilet; and the bowl fill valve being configured to supply an adjustable flow of water out the bowl fill outlet port for filling a toilet bowl during a flush cycle of a toilet. The bowl fill valve extends beyond the bowl fill outlet port in a radial direction with respect to a portion of the body of the toilet fill valve. The bowl fill outlet port (18) further comprises a female receptacle; and the bowl fill valve inlet port further comprises a male end compatible with the female receptacle. The bowl fill valve inlet port further comprises a female receptacle (about 31); and the bowl fill outlet port further comprises a male end (about 76) compatible with the female receptacle. The toilet fill valve further comprises a float (17); an actuating arm coupled to the float, the actuating arm radially extending in an orthogonal direction relative to a longitudinal axis of the toilet fill valve; and the bowl fill valve extending in an orthogonal direction relative to the longitudinal axis of the toilet fill valve, wherein the actuating arm is angularly offset relative to the bowl fill valve, thereby preventing an interference with the bowl fill valve and a translational stem extending from the float to a free end of the actuating arm. The bowl fill valve outlet port further comprises a nipple (see Fig. 2) adapted to mate with an end of a tube (22). The bowl fill valve further comprises a number of

biased positions that is rotatable to select different flow rate output. The toilet fill valve further comprises a first thread on a side wall of the bowl fill outlet port (about 76); and a second thread on a side, wall of the bowl fill valve inlet port, wherein the bowl fill valve inlet port is coupled to the bowl fill outlet port via the first and second threads. The method as claimed would be inherent during normal assembly of the Horad device.

5. Claims 19 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by DeMarco.

DeMarco discloses a toilet fill valve (Fig. 1) comprising a water inlet; a first water outlet configured to supply water to a toilet tank; a bowl fill outlet port-radially extending from a portion of a body of the toilet fill valve, the bowl fill outlet port being operatively coupled to the water inlet; a bowl fill valve (36) having a bowl fill valve inlet port and a bowl fill valve outlet port, wherein the bowl fill valve inlet port is compatible with the bowl fill outlet port and the bowl fill valve inlet port being coupled to the bowl fill outlet port; a tube (tube 22 on the right) having a first end attached to the bowl fill valve outlet port and a second end directed into an overflow tube in the toilet tank, wherein a flow of water into the overflow tube is directed to a toilet bowl of the toilet; and the bowl fill valve being configured to supply an adjustable flow of water out the bowl fill outlet port for filling a toilet bowl during a flush cycle of a toilet. The bowl fill valve extends beyond the bowl fill outlet port in a radial direction with respect to a portion of the body of the toilet fill valve. The bowl fill outlet port further comprises a female receptacle (the right side of the left member 22 of Fig. 1); and the bowl fill valve inlet port (about 44) further comprises a male end compatible with the female receptacle. The bowl fill valve inlet

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port further comprises a female receptacle (the left side of the left member 22 of Fig. 1); and the bowl fill outlet port further comprises a male end (see Fig. 1) compatible with the female receptacle. The toilet fill valve further comprises a float (34); an actuating arm (32) coupled to the float, the actuating arm radially extending in an orthogonal direction relative to a longitudinal axis of the toilet fill valve; and the bowl fill valve extending in an orthogonal direction relative to the longitudinal axis of the toilet fill valve, wherein the actuating arm is angularly offset relative to the bowl fill valve, thereby preventing an interference with the bowl fill valve and a translational stem extending from the float to a free end of the actuating arm. The bowl fill valve outlet port further comprises a nipple (about 46) adapted to mate with an end of a tube (22). The bowl fill valve further comprises a number of biased positions that is rotatable to select different flow rate output. The method as claimed would be inherent during normal assembly of the DeMarco device.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 20 and 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over either one of DeMarco or Horad in view of either one of Robinson et al., Bjerke, or Mueller et al.

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The above claims are readable on either one of DeMarco or Horad with the exceptions of having a specific type of connection coupling as claimed. The patent to either one of Robinson et al., Bjerke, or Mueller et al. teaches the above exceptions. In view of the teaching of Robinson et al., Bjerke, or Mueller et al., it would be obvious to one of ordinary skill in the art, at the time the invention was made to modify the connection coupling type of DeMarco or Hoard in view of the teaching of Robinson et al., Bjerke, or Mueller et al. Such teachings provide no unobvious or unexpected result. Therefore, the method as claimed would be inherent during normal assembly of the DeMarco or Horad in view of either one of Robinson et al., Bjerke, or Mueller et al. device.

Double Patenting

8. 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 obviousness-type 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); and *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 a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 19-25 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-10 of U.S. Patent No. 6,823,889 in view of Horad or DeMarco. Claims 19-25 different from claims 1-10 of U.S. Patent No. 6,823,889 in that the bowl fill valve inlet port is coupling to the bowl fill outlet port instead of integrally connected thereto as set forth in the parent patent. However, that deficiency is taught by Horad and DeMarco as discussed in the respond to argument and rejections above, which can obviously be incorporated to the claimed invention of claims 1-10 of U.S. Patent No. 6,823,889.

Conclusion

10. Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on 11/16/07 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609.04(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan N. Nguyen whose telephone number is 571-272-4892. The examiner can normally be reached on Monday-Friday (10:00-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Huson can be reached on (571) 272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tuan Nguyen/
Primary Examiner, Art Unit 3751

TN

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	10958797
	Filing Date	2004-10-05
	First Named Inventor	Michael J. Schuster et al.
	Art Unit	3751
	Examiner Name	Nguyen, Tuan N.
	Attorney Docket Number	171901-1031

U.S. PATENTS							Remove	
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear		
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		10958797
	Filing Date		2004-10-05
	First Named Inventor	Michael J. Schuster et al.	
	Art Unit	3751	
	Examiner Name	Nguyen, Tuan N.	
Attorney Docket Number		171901-1031	

/TN/	1	Selected Documents from the File History of US Patent 6,823,889 (Parent Patent to this Application) including Examiner Search Strategy and Results, Index of Claims, Search Notes, Non-final Office Action, Issue Classification, Interview Summaries, Notice of Allowance with Examiner's Amendment, Supplemental Notice of Allowance with Supplemental Examiner's Amendment, Bibliographic Data Sheet, Request for Certificate of Correction, Certificate of Correction.	☐
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If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

Examiner Signature	/Tuan Nguyen/	Date Considered	02/14/2008
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*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.

Index of Claims



Application/Control No.

10/958,797

Examiner

Tuan N. Nguyen

Applicant(s)/Patent under Reexamination

SCHUSTER ET AL.

Art Unit

3751

✓	Rejected
=	Allowed

-	(Through numeral) Cancelled
+	Restricted

N	Non-Elected
I	Interference

A	Appeal
O	Objected

Claim	Date
Final	Original
1	4/2/07
2	7/2/07
3	9/18/07
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Claim	Date
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Tuan N. Nguyen

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INTERFERENCE SEARCHED			
Class	Subclass	Date	Examiner

[illegible]

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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875					Application or Docket Number 10/958,797		Filing Date 10/05/2004		☐ To be Mailed	
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		
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))		N/A	N/A		N/A			N/A		
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))		N/A	N/A		N/A			N/A		
TOTAL CLAIMS (37 CFR 1.16(i))		minus 20 =	*		X \$ =		OR	X \$ =		
INDEPENDENT CLAIMS (37 CFR 1.16(h))		minus 3 =	*		X \$ =			X \$ =		
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))		If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 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			TOTAL		
APPLICATION AS AMENDED – PART II										
(Column 1)			(Column 2)			(Column 3)			SMALL ENTITY OR OTHER THAN SMALL ENTITY	
AMENDMENT	11/17/2007	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)		RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(o))	* 26	Minus	** 26	= 0	X \$25 =	0	OR	X \$ =	
	Independent (37 CFR 1.16(h))	* 2	Minus	*** 3	= 0	X \$105 =	0	OR	X \$ =	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
					TOTAL ADD'L FEE	0	OR	TOTAL ADD'L FEE		
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)		RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(o))	*	Minus	**	=	X \$ =		OR	X \$ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X \$ =		OR	X \$ =	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE		
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.										

Legal Instrument Examiner:
/JACQULYN L. WILLIAMS/

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

In re the application of:

Confirmation: 1704

Michael J. Schuster et al.

Art Unit: 3751

Application Number: 10/958,797

Examiner: Nguyen, Tuan N.

Filing Date: October 5, 2004

Docket No.: 171901-1031

Title: **TOILET FILL VALVE WITH ADJUSTABLE BOWL FILL FLOW**

RESPONSE TO OFFICE ACTION OF JULY 17, 2007

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In regard to the outstanding non-final Office Action mailed on July 17, 2007, the following Response is submitted.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required therefor (including fees for net addition of claims) are hereby authorized to be charged to Deposit Account No. 20-0778.

Please amend the application as follows:

IN THE CLAIMS:

1. (Currently Amended) A toilet fill valve, comprising:
 - a water inlet;
 - a first water outlet configured to supply water to a toilet tank;
 - a bowl fill outlet port radially extending from a portion of a body of the toilet fill valve, the bowl fill outlet port being operatively coupled to the water inlet;
 - a bowl fill valve being integral with the toilet fill valve, the bowl fill valve having a bowl fill valve inlet port and a bowl fill valve outlet port, wherein the bowl fill valve inlet port is immovably attached to ~~compatible with~~ the bowl fill outlet port; ~~and the bowl fill valve inlet port being coupled to the bowl fill outlet port; and~~
 - the bowl fill valve being configured to supply an adjustable flow of water out the bowl fill outlet port for filling a toilet bowl during a flush cycle of a toilet.
2. (Original) The toilet fill valve of claim 1, wherein bowl fill valve extends beyond the bowl fill outlet port in a radial direction with respect to a portion of the body of the toilet fill valve.
3. (Original) The toilet fill valve of claim 1, wherein:
 - the bowl fill outlet port further comprises a female receptacle; and
 - the bowl fill valve inlet port further comprises a male end compatible with the female receptacle.

4. (Original) The toilet fill valve of claim 1, wherein:
the bowl fill valve inlet port further comprises a female receptacle;
and
the bowl fill outlet port further comprises a male end compatible with the female receptacle.
5. (Original) The toilet fill valve of claim 1, further comprising:
a float;
an actuating arm coupled to the float, the actuating arm radially extending in an orthogonal direction relative to a longitudinal axis of the toilet fill valve; and
the bowl fill valve extending in an orthogonal direction relative to the longitudinal axis of the toilet fill valve, wherein the actuating arm is angularly offset relative to the bowl fill valve, thereby preventing an interference with the bowl fill valve and a translational stem extending from the float to a free end of the actuating arm.
6. (Original) The toilet fill valve of claim 1, wherein the bowl fill valve outlet port further comprises a nipple adapted to mate with an end of a hose.
7. (Original) The toilet fill valve of claim 1, wherein the bowl fill valve further comprises a number of biased positions.
8. (Original) The toilet fill valve of claim 1, further comprising:
a rib extending from a side wall of the bowl fill outlet port; and
a slot in a side wall of the bowl fill valve inlet port, the rib being inserted into the slot, thereby preventing rotation of the bowl fill valve with respect to the bowl fill outlet port.

9. (Original) The toilet fill valve of claim 1, further comprising:
a rib extending from a side wall of the bowl fill valve inlet port; and
a slot in a side wall of the bowl fill outlet port, the rib being inserted
into the slot, thereby preventing rotation of the bowl fill valve with respect to the
bowl fill outlet port.

10. (Original) The toilet fill valve of claim 1, further comprising:
an annular protrusion extending from a side wall of the bowl fill
valve inlet port; and
an annular groove in a side wall of the bowl fill outlet port, the
annular protrusion being snap-fit into the annular groove, thereby affixing the
bowl fill valve to the bowl fill outlet port.

11. (Original) The toilet fill valve of claim 1, further comprising:
an annular protrusion extending from a side wall of the bowl fill
outlet port; and
an annular groove in a side wall of the bowl fill valve inlet port, the
annular protrusion being snap-fit into the annular groove, thereby affixing the
bowl fill valve to the bowl fill outlet port.

12. (Original) The toilet fill valve of claim 1, further comprising:
at least one locking ear extending from a side wall of the bowl fill
valve inlet port; and
at least one locking groove in a side wall of the bowl fill outlet port,
the at least one locking ear being situated in a locking position of the at least one
locking groove.

13. (Original) The toilet fill valve of claim 12, further comprising a sealing ring clamped between a portion of the bowl fill valve inlet port and a portion of the bowl fill outlet port.

14. (Original) The toilet fill valve of claim 1, further comprising:
at least one locking ear extending from a side wall of the bowl fill outlet port; and
at least one locking groove in a side wall of the bowl fill valve inlet port, the at least one locking ear being situated in a locking position of the at least one locking groove.

15. (Original) The toilet fill valve of claim 14, further comprising a sealing ring clamped between a portion of the bowl fill valve inlet port and a portion of the bowl fill outlet port.

16. (Original) The toilet fill valve of claim 1, further comprising:
a first thread on a side wall of the bowl fill outlet port; and
a second thread on a side wall of the bowl fill valve inlet port,
wherein the bowl fill valve inlet port is coupled to the bowl fill outlet port via the first and second threads.

17. (Original) The toilet fill valve of claim 16, further comprising a sealing ring clamped between a portion of the bowl fill valve inlet port and a portion of the bowl fill outlet port.

18. (Currently Amended) A toilet with a toilet tank having an adjustable bowl fill water flow, comprising:

a toilet fill valve in the toilet tank, the toilet valve having a water inlet coupled to a water source outside of the toilet tank and a water outlet directing a flow of water into the toilet tank;

a bowl fill outlet port radially extending from a portion of a body of the toilet fill valve, the bowl fill outlet port being operatively coupled to the water inlet;

a bowl fill valve being integral with the toilet fill valve, the bowl fill valve having a bowl fill valve inlet port and a bowl fill valve outlet port, wherein the bowl fill valve inlet port is immovably attached to ~~compatible with~~ the bowl fill outlet port; ~~and the bowl fill valve inlet port being coupled to the bowl fill outlet port;~~

a hose having a first end attached to the bowl fill valve outlet port and a second end directed into an overflow hose in the toilet tank, wherein a flow of water into the overflow hose is directed to a toilet bowl of the toilet; and

the bowl fill valve being configured to supply an adjustable flow of water out the bowl fill valve outlet port through the hose and into the overflow hose for filling the toilet bowl during a flush cycle of a toilet.

19. (Original) A method for providing an adjustable bowl fill water flow in a toilet fill valve, comprising the steps of:

- operatively coupling a bowl fill outlet port to a water inlet of the toilet fill valve;
- radially extending the bowl fill outlet port from a portion of a body of the toilet fill valve; and
- coupling a bowl fill valve inlet port of a bowl fill valve directly to the bowl fill outlet port, the bowl fill valve inlet port being compatible with the bowl fill outlet port, the bowl fill valve being configured to provide for the adjustable bowl fill water flow out a bowl fill valve outlet port of the bowl fill valve for filling a toilet bowl during a flush cycle of a toilet.

20. (Original) The method of claim 19, wherein the step of coupling of the bowl fill valve inlet port of the bowl fill valve directly to the bowl fill outlet port further comprises the step of mating a rib with a groove, thereby preventing rotation of the bowl fill valve with respect to the bowl fill outlet port.

21. (Original) The method of claim 19, wherein the step of coupling of the bowl fill valve inlet port of the bowl fill valve directly to the bowl fill outlet port further comprises the step of mating an annular protrusion with an annular groove, thereby affixing the bowl fill valve to the bowl fill outlet port.

22. (Original) The method of claim 19, wherein the step of coupling of the bowl fill valve inlet port of the bowl fill valve directly to the bowl fill outlet port further comprises the step of mating at least one locking ear with a corresponding at least one locking groove, respectively, the at least one locking ear being situated in a locking position of the at least one locking groove.

23. (Original) The method of claim 22, further comprising the step of clamping a sealing ring between a portion of the bowl fill valve inlet port and a portion of the bowl fill outlet port.

24. (Original) The method of claim 19, wherein the step of coupling of the bowl fill valve inlet port of the bowl fill valve directly to the bowl fill outlet port further comprises the step of mating a first thread associated with the bowl fill outlet port with a second thread associated with the bowl fill valve inlet port, wherein the bowl fill valve inlet port is coupled to the bowl fill outlet port via the first and second threads.

25. (Original) The method of claim 24, further comprising the step of clamping a sealing ring between a portion of the bowl fill valve inlet port and a portion of the bowl fill outlet port.

26. (New) The toilet fill valve of claim 1, wherein the bowl fill valve inlet port is compatible with the bowl fill outlet port to facilitate the immovable attachment of the bowl fill valve inlet port to the bowl fill outlet port.

REMARKS

Upon entry of this Response, claims 1-26 remain pending in the present patent application. Claims 1 and 18 have been amended, and claim 26 has been added. Applicants request reconsideration of the pending claims in view of the following remarks.

To begin, in item 3 of the Office Action, claims 1-7, 16, 18, 19 and 24 have been rejected under 35 USC § 102(b) as being anticipated by US Patent 5,715,860 issued to Horad (hereafter "*Horad*"). Anticipation under §102 "requires the disclosure in a single prior art reference of each element of the claim under construction." W.L. Gore & Associates, Inc. v. Garlock, Inc., 220 USPQ 303, 313 (Fed. Cir. 1983). For the reasons that follow, Applicant requests that the rejection of these claims be withdrawn.

To begin, claim 1 as amended recites as follows:

1. A toilet fill valve, comprising:
 - a water inlet;
 - a first water outlet configured to supply water to a toilet tank;
 - a bowl fill outlet port radially extending from a portion of a body of the toilet fill valve, the bowl fill outlet port being operatively coupled to the water inlet;
 - a bowl fill valve being integral with the toilet fill valve, the bowl fill valve having a bowl fill valve inlet port and a bowl fill valve outlet port, wherein the bowl fill valve inlet port is immovably attached to the bowl fill outlet port; and
 - the bowl fill valve being configured to supply an adjustable flow of water out the bowl fill outlet port for filling a toilet bowl during a flush cycle of a toilet.

With respect to claim 1 as originally filed, the Office Action states:

Horad discloses a toilet fill valve (Fig. 1) comprising a water inlet; a first water outlet configured to supply water to a toilet tank; a bowl fill outlet port-radially extending from a portion of a body of the toilet fill valve, the bowl fill outlet port being operatively coupled to the water inlet; a bowl fill valve (40) having a bowl fill valve inlet port and a bowl fill valve outlet port, wherein the bowl fill valve inlet port is compatible with the bowl fill outlet port and the bowl fill valve inlet port being coupled to the bowl fill outlet port; a hose (22) having a first end attached to the bowl fill valve outlet port and a second end directed into an overflow hose in the toilet tank, wherein a flow of water into the overflow hose is directed to a toilet bowl of the toilet; and the bowl fill valve being configured to supply an adjustable flow of water out the bowl fill outlet port for filling a toilet bowl during a

flush cycle of a toilet. The bowl fill valve extends beyond the bowl fill outlet port in a radial direction with respect to a portion of the body of the toilet fill valve. The bowl fill outlet port (18) further comprises a female receptacle; and the bowl fill valve inlet port further comprises a male end compatible with the female receptacle. The bowl fill valve inlet port further comprises a female receptacle (about 31); and the bowl fill outlet port further comprises a male end (about 76) compatible with the female receptacle. The toilet fill valve further comprises a float (17); an actuating arm coupled to the float, the actuating arm radially extending in an orthogonal direction relative to a longitudinal axis of the toilet fill valve; and the bowl fill valve extending in an orthogonal direction relative to the longitudinal axis of the toilet fill valve, wherein the actuating arm is angularly offset relative to the bowl fill valve, thereby preventing an interference with the bowl fill valve and a translational stem extending from the float to a free end of the actuating arm. The bowl fill valve outlet port further comprises a nipple (see Fig. 2) adapted to mate with an end of a hose (22). The bowl fill valve further comprises a number of biased positions that is rotatable to select different flow rate output. The toilet fill valve further comprises a first thread on a side wall of the bowl fill outlet port (about 76); and a second thread on a side wall of the bowl fill valve inlet port, wherein the bowl fill valve inlet port is coupled to the bowl fill outlet port via the first and second threads. The method as claimed would be inherent during normal assembly of the Horad device.

Office Action, pages 2-3.

Applicant respectfully asserts that *Horad* fails to show or suggest each of the elements of claim 1 as amended. Claim 1 specifies that the bowl fill valve is integral with the toilet fill valve, and that the bowl fill valve inlet port is immovably attached to the bowl fill outlet port of the toilet fill valve. One advantage of this claimed structure is the buildup of a pressure head in a hose, such as the hose 18 of *Horad*, where the pressure in the hose will, over time, cause the end of the hose to work off of the nipples to which the hose is attached. This is especially the case given that hoses may become more brittle over time, thereby increasing the probability that a given hose will work off of the nipples to which it is attached. Due to the fact that the bowl fill valve is integral with the toilet fill valve as set forth in claim 1, any pressure head that exists at the bowl fill valve inlet port will not cause the bowl fill valve to be pushed away from the toilet fill valve and result in failure.

For instance, if the hose 18 works itself off of the toilet fill valve as described by *Horad*, then there will be no bowl fill water flow while the toilet tank fills at the end of a

flush cycle. This would result in sewage gases backing up through the trap of the toilet and into the environment around the toilet, given that the toilet bowl would not be full of water as needed to prevent such an occurrence. Also, the resulting lower amount of water in the toilet bowl will increase the likelihood that the toilet will become clogged during the next flush. Further, while the tank refills, the water that exits out of the bowl fill nipple of the toilet fill valve or a loose end of a hose attached to the nipple may spray over the sides of the toilet tank under the lid. This can result in serious water damage to a dwelling or other site.

In addition, claim 1 recites that the bowl fill valve inlet port is immovably attached to the bowl fill outlet port. This element speaks to the issue of hoses working off of nipples due to the creation of a pressure head by action of the bowl fill valve as described above. Also, during operation, a given toilet fill valve in a toilet will experience vibration each time a toilet is flushed due to the flow of water and other mechanical vibration associated with the operation of the toilet fill valve. If the bowl fill valve is not immovably attached to the toilet fill valve, then the relative movement between the fill valve and the bowl fill valve due to vibration will ultimately further encourage the hose 18 to fall off of the nipple, thereby resulting in failure as described above.

Also, during maintenance of the equipment within a toilet tank, it is possible that an individual may bump or otherwise move the bowl fill valve and cause additional movement of the hose 18 relative to the nipples, thereby further encouraging separation of the hose from the nipples. Such movement is exasperated as hoses become more brittle over time.

Accordingly, Applicant respectfully asserts that *Horad* fails to show or suggest each of the elements of claim 1 as amended herein. In addition, claim 18 as amended also includes amendments similar in scope. Accordingly, Applicant asserts that *Horad* fails to show or suggest each of the elements of claim 18 for the same reasons described above. Therefore, Applicant requests that the rejection of claims 1 and 18 be withdrawn. In addition, Applicant requests that the rejection of claims 2-17 be withdrawn as depending from claim 1.

In addition, claim 19 as originally filed recites as follows:

19. A method for providing an adjustable bowl fill water flow in a toilet fill valve, comprising the steps of:
operatively coupling a bowl fill outlet port to a water inlet of the toilet fill valve;
radially extending the bowl fill outlet port from a portion of a body of the toilet fill valve; and
coupling a bowl fill valve inlet port of a bowl fill valve directly to the bowl fill outlet port, the bowl fill valve inlet port being compatible with the bowl fill outlet port, the bowl fill valve being configured to provide for the adjustable bowl fill water flow out a bowl fill valve outlet port of the bowl fill valve for filling a toilet bowl during a flush cycle of a toilet.

As set forth above, claim 19 recites that the bowl fill valve inlet port of the bowl fill valve is directly coupled to the bowl fill outlet port of the toilet fill valve. As shown in *Horad*, the inlet of the bowl fill valve 40 is coupled to the outlet of the toilet fill valve by way of hose 18. Thus, the bowl fill valve inlet port of the bowl fill valve is not directly coupled to the bowl fill outlet port as recited in claim 19.

In addition, claim 19 recites that the bowl fill valve inlet port is compatible with the bowl fill outlet port. As a result, the bowl fill valve inlet port is capable of coupling directly to the bowl fill outlet port as set forth in claim 19. As depicted in Figure 2 of *Horad*, for example, the bowl fill valve includes a male nipple coupled to hose 18. It is also apparent from Figure 1 that the hose 18 is coupled to a male port that appears to act as the bowl fill outlet for the toilet fill valve. Applicant respectfully inquires as to how it is that a male bowl fill valve inlet port can possibly be compatible with a male bowl fill outlet port? Accordingly, Applicant asserts that *Horad* fails to show or suggest each of the elements of claim 19 as originally filed. In addition, Applicant asserts that *Horad* fails to show or suggest each of the elements of claims 20-25 as depending from claim 19. Accordingly, Applicant requests that the rejection of claims 19-25 be withdrawn.

Finally, claim 26 has been added that further defines claim 1 stating that the bowl fill valve inlet port is compatible with the bowl fill outlet port to facilitate the immovable attachment of the bowl fill valve inlet port to the bowl fill outlet port. Applicant respectfully asserts that *Horad* fails to show or suggest such an element for the reasons set forth above with respect to claim 19. Accordingly, Applicant requests the allowance of claim 26.

Next, in item 4 of the Office Action, claims 1-7, 10, 11, 18, 19, and 21 have been rejected under 35 USC § 102(b) as allegedly being anticipated by US Patent 5,708,991 issued to DeMarco (hereafter "*DeMarco*"). Anticipation under §102 "requires the disclosure in a single prior art reference of each element of the claim under construction." W.L. Gore & Associates, Inc. v. Garlock, Inc., 220 USPQ 303, 313 (Fed. Cir. 1983). For the reasons that follow, Applicant respectfully requests that the rejection of these claims be withdrawn.

Applicant notes that, as depicted by *DeMarco*, a bowl fill valve 36 is coupled to a fill valve 18 by way of a hose 22. With respect to this structure, the office action states:

The bowl fill valve extends beyond the bowl fill outlet port in a radial direction with respect to a portion of the body of the toilet fill valve. The bowl fill outlet port further comprises a female receptacle (the right side of the left member 22 of Fig. 1); and the bowl fill valve inlet port (about 44) further comprises a male end compatible with the female receptacle. The bowl fill valve inlet port further comprises a female receptacle (the left side of the left member 22 of Fig. 1); and the bowl fill outlet port further comprises a male end (see Fig. 1) compatible with the female receptacle.

Office Action, page 5.

Applicant respectfully asserts that the "member 22" as described by *DeMarco* is, in fact, a hose. Specifically, in column 3, line 23, *DeMarco* identifies the "member 22" as a "reseal hose." Accordingly, *DeMarco* essentially shows the same structure as described by *Horad*. Thus, Applicant asserts that *DeMarco* fails to show or suggest each of the elements of independent claims 1, 18, and 19 for the same reasons described above with respect to *Horad*. Accordingly, Applicant requests that the rejection of claims 1, 18, and 19 be withdrawn. Also, Applicant requests that the rejection of claims 2-17 and 20-25 be withdrawn as depending from claims 1 and 19. In addition, Applicant requests allowance of claim 26 added herein.

Finally, in item 6 of the Office Action, claims 8, 9, 12-17, 20, and 22-25 have been rejected under 35 USC § 103(a) as being unpatentable over either one of *DeMarco* or *Horad* in view of either one of US Patent 6,409,221 issued to *Robinson et al.*, US Patent 5,926,868 issued to *Bjerke*, or US Patent 5,624,073 issued to *Mueller et al.* A prima facie case of obviousness is established only when the prior art teaches or suggests all of the elements of the claims. MPEP §2143.03, In re Rijckaert, 9 F.3d

1531, 28 U.S.P.Q2d 1955, 1956 (Fed. Cir. 1993). Applicant notes that claims 8, 9, 12-17, 20, and 22-25 depend from claims 1 or 19. Accordingly, Applicant respectfully asserts that the cited combination of references fails to show or suggest each of the elements of claims 8, 9, 12-17, 20, and 22-25 as depending from either claims 1 or 19 for the reasons described above. Accordingly, Applicant requests that the rejection of claims 8, 9, 12-17, 20, and 22-25 be withdrawn.

Finally, the Examiner is invited to call the undersigned if the Examiner believes that a telephonic interview would expedite the earliest issuance of the present application.

CONCLUSION

It is requested that all outstanding objections and rejections be withdrawn and that this application and all presently pending claims be allowed to issue. If the Examiner has any questions or comments regarding this Response, the Examiner is encouraged to telephone the undersigned counsel of Applicants.

Respectfully submitted,

/Michael J. D'Aurelio/

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of:

Confirmation: 1704

Michael J. Schuster et al.

Art Unit: 3751

Serial Number: 10/958,797

Examiner: Nguyen, Tuan N.

Filing Date: October 5, 2004

Docket No.: 171901-1031

Title: **TOILET FILL VALVE WITH ADJUSTABLE BOWL FILL FLOW****INFORMATION DISCLOSURE STATEMENT**

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

This information disclosure statement is filed in accordance with 37 C.F.R. §§ 1.56, 1.97, and 1.98, and specifically:

☐ under 37 CFR 1.97(b), or
(within Three months of filing national application; or date of entry of international application; or before mailing date of first office action on the merits; whichever occurs last)

☒ under 37 CFR 1.97(c) together with either a:
☐ Statement Under 37 C.F.R. 1.97(e), or
☒ a \$180.00 fee under 37 CFR 1.17(p), or
(After the CFR 1.97(b) time period, but before the final office action or notice of allowance, whichever occurs first)

☐ under 37 CFR 1.97(d) together with a:
☐ Statement under 37 CFR 1.97(e), and
☐ a \$180.00 petition fee set forth in 37 CFR 1.17(p).
(Filed after final office action or notice of allowance, whichever occurs first, but before payment of the issue fee)

☐ Enclosed is a check in the amount of \$.

☒ Payment by credit card.

☐ Please charge \$ to deposit account .

☐ At any time during the pendency of this application, please charge any fees required to Deposit Account 20-0778 pursuant to 37 CFR 1.25. The Commissioner is hereby requested to credit any overpayment to Deposit Account No. 20-0778.

- ☒ Applicant(s) submit herewith *Form PTO SB/08A-08B-08a - Information Disclosure Statement by Applicant* together with copies (where required) of patents, publications or other information of which applicant(s) are aware, which applicant(s) believe(s) may or may not be material to the examination of this application and for which there may be a duty to disclose in accordance with 37 CFR 1.56. As required by 37 C.F.R. §1.98(a), a legible copy of each document is provided.
- ☐ A concise explanation of the relevance of foreign language patents, foreign language publications and other foreign language information listed on PTO Form SB/08A-08B-08a, as presently understood by the individual(s) designated in 37 CFR 1.56(c) most knowledgeable about the content is given on the attached sheet, or where a foreign language patent is cited in a search report or other action by a foreign patent office in a counterpart foreign application, an English language version of the search report or action which indicates the degree of relevance found by the foreign office is listed on the form PTO SB/08A-08B-08a and is enclosed herewith.

The following rights are reserved by the Applicant(s): the right to establish the patentability of the claimed invention over any of the listed documents should they be applied as reference, and/or the right to prove that some of these documents may not be prior art, and/or the right to prove that some of these documents may not be enabling for the teachings they purport to offer.

This statement should not be construed as a representation that an exhaustive search has been made, or that information more material to the examination of the present application does not exist. Any statements or identifications regarding the relevance of any portion(s) of cited references should not be construed as a representation that the most relevant portion(s) have been identified, and the absence of such statements or identifications should not be construed as representations that there are no relevant portion(s). The Examiner is specifically requested not to rely solely on the materials submitted herewith. The Examiner is requested to conduct an independent and thorough review of the documents, and to form independent opinions as to their significance.

It is requested that the information disclosed herein be made of record in this application and that the Examiner initial and return a copy of the enclosed PTO SB/08A-08B-08a to indicate the documents have been considered.

Respectfully Submitted,

**THOMAS, KAYDEN, HORSTEMEYER
& RISLEY, L.L.P.**

By: /Michael J. D'Aurelio/
Michael J. D'Aurelio, Reg. No. 40,977

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Suite 1500
Atlanta, Georgia 30339-5948
Phone: (770) 933-9500
Fax: (770) 951-0933

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	10958797
	Filing Date	2004-10-05
	First Named Inventor	Michael J. Schuster et al.
	Art Unit	3751
	Examiner Name	Nguyen, Tuan N.
	Attorney Docket Number	171901-1031

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.						T ⁵

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	10958797
	Filing Date	2004-10-05
	First Named Inventor	Michael J. Schuster et al.
	Art Unit	3751
	Examiner Name	Nguyen, Tuan N.
	Attorney Docket Number	171901-1031

1	Selected Documents from the File History of US Patent 6,823,889 (Parent Patent to this Application) including Examiner Search Strategy and Results, Index of Claims, Search Notes, Non-final Office Action, Issue Classification, Interview Summaries, Notice of Allowance with Examiner's Amendment, Supplemental Notice of Allowance with Supplemental Examiner's Amendment, Bibliographic Data Sheet, Request for Certificate of Correction, Certificate of Correction.	☐
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If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

Examiner Signature		Date Considered	
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*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	10958797
	Filing Date	2004-10-05
	First Named Inventor	Michael J. Schuster et al.
	Art Unit	3751
	Examiner Name	Nguyen, Tuan N.
	Attorney Docket Number	171901-1031

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.

☒ Fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☐ None

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	/Michael J. D'Aurelio/	Date (YYYY-MM-DD)	2007-11-16
Name/Print	Michael J. D'Aurelio	Registration Number	40,977

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.

Electronic Patent Application Fee Transmittal				
Application Number:		10958797		
Filing Date:		05-Oct-2004		
Title of Invention:		Toilet fill valve with adjustable bowl fill flow		
First Named Inventor/Applicant Name:		Michael J. Schuster		
Filer:		Michael D Aurelio/Rhonda Zaffino		
Attorney Docket Number:		171901-1031		
Filed as Small Entity				
Utility Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Claims in excess of 20	2202	1	25	25
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension - 1 month with \$0 paid	2251	1	60	60
Miscellaneous:				
Submission- Information Disclosure Stmt	1806	1	180	180
Total in USD (\$)				265

Electronic Acknowledgement Receipt

EFS ID:	2478526
Application Number:	10958797
International Application Number:	
Confirmation Number:	1704
Title of Invention:	Toilet fill valve with adjustable bowl fill flow
First Named Inventor/Applicant Name:	Michael J. Schuster
Customer Number:	24504
Filer:	Michael D Aurelio/Rhonda Zaffino
Filer Authorized By:	Michael D Aurelio
Attorney Docket Number:	171901-1031
Receipt Date:	16-NOV-2007
Filing Date:	05-OCT-2004
Time Stamp:	14:46:49
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$265
RAM confirmation Number	157
Deposit Account	
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes) /Message Digest	Multi Part /.zip	Pages (if appl.)
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1	Extension of Time	00613110.pdf	126775	no	1
			e7d4647b9688cc23cbabaaca6b2a57a65a5c3359		
Warnings:					
Information:					
2	Amendment - After Non-Final Rejection	00613107.pdf	103661	no	15
			cf372c66872ed2e34ae506f5058766dc6202f2f1		
Warnings:					
Information:					
3	Information Disclosure Statement Letter	00613111.pdf	90535	no	2
			33a6e7c5c733ffa9c17756a342ad804972f6d4b0		
Warnings:					
Information:					
4	Information Disclosure Statement (IDS) Filed	00612717.pdf	661313	no	4
			4f7358707aa9b708529d479563a9aabe57960c18		
Warnings:					
Information:					
A U.S. Patent Number Citation or a U.S. Publication Number Citation is required in the Information Disclosure Statement (IDS) form for autoloading of data into USPTO systems. You may remove the form to add the required data in order to correct the Informational Message if you are citing U.S. References. If you chose not to include U.S. References, the image of the form will be processed and be made available within the Image File Wrapper (IFW) system. However, no data will be extracted from this form. Any additional data such as Foreign Patent Documents or Non Patent Literature will be manually reviewed and keyed into USPTO systems.					
5	NPL Documents	00612711.pdf	1624998	no	36
			ef23616e24468fe4b3281dbb533335becaabcf1		
Warnings:					
Information:					
6	Fee Worksheet (PTO-06)	fee-info.pdf	8450	no	2
			e3dfb1fcc64a5587e644a3c94901aa57b997847b		
Warnings:					
Information:					
Total Files Size (in bytes):			2615732		

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.

PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a) FY 2006 <i>(Fees pursuant to the Consolidated Appropriations act, 2005 (H.R. 4818).)</i>		Docket No. 171901-1031
Application Number: 10/958,797	Filed: October 5, 2004	
For: Toilet Fill Valve With Adjustable Bowl Fill Flow		
Art Unit: 3751	Examiner: Nguyen, Tuan N.	
This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above identified application.		
The requested extension and fee are as follows (check time period desired and enter the appropriate fee below):		
	<u>Fees</u>	<u>Small Entity</u> <u>Fees</u>
☒ One month (37 CFR 1.17(a)(1))	\$120	\$60 \$ 60.00
☐ Two months (37 CFR 1.17(a)(2))	\$460	\$230 \$ _____
☐ Three months (37 CFR 1.17(a)(3))	\$1050	\$525 \$ _____
☐ Four months (37 CFR 1.17(a)(4))	\$1640	\$820 \$ _____
☐ Five months (37 CFR 1.17(a)(5))	\$2230	\$1115 \$ _____
☒ Applicant claims small entity status. See 37 CFR 1.27		
☐ A check in the amount of the fee is enclosed.		
☒ Payment by credit card.		
☐ The Director has already been authorized to charge fees in this application to a Deposit Account.		
☒ The Commissioner is hereby authorized to charge any deficiencies in fees which may be required, or credit any overpayment to Deposit Account No. 20-0778.		
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.		
I am the		
☐ applicant/inventor.		
☐ assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed (Form PTO/SB/96).		
☒ attorney or agent of record. Registration Number: 40,977		
☐ attorney or agent under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34:		
_____ /Michael J. D'Aurelio/ Michael J. D'Aurelio, Reg. No. 40,977	November 16, 2007 _____ Date 770-933-9500 _____ Telephone Number	

The collection of information is required by CFR 1.136(a). 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 USC 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 6 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, US Patent and Trademark Office, US Department of Commerce, PO Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, PO Box 1450 Alexandria, VA 22313-1450.



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UNITED STATES DEPARTMENT OF COMMERCE
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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/958,797	10/05/2004	Michael J. Schuster	171901-1031	1704
24504 7590 07/17/2007 THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP 100 GALLERIA PARKWAY, NW STE 1750 ATLANTA, GA 30339-5948			EXAMINER NGUYEN, TUAN N	
			ART UNIT 3751	PAPER NUMBER
			MAIL DATE 07/17/2007	DELIVERY MODE PAPER

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

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

Office Action Summary	Application No.	Applicant(s)	
	10/958,797	SCHUSTER ET AL.	
	Examiner	Art Unit	
	Tuan N. Nguyen	3751	

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

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

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

Status

1) ☒ Responsive to communication(s) filed on 04 May 2007.

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

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

Disposition of Claims

4) ☒ Claim(s) 1-25 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1-25 is/are rejected.

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

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

Application Papers

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

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

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

a) ☐ All b) ☐ Some * c) ☐ None of:

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

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

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

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

Attachment(s)

1) ☒ Notice of References Cited (PTO-892) 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>10/5/04 & 10/4/06</u>	4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ 5) ☐ Notice of Informal Patent Application 6) ☐ Other: _____
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DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Species 2: Fig. 4 in the reply filed on 5/4/07 is acknowledged.

Claim Rejections - 35 USC § 102

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

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-7, 16, 18, 19 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Horad.

Horad discloses a toilet fill valve (Fig. 1) comprising a water inlet; a first water outlet configured to supply water to a toilet tank; a bowl fill outlet port-radially extending from a portion of a body of the toilet fill valve, the bowl fill outlet port being operatively coupled to the water inlet; a bowl fill valve (40) having a bowl fill valve inlet port and a bowl fill valve outlet port, wherein the bowl fill valve inlet port is compatible with the bowl fill outlet port and the bowl fill valve inlet port being coupled to the bowl fill outlet port; a tube (22) having a first end attached to the bowl fill valve outlet port and a second end directed into an overflow tube in the toilet tank, wherein a flow of water into the overflow tube is directed to a toilet bowl of the toilet; and the bowl fill valve being configured to supply an adjustable flow of water out the bowl fill outlet port for filling a toilet bowl during a flush cycle of a toilet. The bowl fill valve extends beyond the bowl fill outlet port

in a radial direction with respect to a portion of the body of the toilet fill valve. The bowl fill outlet port (18) further comprises a female receptacle; and the bowl fill valve inlet port further comprises a male end compatible with the female receptacle. The bowl fill valve inlet port further comprises a female receptacle (about 31); and the bowl fill outlet port further comprises a male end (about 76) compatible with the female receptacle. The toilet fill valve further comprises a float (17); an actuating arm coupled to the float, the actuating arm radially extending in an orthogonal direction relative to a longitudinal axis of the toilet fill valve; and the bowl fill valve extending in an orthogonal direction relative to the longitudinal axis of the toilet fill valve, wherein the actuating arm is angularly offset relative to the bowl fill valve, thereby preventing an interference with the bowl fill valve and a translational stem extending from the float to a free end of the actuating arm. The bowl fill valve outlet port further comprises a nipple (see Fig. 2) adapted to mate with an end of a tube (22). The bowl fill valve further comprises a number of biased positions that is rotatable to select different flow rate output. The toilet fill valve further comprises a first thread on a side wall of the bowl fill outlet port (about 76); and a second thread on a side, wall of the bowl fill valve inlet port, wherein the bowl fill valve inlet port is coupled to the bowl fill outlet port via the first and second threads. The method as claimed would be inherent during normal assembly of the Horad device.

4. Claims 1-7, 10, 11, 18, 19 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by DeMarco.

DeMarco discloses a toilet fill valve (Fig. 1) comprising a water inlet; a first water outlet configured to supply water to a toilet tank; a bowl fill outlet port-radially extending

from a portion of a body of the toilet fill valve, the bowl fill outlet port being operatively coupled to the water inlet; a bowl fill valve (36) having a bowl fill valve inlet port and a bowl fill valve outlet port, wherein the bowl fill valve inlet port is compatible with the bowl fill outlet port and the bowl fill valve inlet port being coupled to the bowl fill outlet port; a tube (tube 22 on the right) having a first end attached to the bowl fill valve outlet port and a second end directed into an overflow tube in the toilet tank, wherein a flow of water into the overflow tube is directed to a toilet bowl of the toilet; and the bowl fill valve being configured to supply an adjustable flow of water out the bowl fill outlet port for filling a toilet bowl during a flush cycle of a toilet. The bowl fill valve extends beyond the bowl fill outlet port in a radial direction with respect to a portion of the body of the toilet fill valve. The bowl fill outlet port further comprises a female receptacle (the right side of the left member 22 of Fig. 1); and the bowl fill valve inlet port (about 44) further comprises a male end compatible with the female receptacle. The bowl fill valve inlet port further comprises a female receptacle (the left side of the left member 22 of Fig. 1); and the bowl fill outlet port further comprises a male end (see Fig. 1) compatible with the female receptacle. The toilet fill valve further comprises a float (34); an actuating arm (32) coupled to the float, the actuating arm radially extending in an orthogonal direction relative to a longitudinal axis of the toilet fill valve; and the bowl fill valve extending in an orthogonal direction relative to the longitudinal axis of the toilet fill valve, wherein the actuating arm is angularly offset relative to the bowl fill valve, thereby preventing an interference with the bowl fill valve and a translational stem extending from the float to a free end of the actuating arm. The bowl fill valve outlet port further

comprises a nipple (about 46) adapted to mate with an end of a tube (22). The bowl fill valve further comprises a number of biased positions that is rotatable to select different flow rate output. The method as claimed would be inherent during normal assembly of the DeMarco device.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 8, 9, 12-17, 20 and 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over either one of DeMarco or Horad in view of either one of Robinson et al., Bjerke, or Mueller et al. The above claims are readable on either one of DeMarco or Horad with the exceptions of having a specific type of connection coupling as claimed. The patent to either one of Robinson et al., Bjerke, or Mueller et al. teaches the above exceptions. In view of the teaching of Robinson et al., Bjerke, or Mueller et al., it would be obvious to one of ordinary skill in the art, at the time the invention was made to modify the connection coupling type of DeMarco or Hoard in view of the teaching of Robinson et al., Bjerke, or Mueller et al. Such teachings provide no unobvious or unexpected result. Therefore, the method as claimed would be inherent during normal assembly of the DeMarco or Horad in view of either one of Robinson et al., Bjerke, or Mueller et al. device.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan N. Nguyen whose telephone number is 571-272-4892. The examiner can normally be reached on Monday-Friday (10:00-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Huson can be reached on (571) 272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Tuan Nguyen
Primary Examiner
Art Unit 3751

TN

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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Substitute for form 1448/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

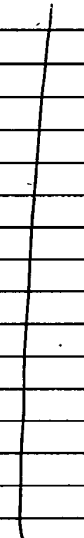
Sheet 1

of 3

Complete if Known

Application Number	10/958,797
Filing Date	October 5, 2004
First Named Inventor	Michael J. Schuster
Art Unit	3751
Examiner Name	To Be Assigned NGUYEN
Attorney Docket Number	171901-1031

U. S. PATENT DOCUMENTS

U. S. PATENT DOCUMENTS					
Examiner Initials*	Cite No.†	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- 1,787,601	01/1931	Swanberg	
		US- 2,087,503	07/1937	Clemmons	
		US- 2,512,176	06/1950	Shaffer	
		US- 2,791,235	05/1957	Smith	
		US- 3,040,769	06/1962	Lamb	
		US- 3,086,546	04/1963	Brown	
		US- 3,172,128	03/1965	Ducey	
		US- 3,457,947	07/1969	Fitzgerald	
		US- 3,744,064	07/1973	Preston	
		US- 4,351,071	09/1982	Clar	
		US- 4,700,413	10/1987	Lopez	
		US- 4,770,388	09/1988	Carman	
		US- 5,083,323	01/1992	Cannan	
		US- 5,228,152	07/1993	Fraley	
		US- 5,232,011	08/1993	Royalty	
		US- 5,327,931	07/1994	Royalty	
		US- 5,442,820	08/1995	Becker	
			US- 5,542,448	08/1996	Campbell et al.
		US- 5,742,951	04/1998	Wright et al.	

FOREIGN PATENT DOCUMENTS

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**Examiner
Signature**

Date
Considered

7/9/07

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 608. 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.

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Substitute for form 1449/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Complete if Known

Application Number	10/958,797
Filing Date	October 5, 2004
First Named Inventor	Michael J. Schuster
Art Unit	3751
Examiner Name	To Be Assigned NGUYEN
Attorney Docket Number	171901-1031

Sheet 2 of 3**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- 5,775,366	07/1998	Ray	
		US- 6,219,856 B1	04/2001	Alles	
		US- 6,385,788 B1	05/2002	Wasielowski	
		US- 136,128	02/1873	Bralley	
		US- 994,746	06/1911	Dwyer et al.	
		US- 996,743	07/1911	Yancey	
		US- 1,113,057	01/06/14	Schumann	
		US- 2,465,866	03/1949	Gaines	
		US- 2,736,037	02/28/56	Hardie	
		US- 2,799,865	07/1957	Schuster	
		US- 3,321,972	05/30/67	Goldtrap	
		US- 3,762,395	10/02/73	Taylor	
		US- 4,134,164	01/16/79	Sanmartin Rial	
		US- 4,505,231	03/19/85	Syler	
		US- 4,527,295	07/09/85	Lacore	
		US- 4,898,124	02/06/90	Granberg et al	
		US- 5,794,279	08/18/98	Schwartz	
		US- 5,862,537	01/26/99	Osmond	
		US- 6,295,660	10/2001	Schuster	

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 ³
		Country Code ² Number ⁴ Kind Code ⁵ (if known)				

Examiner
SignatureDate
Considered

7/9/07

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 809. 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.

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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet	3	of	3
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Complete if Known

Application Number	10/958,797
Filing Date	October 5, 2004
First Named Inventor	Michael J. Schuster
Art Unit	3751
Examiner Name	To Be Assigned — NGUYEN
Attorney Docket Number	171901-1031

U. S. PATENT DOCUMENTS

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FOREIGN PATENT DOCUMENTS

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**Examiner
Signature**

Date	
Considered	

7/9/67

*EXAMINER: Initial reference considered, whether or not citation is in conformance with MPEP 808. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. *Applicant's unique citation designation number (optional). *See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 801.04. *Enter Office that issued the document, by the two-letter code (WIPO Standard ST.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. *Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. *Applicant is to place a check mark here if English language Translation is attached.

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Substitute for form 1449/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 1 of 3

Complete if Known

Application Number	10/958,797
Filing Date	Herewith
First Named Inventor	Michael J. Schuster
Art Unit	3751
Examiner Name	NGUYEN
Attorney Docket Number	1008-100501

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- 2002/0092090 A1	07-18-2002	Johnson	
		US- 2002/0162166 A1	11-07-2002	Saar et al.	
		US- 3,986,216	10-19-1976	Davis et al.	
		US- 3,994,628	11-30-1976	Kemper	
		US- 4,007,498	02-15-1977	Pearson	
		US- 4,017,916	04-19-1977	Pearson	
		US- 4,032,822	06-28-1977	Un	
		US- 4,090,532	05-23-1978	Story, Jr.	
		US- 4,145,775	03-27-1979	Butler	
		US- 4,392,260	07-12-1983	Bensen	
		US- 4,707,867	11-24-1987	Kawabe et al.	
		US- 4,764,996	08-23-1988	Pino	
		US- 4,793,588	12-27-1988	Lavery, Jr.	
		US- 4,918,764	04-24-1990	Haselswerdt et al.	
		US- 4,980,932	01-01-1991	Stemples	
		US- 5,007,452	04-16-1991	Antunez	
		US- 5,036,553	08-06-1991	Sanderson	
		US- 5,052,060	10-01-1991	Makita et al.	
		US- 5,134,729	08-04-1992	Shaw	

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 ³
		Country Code ⁴ Number ⁴ Kind Code ⁵ (if known)				

Examiner Signature		Date Considered	7/9/07
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Substitute for form 1449/PTO		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>		Application Number	10/958,797
		Filing Date	Herewith
		First Named Inventor	Michael J. Schuster
		Art Unit	3751
		Examiner Name	NGUYEN
Sheet 2 of 3	Attorney Docket Number	1008-100501	

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)			
[Signature]		US- 5,245,710	09-21-1993	Haselswerdt et al.	
		US- 5,362,026	11-08-1994	Kobayashi et al.	
		US- 5,432,959	07-18-1995	Ellsworth et al.	
		US- 5,469,586	11-28-1995	Tsutsui et al.	
		US- 5,708,991	01-20-1998	DeMarco	
		US- 5,715,860	02-10-1998	Horad	
		US- 6,202,227 B1	03-20-2001	Gurowitz	
		US- 6,209,576 B1	04-03-2001	Davis	
		US- 6,263,519 B1	07-24-2001	Parsons et al.	
		US- 6,560,790 B2	05-13-2003	Saar et al.	
[Signature]		US- 4,420,845	12-20-1983	Antunez	
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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
		Country Code ³ Number ⁴ Kind Code ⁵ (if known)			

Examiner Signature	[Signature]	Date Considered	7/9/07
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Complete if Known

Application Number	N/A 10/958,797
Filing Date	Herewith
First Named Inventor	Michael J. Schuster
Art Unit	N/A 3751
Examiner Name	N/A NGUYEN
Attorney Docket Number	1008-100501

Sheet 3 of 3

NON PATENT LITERATURE DOCUMENTS

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Examiner Signature		Date Considered	7/9/07
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1 Applicant's unique citation designation number (optional). **2** Applicant is to place a check mark here if English language Translation is attached.

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Notice of References Cited	Application/Control No. 10/958,797	Applicant(s)/Patent Under Reexamination SCHUSTER ET AL.	
	Examiner Tuan N. Nguyen	Art Unit 3751	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-6,409,221 B1	06-2002	Robinson et al.	285/91
*	B	US-5,926,868 A	07-1999	Bjerke, Thomas E.	4/675
*	C	US-5,624,073	04-1997	Mueller et al.	239/442
	D	US-			
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FOREIGN PATENT DOCUMENTS

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

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
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	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Index of Claims 		Application/Control No. 10/958,797 Examiner Tuan N. Nguyen		Applicant(s)/Patent under Reexamination SCHUSTER ET AL. Art Unit 3751	
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✓	Rejected	-	(Through numeral) Cancelled	N	Non-Elected	A	Appeal
=	Allowed	+	Restricted	I	Interference	O	Objected

Claim		Date			
Final	Original	4/2/07	7/9/07		
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Tuan N. Nguyen

3751

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INTERFERENCE SEARCHED			
Class	Subclass	Date	Examiner

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L10	32181	(hose pipe) near2 coupling	USPAT; EPO; JPO; DERWENT	OR	ON	2007/07/09 09:46
L11	627	10 and rib and slot	USPAT; EPO; JPO; DERWENT	OR	ON	2007/07/09 09:46
L12	116	11 and male and female	USPAT; EPO; JPO; DERWENT	OR	ON	2007/07/09 09:46

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of:

Confirmation: 1704

Michael J. Schuster

Art Unit: 3751

Application Number: 10/958,797

Examiner: Nguyen, Tuan N.

Filing Date: October 5, 2004

Docket No.: 171901-1031

Title: **TOILET FILL VALVE WITH ADJUSTABLE BOWL FILL FLOW**

RESPONSE TO ELECTION REQUIREMENT

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In regard to the outstanding non-final Office Action mailed on April 4, 2007 that makes an election requirement, the following Response is submitted.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required therefor (including fees for net addition of claims) are hereby authorized to be charged to Deposit Account No. 20-0778.

REMARKS

Upon entry of this Response, claims 1-25 remain pending in the present patent application. The Office Action sets forth an election requirement in the present application identifying the following allegedly patentably distinct species: Species 1 = Fig. 1 and Species 2 = Fig. 4.

Applicant hereby elects without traverse to pursue species of Fig. 4 in the present application, corresponding to claims 1-25. In addition, Applicant expressly reserves the right to pursue the subject matter of all non-elected species and/or claims in one or more divisional applications. If the Examiner has any questions or comments regarding this response, the Examiner is encouraged to telephone the undersigned counsel of Applicant.

Respectfully submitted,

/Michael J. D'Aurelio/

Michael J. D'Aurelio
Registration Number: 40,977

Thomas, Kayden, Horstemeyer & Risley, L.L.P.

100 Galleria Parkway, N.W.
Suite 1750
Atlanta, Georgia 30339-5948
Phone: (770) 933-9500
Fax: (770) 951-0933

Electronic Acknowledgement Receipt	
EFS ID:	1744578
Application Number:	10958797
International Application Number:	
Confirmation Number:	1704
Title of Invention:	Toilet fill valve with adjustable bowl fill flow
First Named Inventor/Applicant Name:	Michael J. Schuster
Customer Number:	24504
Filer:	Michael D Aurelio/Rhonda Zaffino
Filer Authorized By:	Michael D Aurelio
Attorney Docket Number:	171901-1031
Receipt Date:	04-MAY-2007
Filing Date:	05-OCT-2004
Time Stamp:	13:05:01
Application Type:	Utility

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)	Multi Part /.zip	Pages (if appl.)
1	Response to Election / Restriction Filed	00520165.pdf	62082	no	2

Warnings:

Information:	
Total Files Size (in bytes):	62082
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.	



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.
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10/958,797

10/05/2004

Michael J. Schuster

171901-1031

1704

24504 7590 04/04/2007

THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP
100 GALLERIA PARKWAY, NW
STE 1750
ATLANTA, GA 30339-5948

EXAMINER

NGUYEN, TUAN N

ART UNIT

PAPER NUMBER

3751

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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31 DAYS

04/04/2007

PAPER

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

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/958,797	SCHUSTER ET AL.	
	Examiner	Art Unit	
	Tuan N. Nguyen	3751	

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

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

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

Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-25 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

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

Attachment(s)

- | | |
|--|---|
| 1) ☐ Notice of References Cited (PTO-892) | 4) ☐ Interview Summary (PTO-413) |
| 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) ☐ Information Disclosure Statement(s) (PTO/SB/08) | 5) ☐ Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) ☐ Other: _____ |

DETAILED ACTION

Election/Restrictions

1. This application contains claims directed to the following patentably distinct species: Species 1= Fig. 1 and Species 2 = Fig. 4. The species are independent or distinct because they are structurally different.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, at least claim 1 is considered generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species.

MPEP § 809.02(a).

2. Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

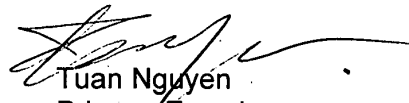
3. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan N. Nguyen whose telephone number is 571-272-4892. The examiner can normally be reached on Monday-Friday (10:00-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Huson can be reached on (571) 272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3751

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Tuan Nguyen
Primary Examiner
Art Unit 3751

TN

Index of Claims



Application/Control No.

10/958,797

Examiner

Tuan N. Nguyen

Applicant(s)/Patent under Reexamination

SCHUSTER ET AL.

Art Unit

3751

✓	Rejected
=	Allowed

—	(Through numeral) Cancelled
+	Restricted

N	Non-Elected
I	Interference

A	Appeal
O	Objected

Claim		Date											
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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

Application Number	10/958,797
Filing Date	October 5, 2004
First Named Inventor	Michael J. Schuster
Art Unit	3751
Examiner Name	To Be Assigned
Attorney Docket Number	171901-1031

Sheet 1 of 3

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- 1,787,601	01/1931	Swanberg	
		US- 2,087,503	07/1937	Clemmons	
		US- 2,512,176	06/1950	Shaffer	
		US- 2,791,235	05/1957	Smith	
		US- 3,040,769	06/1962	Lamb	
		US- 3,086,546	04/1963	Brown	
		US- 3,172,128	03/1965	Ducey	
		US- 3,457,947	07/1969	Fitzgerald	
		US- 3,744,064	07/1973	Preston	
		US- 4,351,071	09/1982	Clar	
		US- 4,700,413	10/1987	Lopez	
		US- 4,770,388	09/1988	Carman	
		US- 5,083,323	01/1992	Cannan	
		US- 5,228,152	07/1993	Fraley	
		US- 5,232,011	08/1993	Royalty	
		US- 5,327,931	07/1994	Royalty	
		US- 5,442,820	08/1995	Becker	
		US- 5,542,448	08/1996	Campbell et al.	
		US- 5,742,951	04/1998	Wright et al.	

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)				

Examiner
SignatureDate
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, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.

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**

(Use as many sheets as necessary)

Complete if Known

Application Number	10/958,797
Filing Date	October 5, 2004
First Named Inventor	Michael J. Schuster
Art Unit	3751
Examiner Name	To Be Assigned
Attorney Docket Number	171901-1031

Sheet 2 of 3**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- 5,775,366	07/1998	Ray	
		US- 6,219,856 B1	04/2001	Alles	
		US- 6,385,788 B1	05/2002	Wasielewski	
		US- 136,128	02/1873	Bralley	
		US- 994,746	06/1911	Dwyer et al.	
		US- 996,743	07/1911	Yancey	
		US- 1,113,057	01/06/14	Schumann	
		US- 2,465,866	03/1949	Gaines	
		US- 2,736,037	02/28/56	Hardie	
		US- 2,799,865	07/1957	Schuster	
		US- 3,321,972	05/30/67	Goldtrap	
		US- 3,762,395	10/02/73	Taylor	
		US- 4,134,164	01/16/79	Sanmartin Rial	
		US- 4,505,231	03/19/85	Syler	
		US- 4,527,295	07/09/85	Lacore	
		US- 4,898,124	02/06/90	Granberg et al	
		US- 5,794,279	08/18/98	Schwartz	
		US- 5,862,537	01/26/99	Osmond	
		US- 6,295,660	10/2001	Schuster	

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)				

Examiner
SignatureDate
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.

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If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of:	)	Confirmation: 1704
Michael J. Schuster et al.	)	
Serial Number: 10/958,797	)	Art Unit: 3751
Filing Date: February 15, 2006	)	Examiner: To Be Assigned
Title: Toilet Fill Valve with Adjustable Bowl	)	Docket No.: 171901-1031
Fill Flow	)	
	)	
	)	

INFORMATION DISCLOSURE STATEMENT

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

This information disclosure statement is filed in accordance with 37 C.F.R. §§ 1.56, 1.97, and 1.98, and specifically:

- ☒ under 37 CFR 1.97(b), or
(within Three months of filing national application; or date of entry of international application; or before mailing date of first office action on the merits; whichever occurs last)
- ☐ under 37 CFR 1.97(c) together with either a:
☐ Statement Under 37 C.F.R. 1.97(e), or
☐ a \$180.00 fee under 37 CFR 1.17(p), or
(After the CFR 1.97(b) time period, but before the final office action or notice of allowance, whichever occurs first)
- ☐ under 37 CFR 1.97(d) together with a:
☐ Statement under 37 CFR 1.97(e), and
☐ a \$180.00 petition fee set forth in 37 CFR 1.17(p).
(Filed after final office action or notice of allowance, whichever occurs first, but before payment of the issue fee)
- ☐ Enclosed is a check in the amount of \$.
- ☐ Enclosed is Credit Card Payment Form (PTO-2038) in the amount of \$.
- ☐ Please charge \$ to deposit account .
- ☒ At any time during the pendency of this application, please charge any fees required to Deposit Account 20-0778 pursuant to 37 CFR 1.25. The Commissioner is hereby requested to credit any overpayment to Deposit Account No. 20-0778.
- ☒ Applicant(s) submit herewith *Form PTO SB/08A-08B-08a - Information Disclosure Statement by Applicant* together with copies (where required) of patents, publications or other information of which applicant(s) are aware, which applicant(s) believe(s) may or may not be material to the examination of this application and for

which there may be a duty to disclose in accordance with 37 CFR 1.56. As required by 37 C.F.R. §1.98(a), a legible copy of each document is provided.

- ☐ A concise explanation of the relevance of foreign language patents, foreign language publications and other foreign language information listed on *Form PTO SB/08A-08B-08a*, as presently understood by the individual(s) designated in 37 CFR 1.56(c) most knowledgeable about the content is given on the attached sheet, or where a foreign language patent is cited in a search report or other action by a foreign patent office in a counterpart foreign application, an English language version of the search report or action which indicates the degree of relevance found by the foreign office is listed on the form *Form PTO SB/08A-08B-08a* and is enclosed herewith.

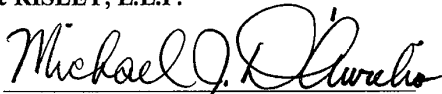
The following rights are reserved by the Applicant(s): the right to establish the patentability of the claimed invention over any of the listed documents should they be applied as reference, and/or the right to prove that some of these documents may not be prior art, and/or the right to prove that some of these documents may not be enabling for the teachings they purport to offer.

This statement should not be construed as a representation that an exhaustive search has been made, or that information more material to the examination of the present application does not exist. Any statements or identifications regarding the relevance of any portion(s) of cited references should not be construed as a representation that the most relevant portion(s) have been identified, and the absence of such statements or identifications should not be construed as representations that there are no relevant portion(s). The Examiner is specifically requested not to rely solely on the materials submitted herewith. The Examiner is requested to conduct an independent and thorough review of the documents, and to form independent opinions as to their significance.

It is requested that the information disclosed herein be made of record in this application and that the Examiner initial and return a copy of the enclosed PTO-1449 (or SB08) to indicate the documents have been considered.

Respectfully Submitted,

THOMAS, KAYDEN, HORSTEMEYER
& RISLEY, L.L.P.

By: 
Michael J. D'Aurelio, Reg. No. 40,977

100 Galleria Parkway, N.W.
Suite 1750
Atlanta, Georgia 30339-5948
Phone: (770) 933-9500
Fax: (770) 951-0933

Electronic Acknowledgement Receipt

EFS ID:	1235522
Application Number:	10958797
Confirmation Number:	1704
Title of Invention:	Toilet fill valve with adjustable bowl fill flow
First Named Inventor:	Michael J. Schuster
Customer Number:	24504
Filer:	Michael D Aurelio
Filer Authorized By:	
Attorney Docket Number:	171901-1031
Receipt Date:	04-OCT-2006
Filing Date:	05-OCT-2004
Time Stamp:	16:24:36
Application Type:	Utility
International Application Number:	

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)	Multi Part	Pages
1	Information Disclosure Statement (IDS) Filed	00431601.pdf	209833	no	3

Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
2	Transmittal letter	00431592.pdf	304266	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			514099		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.					

08/12/2005 10:53

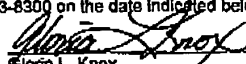
7709510933

THOMAS, KAYDEN

PAGE 01

**RECEIVED
CENTRAL FAX CENTER**

AUG 12 2005

CERTIFICATE OF FACSIMILE TRANSMISSION UNDER 37 CFR 1.8(a)	
I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being transmitted via facsimile to the United States Patent and Trademark Office facsimile number (571) 273-8300 on the date indicated below. Total pages 2.	
Date: <u>8/12/05</u>	 Gloria L. Knox

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT

In re the application of:	)	Art Unit:	3751
Michael J. Schuster	)		
Serial Number:	)	Examiner:	To Be Assigned
10/958,797	)		
Filing Date:	)	Docket No.:	171901-1031
October 5, 2004	)		
Title:	)		
Toilet Fill Valve with Adjustable Bowl Fill	)		
Flow	)		

**POWER OF ATTORNEY/CHANGE OF ADDRESS/REVOCAION OF PRIOR POWERS BY
ASSIGNEE OF ENTIRE INTEREST**

Commissioner for Patents
United States Patent and Trademark Office
Alexandria, VA 22313-1450

Dear Sir:

MJSI, Inc., the assignee of record of the entire right, title and interest in the above identified patent application, revokes all powers of attorney or authorizations of agent previously given and appoints the attorneys associated with customer number

24504

to prosecute and transact all business in the Patent and Trademark Office connected with the above referenced patent application.

CHANGE OF ADDRESS

Please recognize or change the correspondence address for the above-identified patent application to the address associated with Customer Number 24504.

Page 1 of 2

PAGE 1/2 * RCVD AT 8/12/2005 10:51:29 AM [Eastern Daylight Time] * SVR:USPTO-EFAXRF-6/29 * DNIS:2738300 * CSID:7709510933 * DURATION (mm:ss):01:00

Statement Under 37 C.F.R. §3.73(b)

MJSI, Inc. is the assignee of the entire right, title, and interest in the patent application/patent identified above by virtue of 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 015694, Frame 0705, or for which a copy thereof is attached.

I, the undersigned (whose title is supplied below), am authorized to act on behalf of the assignee, MJSI, INC.

MJSI, Inc.

By: Michael J. Schuster
Michael J. Schuster
Title: President

Date: 8-4-05



UNITED STATES PATENT AND TRADEMARK OFFICE

FILE COPY
COMMISSIONER FOR PATENTS
UNITED STATES PATENT AND TRADEMARK OFFICE
WASHINGTON, DC 20231
www.uspto.gov

APPLICATION NUMBER	FILING OR 371 (c) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
10/958,797	10/05/2004	Michael J. Schuster	1008-100501

CONFIRMATION NO. 1704

33852
MICHAEL J. D'AURELIO
96 CHURCH STREET
CHAGRIN FALLS, OH 44022



OC00000015340187

Date Mailed: 03/03/2005

RESPONSE TO REQUEST FOR CORRECTED FILING RECEIPT

Claims, Fees, and Inventors

In response to your request for a corrected Filing Receipt, the Office is unable to comply with the request because:

- ☐ The total number of claims appearing on the Filing Receipt does not include multiple dependent claims. The total fee appearing on the Filing Receipt includes the cost of multiple dependent claims that were present at the time the application was filed.
- ☐ The filing fee is correct. It may include additional claims fees and/or the surcharge under 37 CFR 1.16(e) for filing an oath/declaration or basic filing fee after the application filing date; or it may not reflect fees refunded to the applicant that were paid by mistake.
- ☒ The number of claims reflected on the filing receipt is correct.
- ☐ The filing fee reflected on the filing receipt is correct. Applicant may have miscalculated the fees due.
- ☐ Applicant calculated fees as other than small entity; however, applicant asserted small entity status in the application. Therefore, fees were applied as small entity and the remainder was refunded to the applicant.
- ☐ The difference between the fees paid and the fees due was refunded to the applicant and will not be shown on the filing receipt.
- ☐ The inventor information may be truncated if the family name consists of more than 50 characters (letters and spaces combined) and if the given name consists of more than 50 characters (letters and spaces combined).
- ☐ The inventor's residence allows for up to 40 characters (letters and spaces combined).

☐

☐ The inventor's residence will only include the city and state for U.S. residences or city and country for residences outside the U.S. (See MPEP 605.02).

☐ A petition to correct the inventorship is needed to make this change. See 37 CFR 1.48. For non-provisional applications, the petition should be directed to the Director of the examining group assigned to your application.

☐ Changes made after submission of an executed declaration to the inventor information other than correction of typographical errors must be submitted in the form of a substitute declaration. Change of inventorship requires a petition under 37 CFR 1.48.

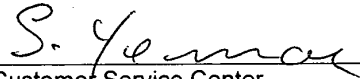
☒ The number of drawings shown on the filing receipt reflects the number of drawing sheets submitted.

☐ The correspondence address was captured as directed by applicant on filing. If you wish correspondence to be directed otherwise, please submit a request for a change of address.

☐ The docket number allows a maximum of 25 characters.

☐ The person signing on behalf of the deceased inventor is reflected on the Filing Receipt as the legal representative.

☐ The filing date of a parent application cannot be changed by this request. A petition to correct the filing date in the parent application is required.



Customer Service Center
Office of Initial Patent Examination
(703) 308-1202

Dec 02 2004 8:53AM

JCNWSCS 02 DEC 2004

D'Aurelio & Mathews, LLC

2164598301

P. 1

CERTIFICATE OF FACSIMILE TRANSMISSION UNDER 37 CFR §1.8

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being transmitted on the date indicated below via facsimile to the United States Patent and Trademark Office, Office of Initial Patent Examination, facsimile number (703) 746-9195.

12/2/04

Date

Michael J. D'Aurelio
Michael J. D'Aurelio

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of:

Michael J. Schuster

Serial Number: 10/958,797

Filing Date: October 5, 2004

Title: TOILET FILL VALVE WITH ADJUSTABLE
BOWL FILL FLOW

Confirmation: 1704

Art Unit: 3751

Examiner: N/A

Docket No.: 1008-100501

REQUEST TO CORRECT THE FILING RECEIPT

Office of Initial Patent Examination
Filing Receipt Corrections
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In regard to the above-identified Continuation-In-Part Patent Application, Applicant respectfully requests that the corrections listed below be made to the Filing Receipt mailed on November 19, 2004. A copy of the Filing Receipt with corresponding handwritten corrections in red pen accompanies this request.

CORRECTIONS TO THE FILING RECEIPT:

Please change the number of claims from "10" to "25"

Please change the number of drawings from "3" to "18"

In addition, it is noted that a fee of \$395.00 was charged to the Deposit Account 50-2425 in conjunction with the erroneous claims count indicated on the Filing Receipt. Given that this CIP Application was filed with 3 independent claims and 25 total claims, the total filing fee that should have been charged to the above Deposit Account should have been \$440.00 which includes \$45.00 for the total number of claims beyond 20 claims. The authorization to charge this amount is provided in the original transmittal papers filed with the Patent Application.

JC

JCWSCS 02 DEC 2004

Dec 02 2004 8:53AM D'Aurelio & Mathews, LLC 2164598301

p. 1

CERTIFICATE OF FACSIMILE TRANSMISSION UNDER 37 CFR §1.8 I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being transmitted on the date indicated below via facsimile to the United States Patent and Trademark Office, Office of Initial Patent Examination, facsimile number (703) 748-9195.	
<u>12/2/04</u> Date	<u>Michael J. D'Aurelio</u> Michael J. D'Aurelio

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of:	)	Confirmation: 1704
Michael J. Schuster	)	
Serial Number: 10/958,797	)	Art Unit: 3751
Filing Date: October 5, 2004	)	Examiner: N/A
Title: TOILET FILL VALVE WITH ADJUSTABLE	)	Docket No.: 1008-100501
BOWL FILL FLOW	)	

REQUEST TO CORRECT THE FILING RECEIPT

Office of Initial Patent Examination
 Filing Receipt Corrections
 Commissioner for Patents
 P.O. Box 1450
 Alexandria, VA 22313-1450

Sir:

In regard to the above-identified Continuation-in-Part Patent Application, Applicant respectfully requests that the corrections listed below be made to the Filing Receipt mailed on November 19, 2004. A copy of the Filing Receipt with corresponding handwritten corrections in red pen accompanies this request.

CORRECTIONS TO THE FILING RECEIPT:

Please change the number of claims from "10" to "25".
 Please change the number of drawings from "3" to "9".

In addition, it is noted that a fee of \$395.00 was charged to the Deposit Account 50-2425 in conjunction with the erroneous claims count indicated on the Filing Receipt. Given that this CIP Application was filed with 3 independent claims and 25 total claims, the total filing fee that should have been charged to the above Deposit Account should have been \$440.00 which includes \$45.00 for the total number of claims beyond 20 claims. The authorization to charge this amount is provided in the original transmittal papers filed with the Patent Application.

However, in the event that a new authorization is needed to charge the additional \$45.00, Applicant hereby authorizes the Director to charge the amount of \$45.00, and credit any overpayment to Deposit Account 50-2425.

If you have any questions or need any further questions, please contact applicants undersigned counsel at the number listed below.

Respectfully Submitted,


Michael J. D'Aurelio
Reg. No. 40,977

D'Aurelio & Mathews, LLC
5755 Granger Road, Suite 365
Cleveland, Ohio 44131
Phone: (216) 458-8300
Fax: (216) 458-8301



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

APPL NO.	FILING OR 371 (c) DATE	ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	DRAWINGS	TOT CLMS	IND CLMS
10/958,797	10/05/2004	3751	895 440.00	1008-100501	3 9	10 25	3

CONFIRMATION NO. 1704

33852
MICHAEL J. D'AURELIO
96 CHURCH STREET
CHAGRIN FALLS, OH 44022

FILING RECEIPT



OC000000014408087

Date Mailed: 11/19/2004

Receipt is acknowledged of this regular Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. 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 write to the Office of Initial Patent Examination's Filing Receipt Corrections, facsimile number 703-746-9195. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections 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 (if appropriate).

Applicant(s)

Michael J. Schuster, Joliet, IL;
Larry Schneider, Wadsworth, IL;

Power of Attorney: The patent practitioners associated with Customer Number **33852**.

Domestic Priority data as claimed by applicant

This application is a CIP of 10/798,606 03/11/2004 PAT 6,823,889

Foreign Applications

If Required, Foreign Filing License Granted: 11/18/2004

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US10/958,797**

Projected Publication Date: Request for Non-Publication Acknowledged

Non-Publication Request: Yes

Early Publication Request: No

**** SMALL ENTITY ****

Title

Toilet fill valve with adjustable bowl fill flow

Preliminary Class

004

**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 Office of Export Administration, Department of Commerce (15 CFR 370.10 (j)); 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).

18351
100504
U.S. PTO**UTILITY PATENT APPLICATION TRANSMITTAL
(Small Entity)***(Only for new nonprovisional applications under 37 CFR 1.53(b))*Docket No.
1008-100501Total Pages in this Submission
63**COMMISSIONER FOR PATENTS**P.O. Box 1450
Alexandria, VA 22313-1450

Transmitted herewith for filing under 35 U.S.C. 111(a) and 37 C.F.R. 1.53(b) is a new utility patent application for an invention entitled:

TOILET FILL VALVE WITH ADJUSTABLE BOWL FILL FLOW

and invented by:

Michael J. Schuster15535 U.S. PTO
10/958797
100504If a **CONTINUATION APPLICATION**, check appropriate box and supply the requisite information:☐ Continuation ☐ Divisional ☒ Continuation-in-part (CIP) of prior application No.: 10/798,606

Which is a:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.: _____

Which is a:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.: _____

Enclosed are:

Application Elements

1. ☒ Filing fee as calculated and transmitted as described below
2. ☒ Specification having 23 pages and including the following:
 - a. ☒ Descriptive Title of the Invention
 - b. ☒ Cross References to Related Applications *(if applicable)*
 - c. ☐ Statement Regarding Federally-sponsored Research/Development *(if applicable)*
 - d. ☐ Reference to Sequence Listing, a Table, or a Computer Program Listing Appendix
 - e. ☒ Background of the Invention
 - f. ☐ Brief Summary of the Invention
 - g. ☒ Brief Description of the Drawings *(if filed)*
 - h. ☒ Detailed Description
 - i. ☒ Claim(s) as Classified Below
 - j. ☒ Abstract of the Disclosure

**UTILITY PATENT APPLICATION TRANSMITTAL
(Small Entity)**

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

Docket No.
1008-100501

Total Pages in this Submission
63

Application Elements (Continued)

3. ☒ Drawing(s) *(when necessary as prescribed by 35 USC 113)*
- a. ☒ Formal Number of Sheets 9
- b. ☐ Informal Number of Sheets _____
4. ☒ Oath or Declaration
- a. ☒ Newly executed *(original or copy)* ☐ Unexecuted
- b. ☐ Copy from a prior application (37 CFR 1.63(d)) *(for continuation/divisional application only)*
- c. ☒ With Power of Attorney ☐ Without Power of Attorney
- d. ☐ DELETION OF INVENTOR(S)
Signed statement attached deleting inventor(s) named in the prior application,
see 37 C.F.R. 1.63(d)(2) and 1.33(b).
5. ☐ Incorporation By Reference *(usable if Box 4b is checked)*
The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied under Box 4b, is considered as being part of the disclosure of the accompanying application and is hereby incorporated by reference therein.
6. ☐ CD ROM or CD-R in duplicate, large table or Computer Program (Appendix)
7. ☐ Application Data Sheet (See 37 CFR 1.76)
8. ☐ Nucleotide and/or Amino Acid Sequence Submission *(if applicable, all must be included)*
- a. ☐ Computer Readable Form (CFR)
- b. ☐ Specification Sequence Listing on:
- i. ☐ CD-ROM or CD-R (2 copies); or
- ii. ☐ Paper
- c. ☐ Statement(s) Verifying Identical Paper and Computer Readable Copy

Accompanying Application Parts

9. ☐ Assignment Papers (cover sheet & document(s))
10. ☐ 37 CFR 3.73(B) Statement (when there is an assignee)
11. ☐ English Translation Document (if applicable)
12. ☒ Information Disclosure Statement/PTO-1449 ☒ Copies of IDS Citations
13. ☐ Preliminary Amendment
14. ☒ Return Receipt Postcard (MPEP 503) (Should be specifically itemized)
15. ☐ Certified Copy of Priority Document(s) (if foreign priority is claimed)
16. ☒ Certificate of Mailing
- ☐ First Class ☒ Express Mail *(Specify Label No.):* ED 301842629 US

(Small Entity)

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

Docket No.
1008-100501

Total Pages in this Submission
63

Accompanying Application Parts (Continued)

17. ☒ Applicant claims small entity status. See 37 CFR 1.27.

☐ (Optional) Small Entity Statement(s) - Specify Number of Statements Submitted:

18. ☐ Additional Enclosures (please identify below):

--

Request That Application Not Be Published Pursuant To 35 U.S.C. 122(b)(2)

9. ☒ Pursuant to 35 U.S.C. 122(b)(2), Applicant hereby requests that this patent application not be published pursuant to 35 U.S.C. 122(b)(1). Applicant hereby certifies that the invention disclosed in this 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 of applications 18 months after filing of the application.

Warning

An applicant who makes a request not to publish, but who subsequently files in a foreign country or under a multilateral international agreement specified in 35 U.S.C. 122(b)(2)(B)(i), must notify the Director of such filing not later than 45 days after the date of the filing of such foreign or international application. A failure of the applicant to provide such notice within the prescribed period shall result in the application being regarded as abandoned, unless it is shown to the satisfaction of the Director that the delay in submitting the notice was unintentional.

**UTILITY PATENT APPLICATION TRANSMITTAL
(Small Entity)**

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

Docket No.
1008-100501

Total Pages in this Submission
63

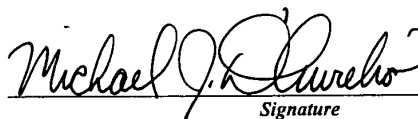
Fee Calculation and Transmittal

CLAIMS AS FILED

For	#Filed	#Allowed	#Extra	Rate	Fee
Total Claims	25	- 20 =	5	x \$9.00	\$45.00
Indep. Claims	3	- 3 =	0	x \$44.00	\$0.00
Multiple Dependent Claims (check if applicable) ☐					\$0.00
BASIC FEE					\$395.00
OTHER FEE (specify purpose)					\$0.00
TOTAL FILING FEE					\$440.00

- ☐ A check in the amount of _____ to cover the filing fee is enclosed.
- ☒ The Director is hereby authorized to charge and credit Deposit Account No. **50-2425** as described below.
- ☒ Charge the amount of **\$440.00** as filing fee.
- ☒ Credit any overpayment.
- ☒ Charge any additional filing fees required under 37 C.F.R. 1.16 and 1.17.
- ☐ Charge the issue fee set in 37 C.F.R. 1.18 at the mailing of the Notice of Allowance, pursuant to 37 C.F.R. 1.311(b).
- ☐ Payment by credit card. Form PTO-2038 is attached.
- 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.**

Dated: 10/05/2004


Signature

Customer Number: 33852

CC:

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of:	)	
Michael J. Schuster	)	
Filing Date: Herewith	)	Atty Docket No.: 1008-100501
Title: TOILET FILL VALVE WITH	)	Atty Reference: 1008-100501
ADJUSTABLE BOWL FILL FLOW	)	
	)	
	)	

CERTIFICATE OF MAILING BY EXPRESS MAIL

I hereby certify that the following correspondence:

Utility Patent Application (including coversheet) (24 pages)
9 Drawings (Formal) (9 pages)
Utility Application Transmittal in duplicate (8 pages)
Declaration/Power of Attorney (2 pages)
1 Return Receipt Postcard
IDS/Forms 1449 (5 pages)
1 Prior Art Reference (14 pages)

is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 with Express Mail No. ED 301842629 US on the date indicated below in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

10/5/04
Date

Michael J. D'Aurelio
Michael J. D'Aurelio
Registration Number 40,977

COMBINED DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare that:

My residence, post office address, and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

TOILET FILL VALVE WITH ADJUSTABLE BOWL FILL FLOW

the specification of which

☒ is attached hereto.

☐ was filed on _____ as U.S. Patent Application Serial Number _____.

☐ was filed on _____ as a U.S. Patent Application
under Express Mail Number _____.

☐ is set forth in PCT International Application Number _____ filed on _____;
☐ and as amended under PCT Article 19 on _____

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above. I acknowledge the duty to disclose information which is material to the patentability of the above identified invention as defined in Title 37, Code of Federal Regulations §1.56.

CLAIM FOR BENEFIT OF U.S. PROVISIONAL APPLICATION(S) UNDER 35 U.S.C. §119(e)

I hereby claim the benefit under Title 35, United States Code §119(e) of any United States provisional application(s) listed below:

APPLICATION SERIAL NUMBER	FILING DATE

CLAIM FOR BENEFIT OF U.S. APPLICATION(S) UNDER 35 U.S.C. §120

I hereby claim the benefit under 35 U.S.C. §120 of any United States application(s) or PCT International Application(s) designating the United States of America listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior application(s) in the manner provided by the first paragraph of 35 USC §112, I acknowledge the duty to disclose material information as defined in 37 CFR §1.56(a) which became available between the filing date of the prior application and the national or PCT international filing date of this application.

APPLICATION SERIAL NUMBER	FILING DATE	STATUS (patented/pending/abandoned)
10/798,606	March 11, 2004	Pending

CLAIM OF FOREIGN PRIORITY UNDER 35 U.S.C. §119

I hereby claim foreign priority benefits under Title 35, United States Code Section 119 of any foreign application(s) for patent or inventor(s) certificate listed below and have also identified below any foreign application for patent or inventor(s) certificate having a filing date before that of the application of which priority is claimed:

COUNTRY	APPLICATION NUMBER	DATE FILED	PRIORITY CLAIMED UNDER 35 U.S.C. §119	
			☐ Yes	☐ No
			☐ Yes	☐ No

Combined Declaration and Power of Attorney
Page 1 of 2

POWER OF ATTORNEY

As a named inventor, I hereby appoint the practitioners associated with

Customer Number: 33852

as my/our attorney(s) or agent(s) to prosecute this application and to transact all business in the United States Patent and Trademark Office connected therewith.

Correspondence Address:

Please direct all correspondence to the address associated with the above-mentioned customer number, which is D'Aurelio & Mathews, LLC, 96 Church Street, Chagrin Falls, Ohio 44022.

Please direct all telephone calls in the first instance to:

Michael J. D'Aurelio
Telephone: (440) 729-7450
Facsimile: (440) 729-7465

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued therein.

Signature of Sole or First Inventor

Full Name of Inventor: Michael J. Schuster
Residence: 612 Nicholson Street, Joliet, Illinois 60435
Post Office Address: 612 Nicholson Street, Joliet, Illinois 60435
Citizenship: United States

Inventor's Signature: Michael J. Schuster Date: 9-27-04

Signature of Second Inventor

Full Name of Inventor: Larry Schneider
Residence: 39155 N. Pine Grove Avenue, Wadsworth, Illinois 60083
Post Office Address: 39155 N. Pine Grove Avenue, Wadsworth, Illinois 60083
Citizenship: United States

Inventor's Signature: Larry Schneider Date: 9/23/04

Signature of Third Inventor

Full Name of Inventor: N/A
Residence: N/A
Post Office Address: N/A
Citizenship: N/A

Inventor's Signature: _____ Date: _____

Combined Declaration and Power of Attorney
Page 2 of 2

MULTIPLE DEPENDENT CLAIM FEE CALCULATION SHEET							SERIAL NO.	FILING DATE			
							APPLICANT(S)				
CLAIMS											
	AS FILED		AFTER 1ST AMENDMENT		AFTER 2ND AMENDMENT						
	IND	DEP	IND	DEP	IND	DEP				IND	DEP
1							51				
2							52				
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43							93				
44							94				
45							95				
46							96				
47							97				
48							98				
49							99				
50							100				
TOTAL IND.	3						TOTAL IND.				
TOTAL DEP.	22						TOTAL DEP.				
TOTAL CLAIMS	25						TOTAL CLAIMS				

CERTIFICATION UNDER 37 CFR 1.10

I hereby certify that this correspondence (along with any other paper referred to as being attached or enclosed) is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR §1.10 with Express Mail No. ED 301842629 US on the date indicated below in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA, 22313-1450

10/5/04
Date

Michael J. D'Aurelio
Michael J. D'Aurelio

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of:	)	
Michael J. Schuster	)	
	)	
Serial Number: N/A	)	Art Unit: N/A
	)	
Filing Date: Herewith	)	Examiner: N/A
	)	
Title: TOILET FILL VALVE WITH ADJUSTABLE	)	Docket No.: 1008-100501
BOWL FILL FLOW	)	
	)	
	)	

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This Information Disclosure Statement is submitted:

- ☒ under 37 CFR §1.97(b).
- ☐ under 37 CFR §1.97(c) together with either a:
- ☐ a statement under 37 CFR §1.97(e) is provided below; or
 - ☐ a fee of \$_____ as required under 37 CFR 1.17(p) paid as indicated below.
- ☐ under 37 CFR §1.97(d) together with a statement under 37 CFR §1.97(e) as provided below; and a fee of \$_____ as set forth under 37 CFR 1.17(p) paid as indicated below.

In addition, the following apply as indicated:

- ☒ Submitted herewith is/are form(s) PTO 1449 along with copies of patents, publications, or other information of which applicant(s) are aware that applicant(s) believe(s) may be material to the examination of this application and for which there may be a duty to disclose in accordance with 37 CFR §1.56.
- ☐ Submitted herewith is/are forms PTO 1449 that identify the patents, publications, or other information previously cited or submitted to the Office in the following application(s) upon which this application relies for an earlier filing date under 35 U.S.C. §120.

Serial Number	Filing Date

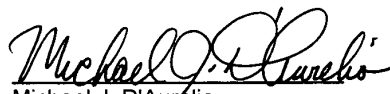
- ☐ A concise explanation of the relevance of any foreign language patents, publications, and other information listed on the form(s) PTO 1449 submitted herewith as presently understood by the individual(s) designated in 37 CFR §1.56(c) most knowledgeable about the content is given on the attached sheet, or where a foreign language patent is cited in a search report or other action by a foreign patent office in a counterpart foreign application, an English language version of the search report or action which indicates the degree of relevance found by the foreign office is listed on form PTO 1449 and is enclosed herewith.
- ☐ The undersigned hereby states as set forth under 37 CFR §1.97(e)(1) that each item of information contained in this 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 this information disclosure statement.
- ☐ The undersigned hereby states as set forth under 37 CFR §1.97(e)(2) that no item of information contained in this 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.

Any fee due as indicated above is provided as indicated below:

- ☐ A check in the amount of \$_____ is enclosed herewith that covers or includes the required fee as indicated above.
- ☐ A form PTO-2038 is enclosed herewith authorizing a credit card charge in the amount of \$_____.
- ☒ Please charge to Deposit Account 50-2425 the sum of \$0.00.
- ☒ The Commissioner is authorized to charge any insufficiencies and the Commissioner is hereby requested to credit any overpayment to Deposit Account 50-2425.

Applicant(s) respectfully requests that the references listed in the form(s) PTO 1449 be "made of record" in the above-identified patent application.

Respectfully submitted,


 Michael J. D'Aurelio
 Registration Number 40,977

D'Aurelio & Mathews, LLC
 96 Church Street
 Chagrin Falls, OH 44022
 Phone: (440) 729-7450
 Fax: (440) 729-7465

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 (Use as many sheets as necessary)		Complete if Known	
		Application Number	
		Filing Date	Herewith
		First Named Inventor	Michael J. Schuster
		Art Unit	
		Examiner Name	
Sheet 1	of 3	Attorney Docket Number	1008-100501

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- 2002/0092090 A1	07-18-2002	Johnson	
		US- 2002/0162166 A1	11-07-2002	Saar et al.	
		US- 3,986,216	10-19-1976	Davis et al.	
		US- 3,994,628	11-30-1976	Kemper	
		US- 4,007,498	02-15-1977	Pearson	
		US- 4,017,916	04-19-1977	Pearson	
		US- 4,032,822	06-28-1977	Un	
		US- 4,090,532	05-23-1978	Story, Jr.	
		US- 4,145,775	03-27-1979	Butler	
		US- 4,392,260	07-12-1983	Bensen	
		US- 4,707,867	11-24-1987	Kawabe et al.	
		US- 4,764,996	08-23-1988	Pino	
		US- 4,793,588	12-27-1988	Lavery, Jr.	
		US- 4,918,764	04-24-1990	Haselswerdt et al.	
		US- 4,980,932	01-01-1991	Stemples	
		US- 5,007,452	04-16-1991	Antunez	
		US- 5,036,553	08-06-1991	Sanderson	
		US- 5,052,060	10-01-1991	Makita et al.	
		US- 5,134,729	08-04-1992	Shaw	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date	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)	MM-DD-YYYY			

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, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.

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.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)	Complete if Known	
	Application Number	
	Filing Date	Herewtih
	First Named Inventor	Michael J. Schuster
	Art Unit	
	Examiner Name	
Sheet 2 of 3	Attorney Docket Number	1008-100501

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- 5,245,710	09-21-1993	Haselswerdt et al.	
		US- 5,362,026	11-08-1994	Kobayashi et al.	
		US- 5,432,959	07-18-1995	Ellsworth et al.	
		US- 5,469,586	11-28-1995	Tsutsui et al.	
		US- 5,708,991	01-20-1998	DeMarco	
		US- 5,715,860	02-10-1998	Horad	
		US- 6,202,227 B1	03-20-2001	Gurowitz	
		US- 6,209,576 B1	04-03-2001	Davis	
		US- 6,263,519 B1	07-24-2001	Parsons et al.	
		US- 6,560,790 B2	05-13-2003	Saar et al.	
		US- 4,420,845	12-20-1983	Antunez	
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FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date	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)	MM-DD-YYYY			

Examiner Signature	Date Considered
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*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, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.

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	N/A
				Filing Date	Herewith
				First Named Inventor	Michael J. Schuster
				Art Unit	N/A
				Examiner Name	N/A
				Attorney Docket Number	1008-100501
Sheet	3	of	3		

[illegible]

Examiner Signature		Date Considered	
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*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.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language translation is attached. 3 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 120 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, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

PATENT APPLICATION FEE DETERMINATION RECORD

Effective October 1, 2004

Application or Docket Number

10958797

CLAIMS AS FILED - PART I

	(Column 1)	(Column 2)
TOTAL CLAIMS	10	
FOR	NUMBER FILED	NUMBER EXTRA
TOTAL CHARGEABLE CLAIMS	10 minus 20 = *	0
INDEPENDENT CLAIMS	3 minus 3 = *	0
MULTIPLE DEPENDENT CLAIM PRESENT ☐		

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

SMALL ENTITY
TYPE ☐

OR OTHER THAN
SMALL ENTITY

RATE	FEE
BASIC FEE	395.00
X\$ 9=	
X44=	
+150=	
TOTAL	395.00

RATE	FEE
BASIC FEE	790.00
X\$18=	
X88=	
+300=	
TOTAL	

CLAIMS AS AMENDED - PART II

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	*	Minus **	=
Independent	*	Minus ***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐			

SMALL ENTITY

OR OTHER THAN
SMALL ENTITY

RATE	ADDI- TIONAL FEE
X\$ 9=	
X44=	
+150=	
TOTAL ADDIT. FEE	

RATE	ADDI- TIONAL FEE
X\$18=	
X88=	
+300=	
TOTAL ADDIT. FEE	

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	*	Minus **	=
Independent	*	Minus ***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐			

RATE	ADDI- TIONAL FEE
X\$ 9=	
X44=	
+150=	
TOTAL ADDIT. FEE	

RATE	ADDI- TIONAL FEE
X\$18=	
X88=	
+300=	
TOTAL ADDIT. FEE	

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT C	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	*	Minus **	=
Independent	*	Minus ***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐			

RATE	ADDI- TIONAL FEE
X\$ 9=	
X44=	
+150=	
TOTAL ADDIT. FEE	

RATE	ADDI- TIONAL FEE
X\$18=	
X88=	
+300=	
TOTAL ADDIT. 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 number found in the appropriate box in column 1.

PATENT APPLICATION SERIAL NO. _____

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE
FEE RECORD SHEET

10/08/2004 SHASSEN1 00000084 502425 10958797

01 FC:2001 395.00 DA
02 FC:2202 45.00 DA

Adjustment date: 11/18/2004 HMOHAMH1
10/08/2004 SHASSEN1 00000084 502425 10958797
02 FC:2202 45.00 CR

PTO-1556
(5/87)

U.S. Government Printing Office: 2002 — 489-287/89033

Express Mail Label No. ED 3018426 JS

**UTILITY PATENT APPLICATION TRANSMITTAL
(Small Entity)**

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

Docket No.
1008-100501Total Pages in this Submission
63**COMMISSIONER FOR PATENTS**P.O. Box 1450
Alexandria, VA 22313-1450

Transmitted herewith for filing under 35 U.S.C. 111(a) and 37 C.F.R. 1.53(b) is a new utility patent application for an invention entitled:

TOILET FILL VALVE WITH ADJUSTABLE BOWL FILL FLOW

and invented by:

Michael J. Schuster

U.S. PTO
10/958797

10/05/2004

If a **CONTINUATION APPLICATION**, check appropriate box and supply the requisite information:☐ Continuation ☐ Divisional ☒ Continuation-in-part (CIP) of prior application No.: 10/798,606

Which is a:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.: _____

Which is a:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.: _____

Enclosed are:

Application Elements

1. ☒ Filing fee as calculated and transmitted as described below
2. ☒ Specification having 23 pages and including the following:
 - a. ☒ Descriptive Title of the Invention
 - b. ☒ Cross References to Related Applications (if applicable)
 - c. ☐ Statement Regarding Federally-sponsored Research/Development (if applicable)
 - d. ☐ Reference to Sequence Listing, a Table, or a Computer Program Listing Appendix
 - e. ☒ Background of the Invention
 - f. ☐ Brief Summary of the Invention
 - g. ☒ Brief Description of the Drawings (if filed)
 - h. ☒ Detailed Description
 - i. ☒ Claim(s) as Classified Below
 - j. ☒ Abstract of the Disclosure

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**UTILITY PATENT APPLICATION TRANSMITTAL
(Small Entity)***(Only for new nonprovisional applications under 37 CFR 1.53(b))*Docket No.
1008-100501Total Pages in this Submission
63**Application Elements (Continued)**

3. ☒ Drawing(s) *(when necessary as prescribed by 35 USC 113)*
- a. ☒ Formal Number of Sheets 9
- b. ☐ Informal Number of Sheets _____
4. ☒ Oath or Declaration
- a. ☒ Newly executed *(original or copy)* ☐ Unexecuted
- b. ☐ Copy from a prior application (37 CFR 1.63(d)) *(for continuation/divisional application only)*
- c. ☒ With Power of Attorney ☐ Without Power of Attorney
- d. ☐ DELETION OF INVENTOR(S)
Signed statement attached deleting inventor(s) named in the prior application,
see 37 C.F.R. 1.63(d)(2) and 1.33(b).
5. ☐ Incorporation By Reference *(usable if Box 4b is checked)*
The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied under Box 4b, is considered as being part of the disclosure of the accompanying application and is hereby incorporated by reference therein.
6. ☐ CD ROM or CD-R in duplicate, large table or Computer Program (Appendix)
7. ☐ Application Data Sheet (See 37 CFR 1.76)
8. ☐ Nucleotide and/or Amino Acid Sequence Submission *(if applicable, all must be included)*
- a. ☐ Computer Readable Form (CFR)
- b. ☐ Specification Sequence Listing on:
- i. ☐ CD-ROM or CD-R (2 copies); or
- ii. ☐ Paper
- c. ☐ Statement(s) Verifying Identical Paper and Computer Readable Copy

Accompanying Application Parts

9. ☐ Assignment Papers (cover sheet & document(s))
10. ☐ 37 CFR 3.73(B) Statement (when there is an assignee)
11. ☐ English Translation Document (if applicable)
12. ☒ Information Disclosure Statement/PTO-1449 ☒ Copies of IDS Citations
13. ☐ Preliminary Amendment
14. ☒ Return Receipt Postcard (MPEP 503) (Should be specifically itemized)
15. ☐ Certified Copy of Priority Document(s) (if foreign priority is claimed)
16. ☒ Certificate of Mailing
- ☐ First Class ☒ Express Mail (Specify Label No.): ED 301842629 US

**UTILITY PATENT APPLICATION TRANSMITTAL
(Small Entity)***(Only for new nonprovisional applications under 37 CFR 1.53(b))*Docket No.
1008-100501Total Pages in this Submission
63**Accompanying Application Parts (Continued)**

- 17.
- ☒
- Applicant claims small entity status. See 37 CFR 1.27.

☐ (Optional) Small Entity Statement(s) - Specify Number of Statements Submitted: _____

- 18.
- ☐
- Additional Enclosures (please identify below):

Request That Application Not Be Published Pursuant To 35 U.S.C. 122(b)(2)

- 19.
- ☒
- Pursuant to 35 U.S.C. 122(b)(2), Applicant hereby requests that this patent application not be published pursuant to 35 U.S.C. 122(b)(1). Applicant hereby certifies that the invention disclosed in this 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 of applications 18 months after filing of the application.

Warning

An applicant who makes a request not to publish, but who subsequently files in a foreign country or under a multilateral international agreement specified in 35 U.S.C. 122(b)(2)(B)(i), must notify the Director of such filing not later than 45 days after the date of the filing of such foreign or international application. A failure of the applicant to provide such notice within the prescribed period shall result in the application being regarded as abandoned, unless it is shown to the satisfaction of the Director that the delay in submitting the notice was unintentional.

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UTILITY PATENT APPLICATION TRANSMITTAL (Small Entity) <i>(Only for new nonprovisional applications under 37 CFR 1.53(b))</i>					Docket No. 1008-100501	
					Total Pages in this Submission 63	
Fee Calculation and Transmittal						
CLAIMS AS FILED						
For	#Filed	#Allowed	#Extra	Rate	Fee	
Total Claims	25	- 20 =	5	x \$9.00	\$45.00	
Indep. Claims	3	- 3 =	0	x \$44.00	\$0.00	
Multiple Dependent Claims (check if applicable) ☐					\$0.00	
BASIC FEE					\$395.00	
OTHER FEE (specify purpose) _____					\$0.00	
TOTAL FILING FEE					\$440.00	
☐ A check in the amount of _____ to cover the filing fee is enclosed. ☒ The Director is hereby authorized to charge and credit Deposit Account No. 50-2425 as described below. ☒ Charge the amount of \$440.00 as filing fee. ☒ Credit any overpayment. ☒ Charge any additional filing fees required under 37 C.F.R. 1.16 and 1.17. ☐ Charge the issue fee set in 37 C.F.R. 1.18 at the mailing of the Notice of Allowance, pursuant to 37 C.F.R. 1.311(b). ☐ Payment by credit card. Form PTO-2038 is attached. 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. Dated: 10/05/2004  Signature Customer Number: 33852 cc:						

Best Available Copy

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of:

Michael J. Schuster

Filing Date: Herewith

Atty Docket No.: 1008-100501

Title: TOILET FILL VALVE WITH
ADJUSTABLE BOWL FILL FLOW

Atty Reference: 1008-100501

CERTIFICATE OF MAILING BY EXPRESS MAIL

I hereby certify that the following correspondence:

Utility Patent Application (including coversheet) (24 pages)
9 Drawings (Formal) (9 pages)
Utility Application Transmittal in duplicate (8 pages)
Declaration/Power of Attorney (2 pages)
1 Return Receipt Postcard
IDS/Forms 1449 (5 pages)
1 Prior Art Reference (14 pages)

is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 with Express Mail No. ED 301842629 US on the date indicated below in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

10/5/04
Date

Michael J. D'Aurelio
Michael J. D'Aurelio
Registration Number 40,977

Best Available Copy

Docket No. 1008-100501

TO ALL WHOM IT MAY CONCERN:

Be it known that we, Michael J. Schuster, residing at 612 Nicholson Street, Joliet, Illinois 60435, a citizen of the United States, and Larry Schneider residing at 39155 N. Pine Grove Ave., Wadsworth, Illinois 60083, a citizen of the United States, have invented the invention described in the following Patent Application entitled

TOILET FILL VALVE WITH ADJUSTABLE BOWL FILL FLOW.

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TOILET FILL VALVE WITH ADJUSTABLE BOWL FILL FLOW

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] The present patent application is a Continuation-in-Part Application claiming priority to U.S. Patent Application entitled "Toilet Fill Valve with Adjustable Bowl Fill Flow" filed on March 11, 2004 and assigned Serial Number 10/798,606.

BACKGROUND

[0002] A toilet fill valve in a toilet typically includes a water outlet that provides water for refilling a toilet bowl during a flush cycle. Unfortunately, the water flowing out of such conventional water outlets to fill a toilet bowl provide much more water than is necessary to fill the average toilet bowl. Consequently, much of the water that flows into a toilet bowl during the average flush cycle is lost down the drain. This translates into a loss of millions of gallons of water each year.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

[0003] The invention can be understood with reference to the following drawings. The components in the drawings are not necessarily to scale. Also, in the drawings, like reference numerals designate corresponding parts throughout the several views.

[0004] FIG. 1 is a drawing of a side view of a toilet fill valve according to an embodiment of the present invention;

[0005] FIG. 2 is a drawing of a top view of the toilet fill valve of FIG. 1;

[0006] FIG. 3 is a drawing of a cutaway view of a toilet tank within which the toilet fill valve of FIG. 1 is installed;

[0007] FIG. 4 is a drawing of a side view of a toilet fill valve according to an embodiment of the present invention;

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[0008] FIGS. 5A and 5B are drawings that illustrate one example of a coupling of a bowl fill valve to the toilet fill valve of FIG. 4 according to an embodiment of the present invention;

[0009] FIGS. 6A, 6B, and 6C are drawings that illustrate another example of a coupling of a bowl fill valve to the toilet fill valve of FIG. 4 according to an embodiment of the present invention;

[0010] FIG. 7 is a drawing that illustrates still another example of a coupling of a bowl fill valve to the toilet fill valve of FIG. 4 according to an embodiment of the present invention;

[0011] FIGS. 8A and 8B are drawings that illustrate an example of a bowl fill valve that is coupled to the toilet fill valve of FIG. 4 according to an embodiment of the present invention; and

[0012] FIGS. 9A and 9B are drawings that illustrate another example of a bowl fill valve that is coupled to the toilet fill valve of FIG. 4 according to an embodiment of the present invention.

DETAILED DESCRIPTION

[0013] With reference to FIG. 1, shown is a toilet fill valve 100 according to an embodiment of the present invention. The toilet fill valve 100 includes a water inlet 103 at the bottom of the toilet fill valve 100 that is configured to be coupled to a water source outside of a toilet tank within which the toilet fill valve 100 is installed. The toilet fill valve 100 includes one or more water outlets 106 that are configured to supply water into a toilet tank within which the toilet fill valve 100 is installed. The toilet fill valve 100 may be, for example, a pilot style fill valve. However, it is understood that the toilet fill valve 100 may be any style of fill valve such as, for example, a ballcock valve, etc. The toilet fill valve 100 also includes a bowl fill valve 109 according to an embodiment of the present invention. The bowl fill valve 109 includes a bowl fill valve inlet 113 and a bowl fill valve outlet 116. In addition, the bowl fill valve 109 includes a handle 119 that facilitates a manual adjustment of the bowl fill valve 109.

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[0014] The bowl fill valve 109 is integral with the toilet fill valve 100. In this respect, the term "integral" refers to the fact that the bowl fill valve 109 and the toilet fill valve 100 comprise a single structure. In this respect, the bowl fill valve 109 may be included within the body of the toilet fill valve 100 as a portion of the toilet fill valve 100 in a single piece construction. Specifically, the bowl fill valve 109 may be molded as a portion of the toilet fill valve 100 or it may be snapped or clamped into place, or it may be attached to the toilet fill valve 100 in some other manner, etc.

[0015] Within the toilet fill valve 100, the bowl fill valve inlet 113 is operatively coupled to the water inlet 103. In this respect, when the toilet fill valve 100 is open and water flows from the water inlet 103 to the water outlets 106 and into a toilet tank, an amount of water is also supplied to the bowl fill valve inlet 113 that flows through the bowl fill valve 109 and out the bowl fill valve outlet 116. By virtue of the manual setting of the handle 119 of the bowl fill valve 109, the flow of water through the bowl fill valve 109 is regulated. In this manner, the flow of water is regulated so that enough water flows out of the bowl fill valve 109 to fill a toilet bowl without wasting any water down a drain.

[0016] Thus, the bowl fill valve 109 is configured to supply an adjustable flow of water out of the bowl fill outlet 116 that is directed to a toilet bowl during a flush cycle of a toilet to fill the toilet bowl. The flow of water is adjusted so that just enough flows out of bowl fill valve 109 so as to fill the toilet bowl without wasting any water.

[0017] The toilet fill valve 100 includes a float 123 that is operatively coupled to an actuating arm (not shown) by a translating stem 126. The float 123 floats on the water within a toilet tank and, depending on the location of the float 123 along the toilet fill valve 100, the toilet fill valve 100 is open or closed as can be appreciated by those with ordinary skill in the art. The bowl fill valve 109 and the actuating arm (not shown) are each located on the toilet fill valve 100 so as to prevent any interference between the bowl fill valve 109 and the translational stem 126 or the actuating arm as will be discussed.

[0018] According to an embodiment of the present invention, the bowl fill valve 109 may include a number of biased positions. In this respect, the movement of the

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handle 119 may cause the bowl fill valve 109 to move from one predefined biased position to other predefined biased positions. In this respect, various mechanisms such as tabs, snaps, or other position biasing structures may be employed. The biased positions of the bowl fill valve 109 help ensure that the bowl fill valve 109 remains in a given setting selected by a user by a manual manipulation of the handle 119 during the normal course of operation of the toilet fill valve 100. Thus, by virtue of the biased positions, the bowl fill valve 109 is prevented from moving out of a desired position set by a user over a long period of use due to vibration and other factors as can be appreciated by those with ordinary skill in the art.

[0019] The bowl fill valve 109 may be, for example, a ball valve, a gate valve, a globe valve, a plug valve, a diaphragm valve, a butterfly valve, a needle valve, a sliding gate, a quick turn valve, a knife valve or any other appropriate type of valve as can be appreciated by those with ordinary skill in the art.

[0020] To operate the toilet fill valve 100, the toilet fill valve 100 is first installed within a toilet tank. When a toilet is flushed and the tank is drained, the float 123 moves downward along the toilet fill valve 100 and, consequently, the toilet fill valve 100 opens to allow water to flow from the water inlet 103 and out the water outlets 106 into a toilet tank. At the same time, water flows into the bowl fill valve inlet 113 and out the bowl fill valve outlet 116 through the bowl fill valve 109. Based on the setting of the handle 119, the bowl fill valve 109 determines the precise flow rate of the water that flows out the bowl fill valve outlet 116. A tube is typically employed to direct the water flowing out the bowl fill valve outlet 116 to an overflow tube in the toilet tank. In this respect, the water flowing out the bowl fill valve outlet 116 refills the toilet bowl of the respective toilet.

[0021] Referring next to FIG. 2, shown is a top view of the toilet fill valve 100 according to an embodiment of the present invention. In this respect, the actuating arm 129 of the bowl fill valve 100 is seen with respect to the bowl fill valve 109. The actuating arm 129 is coupled to the float by way of the translational stem 126 (FIG. 1). In this respect, the actuating arm 129 extends in an orthogonal direction relative to a longitudinal axis 133 of the toilet fill valve 100. The longitudinal axis 133 is centered in

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the toilet fill valve 100 along the length of the toilet fill valve 100. Also, the bowl fill valve 109 extends in an orthogonal direction relative to the longitudinal axis 133 of the toilet fill valve 100. In order to prevent interference between the bowl fill valve 109 and the translational stem 126 or the actuating arm 129, the actuating arm 129 is angularly offset relative to the bowl fill valve 109 as shown. In this respect, the translational stem 126 is coupled to the free end of the actuating arm 129. By virtue of the angular offset between the bowl fill valve 109 and the actuating arm 129, the operation of the bowl fill valve 109 does not interfere with the operation of the toilet fill valve 100 itself by virtue of the fact that the float 123 (FIG. 1) can move freely with the movement of the translational stem 126 in order for proper operation of the toilet fill valve 100.

[0022] With reference to FIG. 3, shown is the toilet fill valve 100 as installed within a toilet tank 143 according to an embodiment of the present invention. In this respect, the toilet fill valve 100 includes the water inlet 103 that is coupled to a water source outside of the toilet tank 143. The toilet fill valve 100 also includes one or more water outlets 106 that direct a flow of water into the toilet tank 143 during the operation of a flush cycle. The bowl fill valve 109 includes the bowl fill valve inlet (not shown) and the bowl fill valve outlet 116, where the bowl fill valve inlet is operatively coupled to the water inlet 103 as described above. Also, the bowl fill valve 109 is integrated with the body of the toilet fill valve 100 as described above.

[0023] A tube 146 is coupled to the bowl fill valve outlet 116 and is directed into the overflow tube 149 of the toilet tank 143. The tube 146 directs water that flows out of the bowl fill valve outlet 116 into the overflow tube 149 and refills the toilet bowl associated with the toilet tank 143 as can be appreciated by those with ordinary skill in the art. The bowl fill valve 109 is configured to supply the adjustable flow of water out the bowl fill valve outlet through the tube 146 and into the overflow tube 149 for filling the toilet bowl during the flush cycle of the toilet. In this respect, no pressure is seen within the tube 146. Specifically, the fact that the bowl fill valve 109 is integral with the toilet fill valve 100 prevents the creation of a pressure head in the tube 146 as would be the case if the bowl fill valve 109 were included in the middle of the tube 146. The

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fact that a pressure head is not created in any portion of the tube 146 prevents the tube 146 from working its way off of the bowl fill valve outlet 116 over time.

[0024] When installed, the bowl fill valve 109 is calibrated for the particular flush cycle of the toilet within which the toilet fill valve 100 is installed. To calibrate the bowl fill valve 109, a user first determines the water level in the toilet bowl when the toilet bowl is full of water. This gives the user a starting and an ending point for determining when the toilet bowl of the respective toilet is full. Next, the bowl fill valve handle 109 is adjusted so that the bowl fill valve 109 is placed in a predefined position that allows a predefined flow of water to refill the toilet bowl. In this manner, one adjusts the actual flow of water that refills the toilet bowl. Thereafter, the user flushes the toilet itself. Next, the user determines if the flow of water into the toilet bowl by virtue of the adjustments made to the bowl fill valve 109 is adequate to refill the toilet bowl during the flush cycle. This may be determined, by identifying whether the level of the water in the toilet bowl reaches the full level determined at the beginning of the bowl fill valve calibration above.

[0025] The flow of water from the bowl fill valve 109 should be set so as to ensure that the water level in the toilet bowl reaches the full level at about the same time that the flush cycle ends. In other words, the level of water in the toilet bowl should reach its highest level at the same time that the flush cycle ends. This prevents any water from being lost down the drain associated with the toilet.

[0026] If the amount of water that flows into the toilet bowl is inadequate to refill the toilet bowl during the flush cycle as described above, then one should repeat the steps of adjusting the bowl fill valve, flushing the toilet, and then once again determining if the flow of water into the toilet bowl is adequate to refill the toilet bowl during a flush cycle.

[0027] Ultimately, during use of the toilet that includes the toilet fill valve 100 and the toilet tank 143, a user flushes the toilet and a predetermined flow of water exits the bowl fill valve outlet 116 and is directed into the toilet bowl. After the toilet tank has drained during the flush cycle, a flapper closes in the toilet tank and the toilet tank refills. During the refilling of the tank, the water supplied by the bowl fill valve 109

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fills the toilet bowl itself. The amount of water supplied by the bowl fill valve in the time it takes to refill the toilet tank should be approximately equal to the amount of water needed to fill the toilet bowl. By virtue of the fact that the bowl fill valve 100 is integrated within the toilet fill valve 100, a pressure head is prevented from being created due to any potential pinching of the tube 146 or other similar adjustment mechanism.

[0028] With reference to FIG. 4, shown is a toilet fill valve 200 according to another embodiment of the present invention. The toilet fill valve 200 includes the same water inlet 103 and the water outlets 106 as the toilet fill valve 100 (FIG. 1). The toilet fill valve 200 also includes the float 123 and the translational stem 126 as was described with reference to the toilet fill valve 100. In addition, the toilet fill valve 200 includes a bowl fill valve 203 that is integral with the toilet fill valve 200 as will be described. As stated above, the term "integral" refers to the fact that the bowl fill valve 200 and the toilet fill valve 100 comprise a single structure. In this embodiment, the bowl fill valve 200 is a separate component that is attached the body of the toilet fill valve 100, thereby forming the integral, single structure.

[0029] The toilet fill valve 200 also includes a bowl fill outlet port 206 that radially extends from a portion of a body 209 of the toilet fill valve 200. In this respect, the bowl fill outlet port is operatively coupled to the water inlet 103. In particular, when the toilet fill valve 200 is in an "on" state, water that flows in the water inlet 103 flows out of both the water outlets 106 and the bowl fill outlet port 206. The water flowing out of the bowl fill outlet port 206 flows through the bowl fill valve 203 as will be described.

[0030] The bowl fill valve 203 includes a bowl fill valve inlet port 213 and a bowl fill valve outlet port 216. The bowl fill valve inlet port 213 is compatible with the bowl fill outlet port 206, where the bowl fill valve inlet port 213 is coupled to the bowl fill outlet port 206 when the bowl fill valve 203 is coupled or affixed to the toilet fill valve 200. The bowl fill valve inlet port 213 is compatible with the bowl fill outlet port 206 in the sense that both the bowl fill valve inlet port 213 and the bowl fill outlet port 206 comprise various structures that couple together when the bowl fill valve 203 is

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connected to the bowl fill outlet port 206 as will be described. In particular, various embodiments of the coupling between the bowl fill valve inlet port 213 and the bowl fill outlet port 206 are described herein.

[0031] The bowl fill valve 203 also includes a handle that may be adjusted by hand to adjust a flow of water through the bowl fill valve 203 during a flush operation of a toilet in which the toilet fill valve 200 is installed. Typically, the handle 219 is initially adjusted to a desired position when the toilet fill valve 200 is installed and generally remains in such position for the continued operation of the toilet fill valve 200. During the life cycle of the bowl fill valve 203, it may be possible that the bowl fill valve 203 is adjusted to take into account various changes in the operation of the toilet fill valve 200 such as, for example, changes in pressure or other operational changes.

[0032] The bowl fill valve 203 also includes a nipple 223. The nipple 223 is adapted to mate with a tube that extends from the bowl fill valve outlet port 216 to the overflow tube 149 (FIG. 3) in a manner similar to that as shown in FIG. 3 with respect to the tube 146 (FIG. 3) that extends from the nipple 116 (FIG. 3) to the overflow tube 149 (FIG. 3). The bowl fill valve 203 extends beyond the bowl fill outlet port 206 in a radial direction with respect to the portion of the body 209 of the toilet fill valve 200.

[0033] In some embodiments, the bowl fill outlet port 206 may comprise a female receptacle and, correspondingly, the bowl fill valve inlet port 213 may comprise a male end compatible with the female receptacle. Alternatively, the bowl fill valve inlet port 213 may comprise a female receptacle and the bowl fill outlet port 206 may comprise a male end compatible with such female receptacle.

[0034] The toilet fill valve 200 further includes an actuating arm (not shown) that extends in a radial direction that is orthogonal relative to a longitudinal axis of the toilet fill valve 200 in a manner similar as that described with reference to the toilet fill valve 100 (FIG. 1). The longitudinal axis is defined as an axis that runs from the water inlet 103 through the body 209 of the toilet fill valve 200 and out the top of the toilet fill valve 200. In one embodiment, the bowl fill valve 203 extends radially in an orthogonal direction relative to such longitudinal axis of the toilet fill valve 200. Also, in one embodiment, the actuating arm is angularly offset relative to the bowl fill valve 203.

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to prevent interference between the bowl fill valve 203 and the translational stem 126 that extends from the float 123 to a free end of the actuating arm. This allows the float 123 to move up and down and to engage the actuating arm during the normal operation of the toilet fill valve 200 during various flush cycles.

[0035] In addition, the bowl fill valve 203 may be constructed with a number of biased positions that help prevent the bowl fill valve 203 from moving out of adjustment over time when the force of pressure develops therein. Also, the biased positions aid a user in actual adjustment of the bowl fill valve 203 as can be appreciated.

[0036] The toilet fill valve 200 provides an advantage in that the body 209 of the toilet fill valve 200 may be constructed with the bowl fill outlet port 206 using a molding process that is much less complex than attempting to mold the entire bowl fill valve 203 within the structure of the body 209 as a single molded construction as was described with reference to one embodiment of the toilet fill valve 100. In this regard, the bowl fill valve 203 may be constructed as a separate component to the body 209 of the toilet fill valve 200 and assembled for distribution to end users.

[0037] Due to the fact that the bowl fill valve 203 is affixed to the toilet fill valve 200 through the coupling of the bowl fill outlet port 206 with the bowl fill valve inlet port 213, then a pressure head that develops within the bowl fill valve 203 due to the adjustment of the handle 219 during operation of the toilet fill valve 200 will not cause the bowl fill valve 203 to fall off of the toilet fill valve 200. Thus, when the toilet fill valve 200 is installed in a toilet tank 143, a user may adjust the opening of the bowl fill valve 203 by adjusting the handle 219 until a desired flow of water flows out of the bowl fill valve outlet port 216 into a tube and into the overflow tube 149 of a toilet. This flow of water is typically established to refill a toilet bowl of a toilet. In this regard, the flow of the water into the overflow tube 149 that refills the toilet bowl during a toilet flush operation may be regulated or adjusted so as to minimize or eliminate the amount of water that is lost down the drain of a toilet due to over filling of the toilet bowl during a flush cycle of a toilet. In one embodiment, the bowl fill valve 203 is

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adjusted until the filling of the toilet bowl of the toilet coincides with the end of the flush cycle, thereby resulting in little or no loss of water.

[0038] Referring next to FIG. 5A, shown is a coupling 233 between one embodiment of the bowl fill outlet port 206, denoted herein as bowl fill outlet port 206a, and an embodiment of the bowl fill valve inlet port 213, denoted herein as bowl fill valve inlet port 213a. The bowl fill valve inlet port 213a includes a slot 236 in a side wall 239. The bowl fill outlet port 206a comprises a rib (not shown) that extends from a side wall 243 that is inserted into the slot 236 when the bowl fill inlet port 213a is inserted into the bowl fill outlet port 206a. The mating of the slot 236 with the rib prevents the rotation of the bowl fill valve 213a with respect to the bowl fill outlet port 206a when the bowl fill valve inlet port 213a is inserted into the bowl fill outlet port 206a. Alternatively, there may be a number of slots 236 in the side wall 239 of the bowl fill valve inlet port 213a and a corresponding number of ribs extending from the side wall 243 of the bowl fill outlet port 206a.

[0039] The bowl fill valve inlet port 213a also includes an annular protrusion 246 that extends from the side wall 239 of the bowl fill valve inlet port 213a. Correspondingly, an annular groove (not shown) in the side wall 243 of the bowl fill valve outlet port 206a is provided that mates up with the annular protrusion 246 when the bowl fill valve inlet port 213 is inserted into the bowl fill outlet port 206a. In this respect, the annular protrusion 246 is snap fit into the annular groove (not shown), thereby affixing the bowl fill valve 203a to the bowl fill valve outlet port 206a.

[0040] Turning then to FIG. 5B, shown is a cutaway view of the coupling 233 between the bowl fill outlet port 206a and the bowl fill valve inlet port 213a according to an embodiment of the present invention. In this respect, the bowl fill outlet port 206a is depicted with two ribs 249 extending from the side wall 243 within the bowl fill outlet port 206a. Also, the bowl fill outlet port 206a includes the annular groove 253 into which the annular protrusion 246 snaps when the bowl fill valve inlet port 213a is inserted into the bowl fill outlet port 206a. In this respect, the mating of the annular protrusion 246 with the annular groove 253 fixes the bowl fill valve 203 to the bowl fill

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outlet port 206a. In this respect, the bowl fill valve 203 becomes an integral portion of the toilet fill valve 200.

[0041] Also, the fit between the annular protrusion 246 is a snug fit that forms a seal between the bowl fill outlet port 206a and the bowl fill valve inlet port 213a that prevents the leakage of water from the coupling 233 during a flush cycle. Alternatively, a snug fit may occur between other mating surfaces of the bowl fill outlet port 206a and the bowl fill valve inlet port 213a that prevents leakage of water from the coupling 233.

[0042] With reference to FIGS. 5A and 5B, even though the slots 236 are depicted as being formed within the side wall 239 of the bowl fill valve inlet port 213 and the ribs 249 extend from the side wall 243 within the bowl fill outlet port 206, it is possible that this arrangement may be reversed where the slots 236 are formed in the side wall 243 of the bowl fill outlet port 206a and the ribs 249 extend from the side wall 239 of the bowl fill valve inlet port 213a. In addition, the annular groove 253 may be created in the side wall 239 of the bowl fill valve inlet port 213 and the annular projection 246 may extend inward from the side wall 243 within the bowl fill outlet port 206 in a reverse arrangement than that shown with reference to FIG. 5B.

[0043] Referring next to FIG. 6A, 6B, and 6C, shown is a coupling 263 between another embodiment of the bowl fill outlet port 206, denoted herein as bowl fill outlet port 206b, and another embodiment of the bowl fill valve inlet port 213, denoted herein as bowl fill valve inlet port 213b. The bowl fill valve inlet port 213b includes at least two locking ears 266 that mate with corresponding locking grooves 269 in the bowl fill outlet port 206b. In particular, the locking ears 266 extend from a side wall 271 of the bowl fill valve inlet port 213b. The locking grooves 269 are disposed in the side wall 273 of the bowl fill outlet port 206b. When the bowl fill valve 203 is inserted and twisted into the bowl fill outlet port 206b, each of the locking ears 266 is situated in a locking position of one of the locking grooves 269 as will be described. The coupling 263 further comprises a sealing ring 276 that may be, for example, a rubber O-ring or other type of sealing ring. The sealing ring 276 is compressed between an end of the bowl fill valve inlet port 213b and a seat within the bowl fill outlet port 206b as we

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described. While at least two locking ears 266 and corresponding locking grooves 269 are shown, it is possible that a design may be employed that comprises a single locking ear 266 and a single corresponding locking groove 269.

[0044] With reference to FIG. 6B, shown is a portion of the bowl fill valve inlet port 213b and the bowl fill outlet port 206b as the bowl fill valve inlet port 213b is inserted into the bowl fill outlet port 206b and is partially rotated such that the locking ears 266 are almost located in the locking positions 279. In this respect, each of the locking grooves 269 is a "J" formation. The J formation of the locking grooves 269 allows the locking ears 266 to slide down and around the partial loop of the J and seat in the locking position 279 such that the sealing ring 276 exerts a force against the end of the bowl fill valve inlet port 213b, thereby pushing the locking ears 266 into the locking positions 279 of the locking grooves 269 and holding the locking ears 266 in place. This ensures that the bowl fill valve 203 remains coupled to the bowl fill outlet port 206b.

[0045] With reference to FIG. 6C, shown is a cutaway view of the coupling 263 between the bowl fill outlet port 206b and the bowl fill valve inlet port 213b. In this respect, the bowl fill valve inlet port 213b is inserted into the bowl fill outlet port 206b in a manner such that the locking ears 266 mate with the locking grooves 269. When the locking ears 266 reach the bottom of the "J" of the locking grooves 269, then the bowl fill valve 203 is rotated so that the locking ears 266 may be seated in the locking positions 279.

[0046] The sealing ring 276 is seated against a portion of the bowl fill outlet port 206b. In one embodiment, this portion is a seating face 283 of the bowl fill outlet port 206b. Also, a portion of the bowl fill valve inlet port 213b is mated against the sealing ring 276. In one embodiment, this portion of the bowl fill valve inlet port 213b is an end face 286 such that the sealing ring is clamped between the seating face 283 and the end face 286 when the bowl fill valve inlet port 213b is inserted fully into the bowl fill outlet port 206b. The clamping or compression of the sealing ring 276 pushes the locking ears 266 into the locking position 279 of the locking grooves 269 once the bowl fill valve 203 is rotated accordingly. In this respect, the compressive force of the

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sealing ring 276 helps keep the bowl fill valve inlet port 213b of the bowl fill valve 203 mated with the bowl fill outlet port 206b. Also, the sealing ring 276 forms a seal between the bowl fill outlet port 206b and the bowl fill valve inlet port 213b that prevents leakage of water from the coupling 263 between the bowl fill outlet port 206b and the bowl fill valve inlet port 213b.

[0047] The locking positions 279 of the locking grooves and the locking ears 266 are located such that when the bowl fill valve 203 is rotated thereby positioning the locking ears 266 in the locking positions 279, the bowl fill valve 203 is substantially upright. In addition, the bowl fill outlet port 206b includes structural ribs 289 that provide greater structural stability for the bowl fill outlet port 206b and its attachment to the portion of the body 209 of the toilet fill valve 200 (FIG. 4). Alternatively, the bowl fill outlet port 206b may be attached without the structural ribs 289. In addition, it may be the case that the locking ears 266 extend inward from the side wall 273 of the bowl fill outlet port 206b and that the locking grooves 269 be situated within the side wall 271 of the bowl fill valve inlet port 213b.

[0048] Referring next to FIG. 7, shown is a cutaway view of a coupling 303 between a third embodiment of the bowl fill outlet port 206, denoted herein as bowl fill outlet port 206c and the bowl fill valve inlet port 213 denoted herein as bowl fill valve inlet port 213c. In this respect, the bowl fill outlet port 206c includes a first thread 306 disposed on a side wall 309 of the bowl fill outlet port 206c. A second thread 313 is disposed on a side wall of the bowl fill valve inlet port 213c that engages the first thread 306 disposed in the side wall of the bowl fill outlet port 206c. The bowl fill valve inlet port 213c is coupled to the bowl fill outlet port 206c by way of the first and second threads 306 and 313. Specifically, the bowl fill valve 203 may be screwed onto the bowl fill outlet port 206c by virtue of the threads 306 and 313. When the bowl fill valve inlet port 213c is screwed into the bowl fill valve outlet port 206c, a sealing ring is clamped between portions of the bowl fill valve inlet port 213c and the bowl fill outlet port 206c such as a seating face 319 of the bowl fill outlet port 206c and an end face 323 of the bowl fill valve inlet port 213c. In this respect, a seal is formed between the bowl fill outlet port 206c and the bowl fill valve inlet port 213c. Alternatively, the

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threads 306 and 313 may be specified so as to form an adequate seal between the bowl fill valve outlet port 206c and the bowl fill valve inlet port 213c for purposes of preventing leakage. As an additional alternative, the seating face 319 and the end face 323 or other portions of the bowl fill valve inlet port 213c and the bowl fill outlet port 206c may be compressed together to form a seal to prevent leakage.

Alternatively, the bowl fill outlet port 206c and the bowl fill valve inlet port 213c may be designed to include mating surfaces that perform a friction seal as can be appreciated.

[0049] Referring next to FIG. 8a, shown is one embodiment of the bowl fill valve 203, denoted herein as bowl fill valve 203a according to an embodiment of the present invention. The bowl fill valve 203a includes a handle 219a and a valve body 333. The bowl fill valve 203a includes the bowl fill valve outlet port 216a and the bowl fill valve inlet port (not shown) the bowl fill outlet port 216a includes a nipple 223a.

[0050] Referring then to FIG. 8b, shown is a cutaway view of the bowl fill valve 203a according to an embodiment of the present invention. In this respect, the valve body 333 forms a cavity within which a valve 336 is inserted as shown. A line contact 339 is formed between surfaces of the valve body 333 and the valve 336 so as to both hold the valve 336 within the cavity that is formed by the valve body 333 and to form a seal between the valve body 333 and the valve 336 to prevent water leakage. As seen, the valve 336 is integrated with the handle 219a in a single piece construction, although multiple piece construction may be employed.

[0051] With reference to FIGS. 9a and 9b, shown is a second embodiment of the bowl fill valve 203, denoted herein as bowl fill valve 203b according to an embodiment of the present invention. The bowl fill valve 203b includes a valve body 343 within which is inserted a valve 346. The bowl fill valve 203b further comprises the bowl fill valve outlet port 216b and a bowl fill valve inlet port (not shown). The bowl fill valve outlet port 216b includes a nipple 223b. The bowl fill valve 203b further includes a handle 209b for manual adjustment of the bowl fill valve 203b.

[0052] Referring next to FIG. 9b, shown is a cutaway view of the bowl fill valve 203b according to an embodiment of the present invention. As shown, the valve 346 is inserted into the valve body 343. A snap fit 349 affixes the valve 346 within the

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valve body 343. A seal is formed by virtue of an interference fit 353 between a surface of the valve 346 and an inner surface of the valve body 343. The bottom of the cavity within the valve 346 is closed by a cap 356 that may be spin welded onto the valve 346 after the valve is inserted into the valve body 343.

[0053] In addition, referring back to FIG. 4, other types of couplings may be employed between the bowl fill outlet port 206 the bowl fill valve inlet port 213. For example, the bowl fill outlet port 206 the bowl fill valve inlet port 213 may be configured to facilitate a compression fitting there between. Also, other snap fit and sealing configurations may be employed beyond those specifically described herein.

[0054] Although the invention is shown and described with respect to certain embodiments, it is obvious that equivalents and modifications will occur to others skilled in the art upon the reading and understanding of the specification. The present invention includes all such equivalents and modifications, and is limited only by the scope of the claims.

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CLAIMS

What is claimed is:

1. A toilet fill valve, comprising:
a water inlet;
a first water outlet configured to supply water to a toilet tank;
a bowl fill outlet port radially extending from a portion of a body of the toilet fill valve, the bowl fill outlet port being operatively coupled to the water inlet;
a bowl fill valve having a bowl fill valve inlet port and a bowl fill valve outlet port, wherein the bowl fill valve inlet port is compatible with the bowl fill outlet port and the bowl fill valve inlet port being coupled to the bowl fill outlet port; and
the bowl fill valve being configured to supply an adjustable flow of water out the bowl fill outlet port for filling a toilet bowl during a flush cycle of a toilet.
2. The toilet fill valve of claim 1, wherein bowl fill valve extends beyond the bowl fill outlet port in a radial direction with respect to a portion of the body of the toilet fill valve.
3. The toilet fill valve of claim 1, wherein:
the bowl fill outlet port further comprises a female receptacle; and
the bowl fill valve inlet port further comprises a male end compatible with the female receptacle.
4. The toilet fill valve of claim 1, wherein:
the bowl fill valve inlet port further comprises a female receptacle; and
the bowl fill outlet port further comprises a male end compatible with the female receptacle.

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5. The toilet fill valve of claim 1, further comprising:
a float;
an actuating arm coupled to the float, the actuating arm radially extending in an orthogonal direction relative to a longitudinal axis of the toilet fill valve;
and
the bowl fill valve extending in an orthogonal direction relative to the longitudinal axis of the toilet fill valve, wherein the actuating arm is angularly offset relative to the bowl fill valve, thereby preventing an interference with the bowl fill valve and a translational stem extending from the float to a free end of the actuating arm.
6. The toilet fill valve of claim 1, wherein the bowl fill valve outlet port further comprises a nipple adapted to mate with an end of a tube.
7. The toilet fill valve of claim 1, wherein the bowl fill valve further comprises a number of biased positions.
8. The toilet fill valve of claim 1, further comprising:
a rib extending from a side wall of the bowl fill outlet port; and
a slot in a side wall of the bowl fill valve inlet port, the rib being inserted into the slot, thereby preventing rotation of the bowl fill valve with respect to the bowl fill outlet port.

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9. The toilet fill valve of claim 1, further comprising:
a rib extending from a side wall of the bowl fill valve inlet port; and
a slot in a side wall of the bowl fill outlet port, the rib being inserted into the slot, thereby preventing rotation of the bowl fill valve with respect to the bowl fill outlet port.
10. The toilet fill valve of claim 1, further comprising:
an annular protrusion extending from a side wall of the bowl fill valve inlet port; and
an annular groove in a side wall of the bowl fill outlet port, the annular protrusion being snap-fit into the annular groove, thereby affixing the bowl fill valve to the bowl fill outlet port.
11. The toilet fill valve of claim 1, further comprising:
an annular protrusion extending from a side wall of the bowl fill outlet port; and
an annular groove in a side wall of the bowl fill valve inlet port, the annular protrusion being snap-fit into the annular groove, thereby affixing the bowl fill valve to the bowl fill outlet port.
12. The toilet fill valve of claim 1, further comprising:
at least one locking ear extending from a side wall of the bowl fill valve inlet port; and
at least one locking groove in a side wall of the bowl fill outlet port, the at least one locking ear being situated in a locking position of the at least one locking groove.

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13. The toilet fill valve of claim 12, further comprising a sealing ring clamped between a portion of the bowl fill valve inlet port and a portion of the bowl fill outlet port.

14. The toilet fill valve of claim 1, further comprising:
at least one locking ear extending from a side wall of the bowl fill outlet port; and

at least one locking groove in a side wall of the bowl fill valve inlet port, the at least one locking ear being situated in a locking position of the at least one locking groove.

15. The toilet fill valve of claim 14, further comprising a sealing ring clamped between a portion of the bowl fill valve inlet port and a portion of the bowl fill outlet port.

16. The toilet fill valve of claim 1, further comprising:
a first thread on a side wall of the bowl fill outlet port; and
a second thread on a side wall of the bowl fill valve inlet port, wherein the bowl fill valve inlet port is coupled to the bowl fill outlet port via the first and second threads.

17. The toilet fill valve of claim 16, further comprising a sealing ring clamped between a portion of the bowl fill valve inlet port and a portion of the bowl fill outlet port.

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18. A toilet with a toilet tank having an adjustable bowl fill water flow, comprising:

a toilet fill valve in the toilet tank, the toilet valve having a water inlet coupled to a water source outside of the toilet tank and a water outlet directing a flow of water into the toilet tank;

a bowl fill outlet port radially extending from a portion of a body of the toilet fill valve, the bowl fill outlet port being operatively coupled to the water inlet;

a bowl fill valve having a bowl fill valve inlet port and a bowl fill valve outlet port, wherein the bowl fill valve inlet port is compatible with the bowl fill outlet port and the bowl fill valve inlet port being coupled to the bowl fill outlet port;

a tube having a first end attached to the bowl fill valve outlet port and a second end directed into an overflow tube in the toilet tank, wherein a flow of water into the overflow tube is directed to a toilet bowl of the toilet; and

the bowl fill valve being configured to supply an adjustable flow of water out the bowl fill valve outlet port through the tube and into the overflow tube for filling the toilet bowl during a flush cycle of a toilet.

19. A method for providing an adjustable bowl fill water flow in a toilet fill valve, comprising the steps of:

operatively coupling a bowl fill outlet port to a water inlet of the toilet fill valve;

radially extending the bowl fill outlet port from a portion of a body of the toilet fill valve; and

coupling a bowl fill valve inlet port of a bowl fill valve directly to the bowl fill outlet port, the bowl fill valve inlet port being compatible with the bowl fill outlet port, the bowl fill valve being configured to provide for the adjustable bowl fill water flow out a bowl fill valve outlet port of the bowl fill valve for filling a toilet bowl during a flush cycle of a toilet.

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20. The method of claim 19, wherein the step of coupling of the bowl fill valve inlet port of the bowl fill valve directly to the bowl fill outlet port further comprises the step of mating a rib with a groove, thereby preventing rotation of the bowl fill valve with respect to the bowl fill outlet port.

21. The method of claim 19, wherein the step of coupling of the bowl fill valve inlet port of the bowl fill valve directly to the bowl fill outlet port further comprises the step of mating an annular protrusion with an annular groove, thereby affixing the bowl fill valve to the bowl fill outlet port.

22. The method of claim 19, wherein the step of coupling of the bowl fill valve inlet port of the bowl fill valve directly to the bowl fill outlet port further comprises the step of mating at least one locking ear with a corresponding at least one locking groove, respectively, the at least one locking ear being situated in a locking position of the at least one locking groove.

23. The method of claim 22, further comprising the step of clamping a sealing ring between a portion of the bowl fill valve inlet port and a portion of the bowl fill outlet port.

24. The method of claim 19, wherein the step of coupling of the bowl fill valve inlet port of the bowl fill valve directly to the bowl fill outlet port further comprises the step of mating a first thread associated with the bowl fill outlet port with a second thread associated with the bowl fill valve inlet port, wherein the bowl fill valve inlet port is coupled to the bowl fill outlet port via the first and second threads.

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25. The method of claim 24, further comprising the step of clamping a sealing ring between a portion of the bowl fill valve inlet port and a portion of the bowl fill outlet port.

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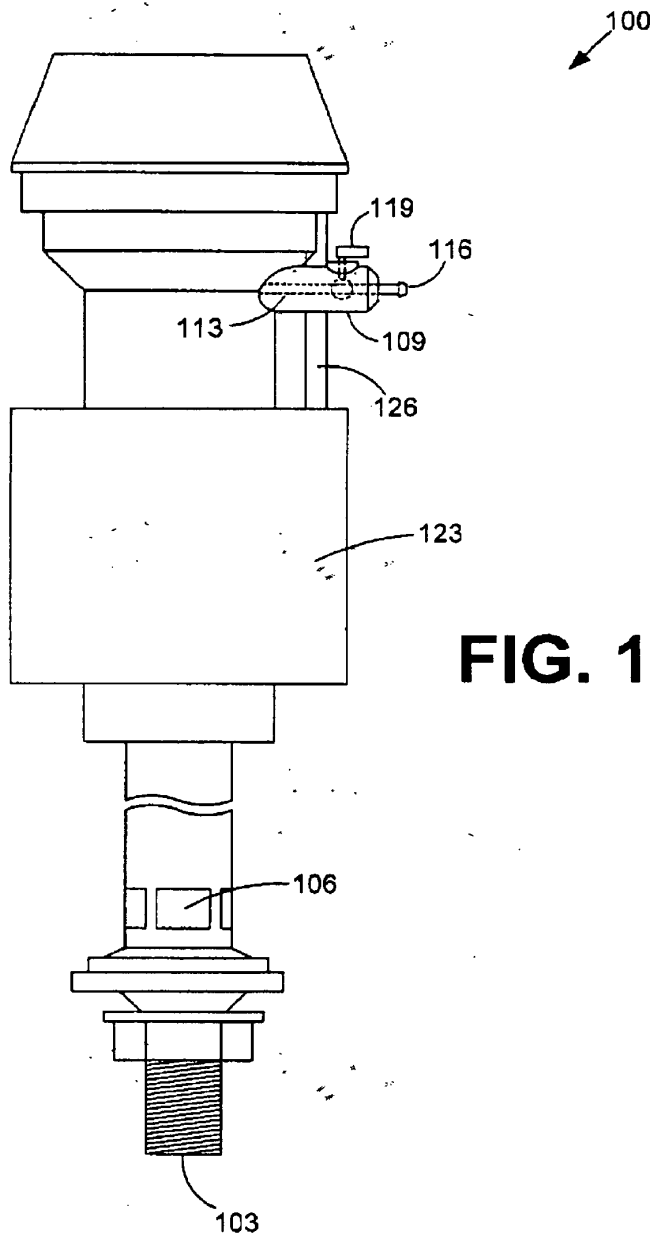
ABSTRACT OF THE DISCLOSURE

A toilet fill valve, toilet, and associated methods are provided with an adjustable bowl fill flow. In one embodiment, a toilet fill valve includes a water inlet and a first water outlet configured to supply water to a toilet tank. A bowl fill outlet port extends from a portion of a body of the toilet fill valve, the bowl fill outlet port being operatively coupled to the water inlet. The toilet fill valve includes a bowl fill valve having a bowl fill valve inlet port and a bowl fill valve outlet port, wherein the bowl fill valve inlet port is compatible with the bowl fill outlet port and the bowl fill valve inlet port being coupled to the bowl fill outlet port, the bowl fill valve radially extending from a portion of a body of the toilet fill valve. The bowl fill valve is configured to supply an adjustable flow of water out the bowl fill outlet port for filling a toilet bowl during a flush cycle of a toilet.

TOILET VALVE WITH ADJUSTABLE BOWL FILL RATE
Inventor: Michael J. Schuster and Larry Schneider
Attorney Docket Number: 1008-100501

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TOILET VALVE WITH ADJUSTABLE BOWL FILL FLOW

Inventor: Michael J. Schuster and Larry Schneider

Attorney Docket Number: 1008-100501

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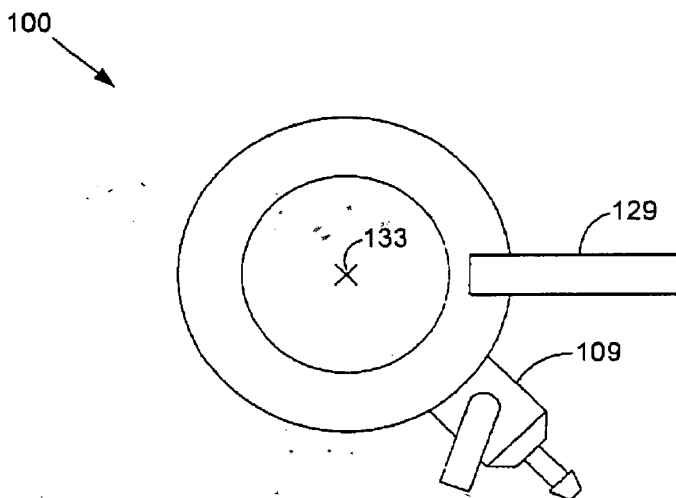


FIG. 2

TOILET VALVE WITH ADJUSTABLE BOWL FILL FLOW
Inventor: Michael J. Schuster and Larry Schneider
Attorney Docket Number: 1008-100501

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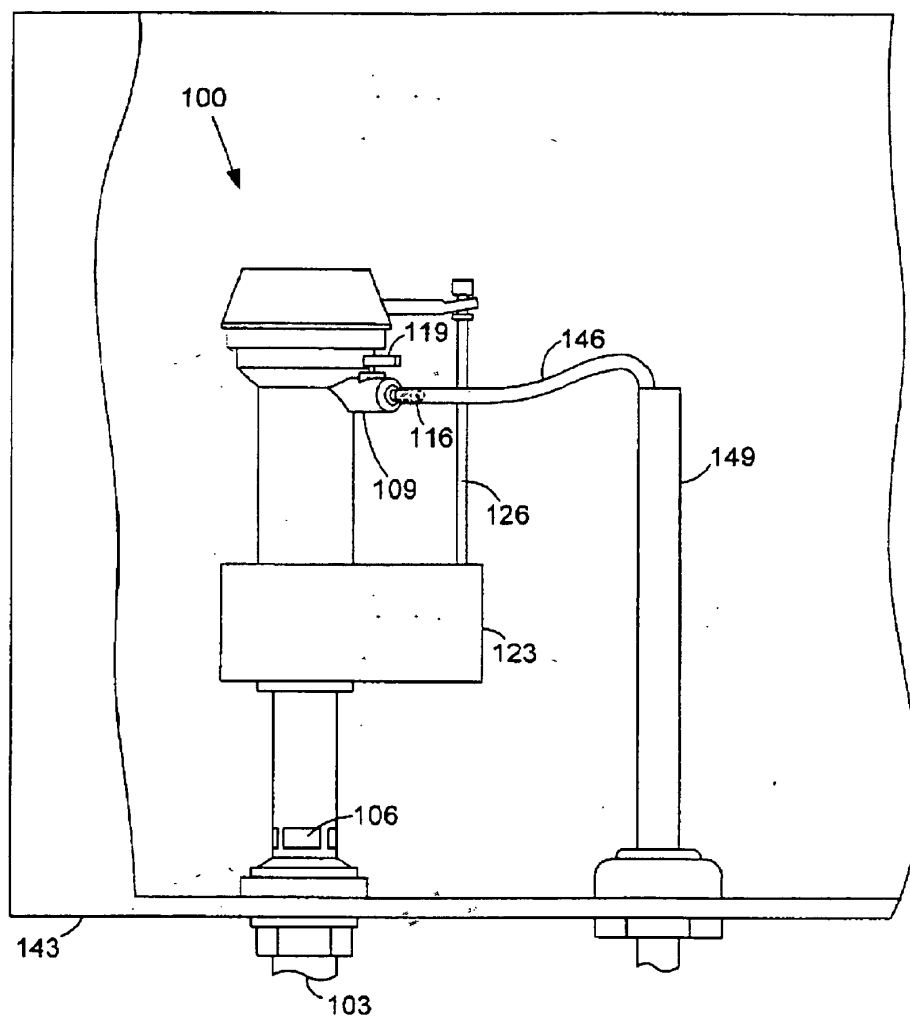
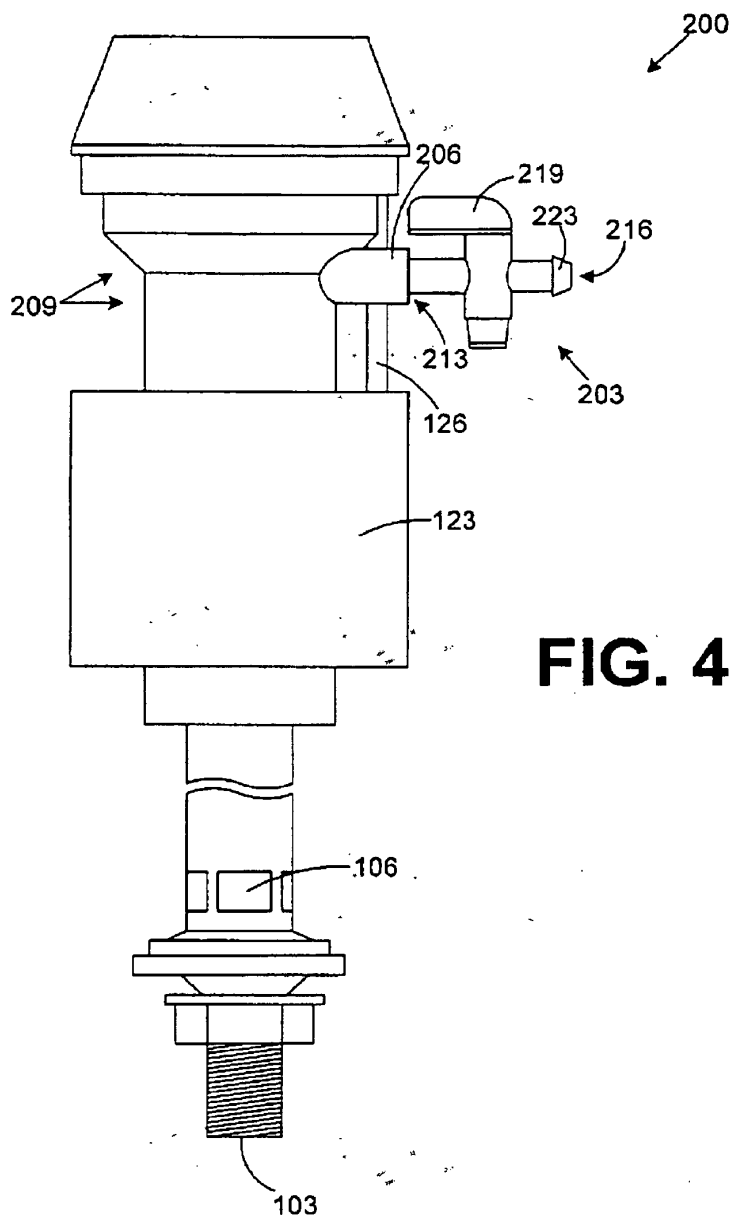


FIG. 3

TOILET VALVE WITH ADJUSTABLE BOWL FLOW
Inventor: Michael J. Schuster and Larry Schneider
Attorney Docket Number: 1008-100501

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TOILET VALVE WITH ADJUSTABLE BOWL FILLOW
 Inventor: Michael J. Schuster and Larry Schneider
 Attorney Docket Number: 1008-100501

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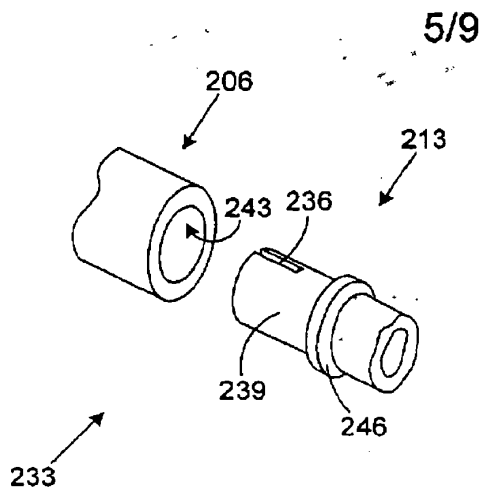


FIG. 5A

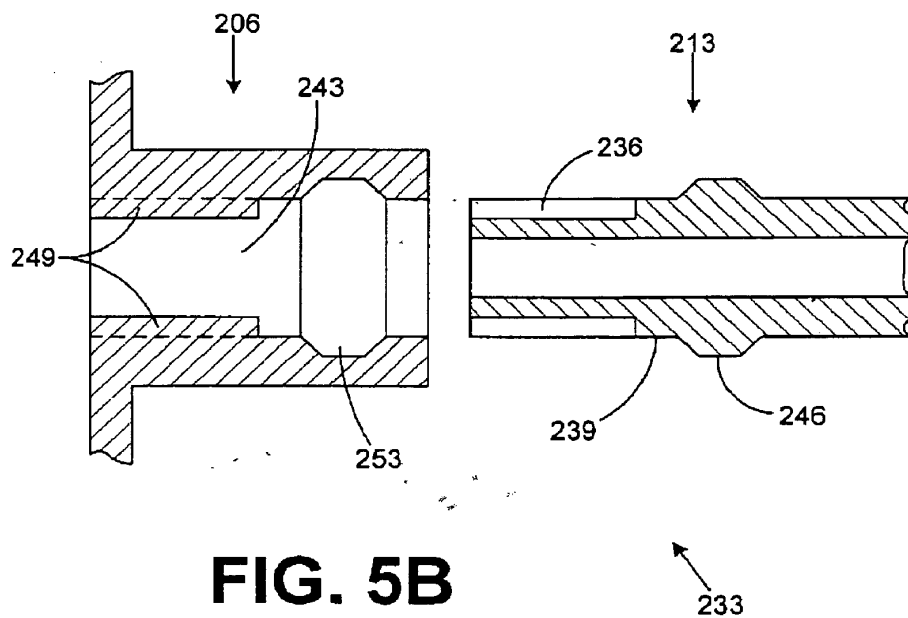


FIG. 5B

TOILET VALVE WITH ADJUSTABLE BOWL FLOW
 Inventor: Michael J. Schuster and Larry Schreiner
 Attorney Docket Number: 1008-100501

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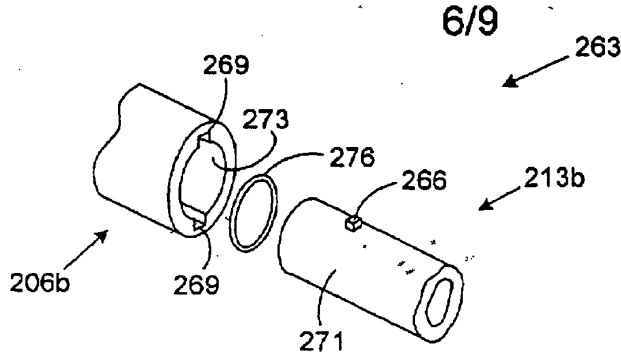


FIG. 6A

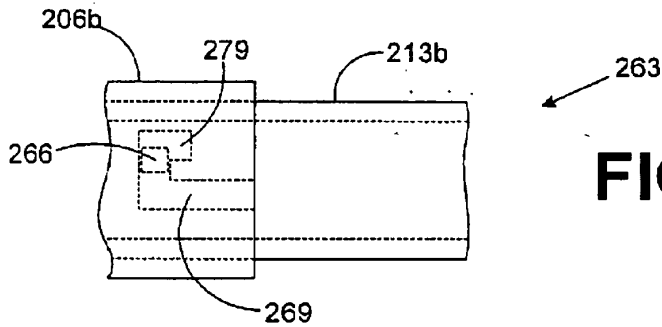


FIG. 6B

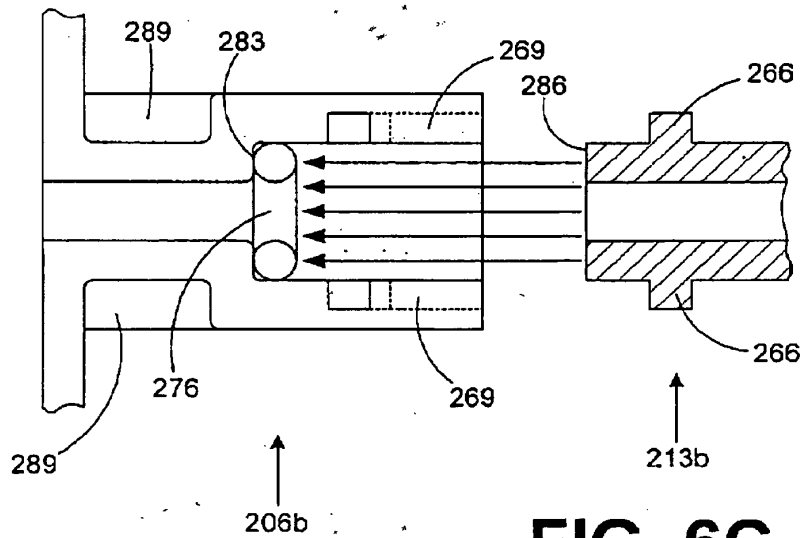


FIG. 6C

Attorney Docket Number: 1008-100501

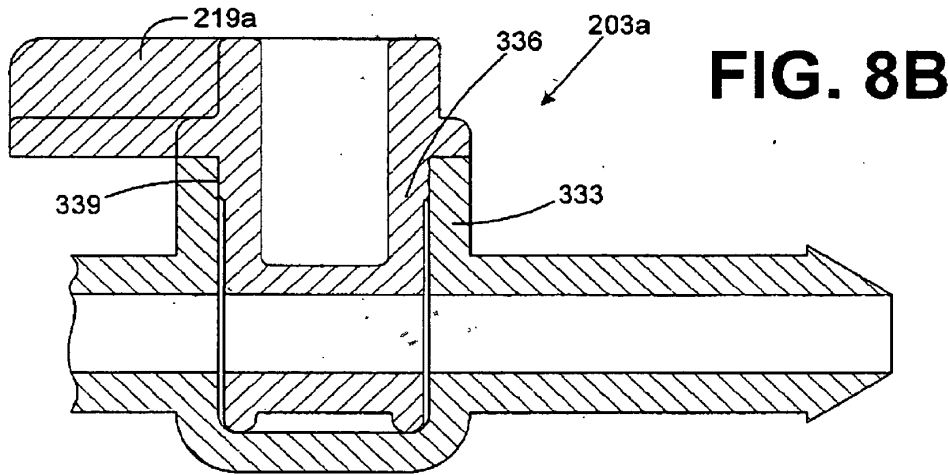
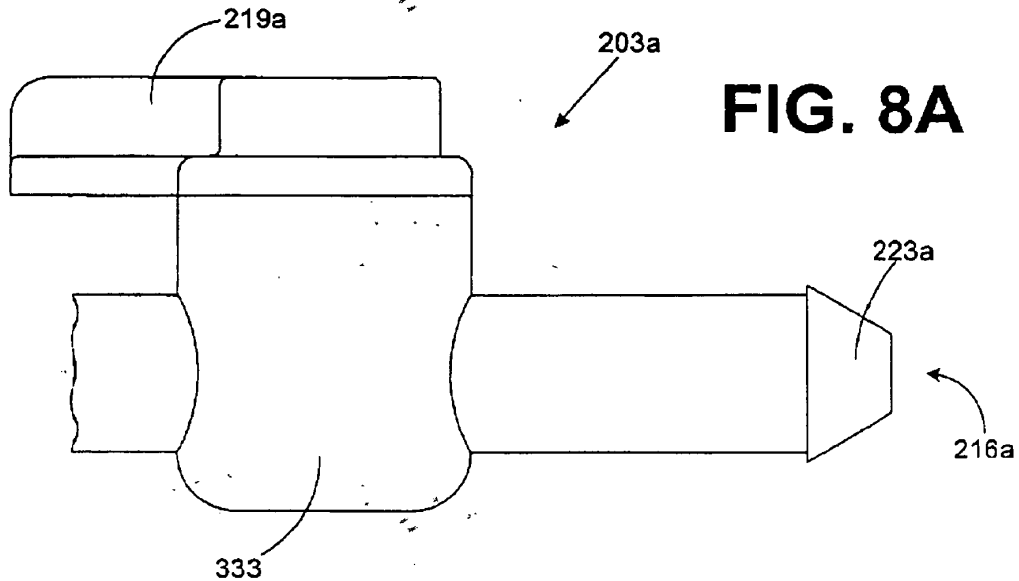
This diagram shows a second embodiment of the device in a cross-sectional view. It features a similar structure to the first embodiment, with a central component 213c and a base 206c. The upper part includes a top plate 306 and a top flange 309. The lower part includes a bottom plate 306 and a bottom flange 313. A central vertical member 319 is shown, with a top flange 316 and a bottom flange 323. A label 303 with an arrow points to the upper part of the device.

FIG. 7

TOILET FLUSH VALVE WITH ADJUSTABLE BOWL FLOW
 Inventor: Michael J. Schuster and Larry Schneck
 Attorney Docket Number: 1008-100501

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TOILET FL VALVE WITH ADJUSTABLE BOWL FLOW
 Inventor: Michael J. Schuster and Larry Schnelker
 Attorney Docket Number: 1008-100501

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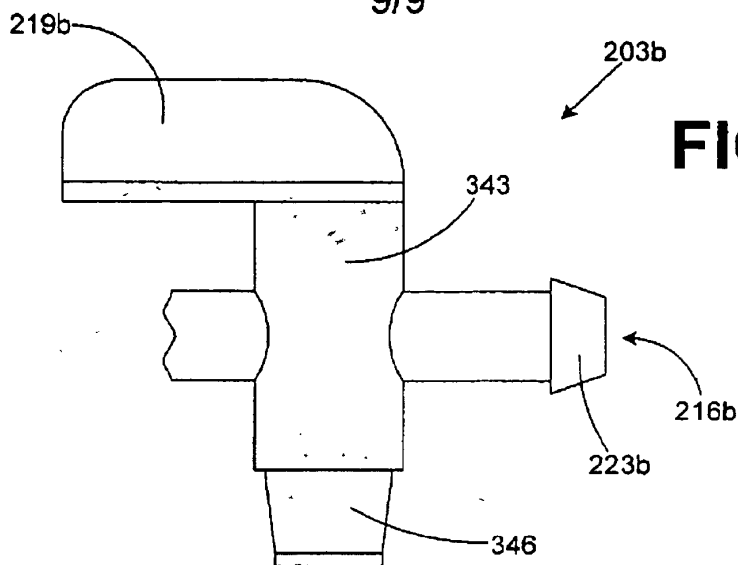


FIG. 9A

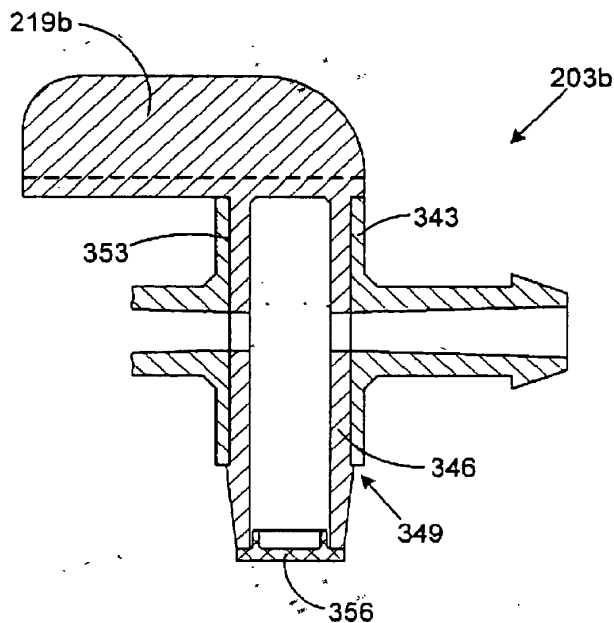


FIG. 9B

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PATENT APPLICATION SERIAL NO. _____

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE
FEE RECORD SHEET

10/08/2004 SHASSEN1 00000084 10958797

01 FC:2001	395.00 DA
02 FC:2202	45.00 DA

PTO-1556
(5/87)

*U.S. Government Printing Office: 2002 — 489-267/89033

PATENT APPLICATION FEE DETERMINATION RECORD

Effective October 1, 2004

Application or Docket Number

CLAIMS AS FILED - PART I

(Column 1) (Column 2)

TOTAL CLAIMS		
FOR	NUMBER FILED	NUMBER EXTRA
TOTAL CHARGEABLE CLAIMS	25 minus 20 =	* 5
INDEPENDENT CLAIMS	3 minus 3 =	*
MULTIPLE DEPENDENT CLAIM PRESENT ☐		

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

CLAIMS AS AMENDED - PART II

(Column 1) (Column 2) (Column 3)

AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	*	Minus	**	=
	Independent	*	Minus	***	=
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐				

(Column 1) (Column 2) (Column 3)

AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	*	Minus	**	=
	Independent	*	Minus	***	=
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐				

(Column 1) (Column 2) (Column 3)

AMENDMENT C		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	*	Minus	**	=
	Independent	*	Minus	***	=
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐				

* 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 number found in the appropriate box in column 1.

SMALL ENTITY TYPE ☐

OR OTHER THAN SMALL ENTITY

RATE	FEE
BASIC FEE	395.00
X\$ 9=	
X44=	
+150=	
TOTAL	

RATE	FEE
BASIC FEE	790.00
X\$18=	
X88=	
+300=	
TOTAL	

SMALL ENTITY

OR OTHER THAN SMALL ENTITY

RATE	ADDITIONAL FEE
X\$ 9=	
X44=	
+150=	
TOTAL	

RATE	ADDITIONAL FEE
X\$18=	
X88=	
+300=	
TOTAL	

RATE	ADDITIONAL FEE
X\$ 9=	
X44=	
+150=	
TOTAL	

RATE	ADDITIONAL FEE
X\$18=	
X88=	
+300=	
TOTAL	

RATE	ADDITIONAL FEE
X\$ 9=	
X44=	
+150=	
TOTAL	

RATE	ADDITIONAL FEE
X\$18=	
X88=	
+300=	
TOTAL	