503683000 02/05/2016

EPAS ID: PAT3729636

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

SUBMISSION TYPE:

CORRECTIVE ASSIGNMENT

Corrective Assignment to correct the ASSIGNOR INFORMATION previously recorded on Reel 034498 Frame 0272. Assignor(s) hereby confirms the ASSIGNMENT.

CONVEYING PARTY DATA

Name	Execution Date
MUELLER INTERNATIONAL, LLC	11/25/2014
ANVIL INTERNATIONAL, LLC	11/25/2014
MUELLER SYSTEMS, LLC	11/25/2014
HENRY PRATT COMPANY, LLC	11/25/2014

RECEIVING PARTY DATA

Name:	BANK OF AMERICA, N.A., AS ADMINISTRATIVE AGENT
Street Address:	335 MADISON AVENUE
Internal Address:	6TH FLOOR
City:	NEW YORK
State/Country:	NEW YORK
Postal Code:	10017

PROPERTY NUMBERS Total: 2

Property Type	Number		
Patent Number:	6674371		
Patent Number:	6543747		

CORRESPONDENCE DATA

Fax Number: (703)712-5050

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent

using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 703-712-5352

Email: jmiller@mcguirewoods.com

Correspondent Name: JOYCE MILLER

Address Line 1: 1750 TYSONS BLVD.

Address Line 2: SUITE 1800

Address Line 4: TYSONS CORNER, VIRGINIA 22102

ATTORNEY DOCKET NUMBER:	2039261-0117
NAME OF SUBMITTER:	JOYCE MILLER
SIGNATURE:	/Joyce Miller/

PATENT 503683000 REEL: 037732 FRAME: 0327

DATE SIGNED:	02/05/2016
Total Attachments: 18	
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PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3126157

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	SECURITY INTEREST

CONVEYING PARTY DATA

-	Name	Execution Date
	MUELLER INTERNATIONAL, LLC	11/25/2014
3	8 8 7 7 7 7 8 8 8 8 9 3 8 28 3 28 3 8 28 28 28 3 28 3 28 28 28 28 28 28 28 28 28 28 28 28 28	NATAR. L.C.C 11/2/5/79791V-

RECEIVING PARTY DATA HENRY PRATI CONPANY, LLC 11/25/2014

Name:	BANK OF AMERICA, N.A., AS ADMINISTRATIVE AGENT
Street Address:	335 MADISON AVENUE, 6TH FLOOR
City:	NEW YORK
State/Country:	NEW YORK
Postal Code:	10017

PROPERTY NUMBERS Total: 161

Property Type	Number
Patent Number:	8313065
Patent Number:	6035704
Patent Number:	6358408
Patent Number:	6635172
Patent Number:	6880566
Patent Number:	8733381
Patent Number:	6013150
Patent Number:	7178739
Patent Number:	6467500
Patent Number:	6598850
Patent Number:	5947152
Patent Number:	5778715
Patent Number:	D647784
Patent Number:	5944288
Patent Number:	8646814
Patent Number:	7240852
Patent Number:	7240853
Patent Number:	7240854
Patent Number:	8668206
Patent Number:	D631134
Patent Number:	D607541

ABL PATENT SECURITY AGREEMENT

This ABL Patent Security Agreement (this "<u>Agreement</u>"), dated as of November 25, 2014, is entered into by each of the undersigned (each, a "<u>Grantor</u>") in favor of Bank of America, N.A., as Administrative Agent (together with its successors, in such capacity, the "<u>Administrative Agent</u>") for the benefit of the Secured Parties (as defined in the Pledge and Security Agreement described below).

WHEREAS, each Grantor has executed and delivered that certain ABL Pledge and Security Agreement, dated on even date herewith, in favor of the Administrative Agent (as the same may be amended, restated, amended and restated or otherwise modified, the "Pledge and Security Agreement"), pursuant to which such Grantor has granted to the Administrative Agent, for the ratable benefit of the Secured Parties, a security interest in all of such Grantor's right, title, and interest in and to the Patent Collateral (as defined below).

NOW, THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, each Grantor and the Administrative Agent hereby agree as follows:

SECTION 1. <u>Defined Terms</u>. Capitalized terms not otherwise defined herein have the meanings set forth in the Pledge and Security Agreement.

SECTION 2. Grant of Security Interest. Each Grantor hereby collaterally assigns, grants, mortgages and pledges to the Administrative Agent, for the benefit of the Secured Parties, and hereby grants to the Administrative Agent, for the benefit of the Secured Parties, a security interest in all of the following property now owned or at any time hereafter acquired by such Grantor or in which such Grantor now has or at any time in the future may acquire any right, title, or interest and wherever the same may be located (collectively, the "Patent Collateral"), as collateral security for the prompt and complete payment and performance when due (whether at stated maturity, by acceleration or otherwise) of such Grantor's Obligations (including, without limitation, any extensions, modifications, substitutions, amendments or renewals of any or all of such Obligations):

- (i) all patents and patent applications including those set forth in Schedule A hereto;
- (ii)all extensions and renewals of the foregoing;
- (iii) the right to sue or otherwise recover for any past, present and future infringement, dilution, or other violation of any of the foregoing or for any injury to goodwill;
- (iv) all Proceeds of the foregoing, including, without limitation, licenses, royalties, income, payments, claims, damages, and proceeds of suit now or hereafter due and/or payable with respect thereto; and
- (v) and all other rights of any kind accruing thereunder or pertaining thereto throughout the world.

SECTION 3. <u>Security Agreement</u>. The security interest granted pursuant to this Agreement is granted in conjunction with the security interest granted to the Administrative Agent for the ratable benefit of the Secured Parties pursuant to the Pledge and Security Agreement, and each Grantor hereby acknowledges and affirms that the rights and remedies of the Administrative Agent with respect to

the security interest in the Patent Collateral made and granted hereby are more fully set forth in the Pledge and Security Agreement, the terms and provisions of which are incorporated by reference herein as if fully set forth herein. In the event that any provision of this Agreement is deemed to conflict with the Pledge and Security Agreement, the provisions of the Pledge and Security Agreement shall control.

SECTION 4. <u>Recordation</u>. Each Grantor authorizes and requests that the Commissioner for Patents and any other applicable government officer record this Agreement.

SECTION 5. Governing Law. This agreement and the rights and obligations of the parties hereunder and any claim or controversy relating hereto shall be governed by, and construed and interpreted in accordance with, the laws of the State of New York, without regard to its conflicts of laws principles.

SECTION 6. <u>Counterparts</u>. This Agreement may be executed in any number of counterparts, each of which when so executed shall be deemed to be an original and all of which taken together shall constitute one and the same agreement.

[Signatures follow]

62370040_2

IN WITNESS WHEREOF, each of the undersigned has caused this Agreement to be duly executed and delivered as of the date first above written.

GRANTORS:

MUELLER INTERNATIONAL, LLC ANVIL INTERNATIONAL, LLC MUELLER SYSTEMS, LLC HENRY PRATT COMPANY, LLC

By: Name: Evan Hart

Title: Chief Financial Officer

REEL: 037732 FRAME: 0332

BANK OF AMERICA, N.A., as Administrative Agent

By:

Name: William J. Wilson Title: Senior Vice President

[Signature Page to Patent Security Agreement]

SCHEDULE A

PATENTS

Grantor	Country	Title	Application Number	Application Date	Patent Number	Grant Date
Mueller International, LLC	United States of America	A System For Contaminant Isolation and	14462023	Aug 18, 2014		
Mueller International, LLC	United States of America	Flushing Adjustable Meter with Tamper Detection	14490095	Sep 18, 2014		
Mueller International, LLC	United States of America	Adjustable Underground Meter Installation	12564459	Sep 22, 2009		
Mueller International, LLC	United States of America	Adjustable Underground Meter Installation	13460956	May 1, 2012	-	
Mueller International, LLC	United States of America	Air Valve Seat	13752414	Jan 29, 2013	-	
Mueller International, LLC	United States of America	Alloy Insert Clamp	12780429	May 14, 2010	8313065	Nov 20, 2012
Mueller International, LLC	United States of America	An Apparatus for the Enhancement Of Water Quality in a Subterranean Pressurized Water Distribution System	09096626	Jun 12, 1998	6035704	Mar 14, 2000
Mueller International, LLC	United States of America	An Apparatus for the Enhancement Of Water Quality in a Subterranean Pressurized Water Distribution System	09525203	Mar 14, 2000	6358408	Mar 19, 2002
Mueller International, LLC	United States of America	An Apparatus for the Enhancement of Water Quality in a Subterranean Pressurized Water Distribution System	10021742	Dec 12, 2001	6635172	Oct 21, 2003
Mueller International, LLC	United States of America	An Apparatus for the Enhancement of Water Quality in a Subterranean Pressurized Water Distribution System	10691289	Oct 20, 2003	6880566	Apr 19, 2005

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Grantor	Country	Title	Application Number	Application Date	Patent Number	Grant Date
N dec = 11 =	United	A V - 1 £				
Mueller International,	States of	Anchor Valve for Security	12144273	Jun 23, 2008	8733381	May 27, 2014
LLC	America	Security				2014
Mueller	United	Anchor Valve For	14259887	Amr. 22, 2014		
International,	States of	Security	14239007	Apr 23, 2014		
LLC	America	Security				
Mueller	United	Antenna	62022266	Jul 9, 2014	1	
International,	States of	Attachment	02022200	Jul 9, 2014		
LLC	America	Attachment				
Mueller	United	Automatic	10864560	Jun 9, 2004	7178739	Feb 20,
	States of	Stagnant Water	10804300	Jun 9, 2004	11/8/39	2007
International, LLC		· ·				2007
Mueller	America	Flushing System	09814106	M 22, 2001	6467500	0-+ 22
	United States of	Ball Valve	09814106	Mar 22, 2001	6467500	Oct 22,
International,		Locking Device				2002
LLC Mueller	America	Dayth aufler V-1	00070012	Oat 17, 2001	6500050	Jul 20
	United States of	Butterfly Valve	09978012	Oct 17, 2001	6598850	Jul 29, 2003
International,	States of	Locking Device				2003
LLC	America	C1 1 1 1 1	0000012	I 20 1000	5047150	0.7
Mueller	United	Check Valve and	9009212	Jan 20, 1998	5947152	Sep 7,
International,	States of	Backflow				1999
LLC	America	Preventer	1.122.6610	X 10 2014	-	
Mueller	United	Check Valve Disc	14326610	Jul 9, 2014		
International,	States of					
LLC	America	G 115 111	00=11106	7. 7. 4006		
Mueller	United	Cold Rolling	08744106	Nov 5, 1996	5778715	Jul 14,
International,	States of	Positioning Roller				1998
LLC	America	Assembly	2027/020	0 10 0010	7.61-01	
Mueller	United	Conduit Hanger	29376829	Oct 13, 2010	D647784	Nov 1,
International,	States of					2011
LLC	America					<u> </u>
Mueller	United	Constant Support	09022971	Feb 13, 1998	5944288	Aug 31,
International,	States of	Pipe Hanger				1999
LLC	America					
Mueller	United	Coupling Gasket	12245189	Oct 3, 2008	8646814	Feb 11,
International,	States of	and Associated				2014
LLC	America	Methods	12000066	2.5 2.0014		
Mueller	United	Coupling Gasket	13098866	May 2, 2011	-	
International,	States of	and Associated				
LLC	America	Methods	10051:55	* an and		
Mueller	United	Coupling Gasket	13354466	Jan 20, 2012	-	
International,	States of	with Multiple				
LLC	America	Sealing Surfaces	1000=00			
Mueller	United	Coupling with	13667786	Nov 2, 2012	-	
International,	States of	Extending Parting				
LLC	America	Line				
Mueller	United	Coupling with	13354464	Jan 20, 2012	-	
International,	States of	Tongue and				
LLC	America	Groove				
Mueller	United	Coupling with	14506307	Oct 3, 2014		
International,	States of	Tongue and	1			
LLC	America	Groove				

Grantor	Country	Title	Application	Application	Patent	Grant
			Number	Date	Number	Date
Mueller	United	Detecting Leaks	14063334	Oct 25, 2013		
International,	States of	in a Fluid	1100333	361 23, 2013		
LLC	America	Distribution				
LLC	1 timerica	System				
Mueller	United	Directive Array	14193302	Feb 28, 2014		
International,	States of	for Drive By	11175502	100 20, 2011		
LLC	America	Meter Reading				
Mueller	United	Drinking Fountain	10864718	Jun 9, 2004	7240852	Jul 10,
International,	States of	with Automatic	10004710	Jun 2, 2004	7240032	2007
LLC	America	Stagnant Water				2007
LLC	America	Flushing System				
Mueller	United	Dynamic Routing	14475050	Sep 2, 2014		
	States of	in a Mesh	14473030	Sep 2, 2014		
International,						
LLC Mueller	America	Network	10864725	I 0 2004	7240952	I-1 10
	United	Emergency	10864725	Jun 9, 2004	7240853	Jul 10,
International,	States of	Shower with				2007
LLC	America	Automatic				
		Stagnant Water				
3.6 11	TT 1. 1	Flushing System	12402705	T 0 2012		
Mueller	United	Enclosure for	13492795	Jun 8, 2012	-	
International,	States of	Leak Detector				
LLC	America					
Mueller	United	Eyewash With	10864743	Jun 9, 2004	7240854	Jul 10,
International,	States of	Automatic				2007
LLC	America	Stagnant Water				
		Flushing System				
Mueller	United	Face Seal Gasket	12813925	Jun 11, 2010	8668206	Mar 11,
International,	States of					2014
LLC	America					
Mueller	United	Fire Hydrant	29329831	Dec 22, 2008	D631134	Jan 18,
International,	States of					2011
LLC	America					
Mueller	United	Fire Hydrant Leak	13492790	Jun 8, 2012	-	
International,	States of	Detector				
LLC	America					
Mueller	United	Flapper Disc	29280982	Jun 12, 2007	D607541	Jan 5,
International,	States of					2010
LLC	America					
Mueller	United	Flex Vibration	14503951	Oct 1, 2014		
International,	States of	Sensor for Water				
LLC	America	Leak Detection				
Mueller	United	Flushing Hydrant	13760804	Feb 6, 2013	-	
International,	States of					
LLC	America					
Mueller	United	Flushing Hydrant	13841597	Mar 15, 2013	-	
International,	States of	with Fail-Safe				
LLC	America	1			I	

Grantor	Country	Title	Application Number	Application Date	Patent Number	Grant Date
Mueller International, LLC	United States of America	Freeze and Backflow Protection for Subterranean Water Flushing System	10856003	May 28, 2004	7497228	Mar 3, 2009
Mueller International, LLC	United States of America	Gasket for Parabolic Ramp Self Restraining Bell Joint	13216523	Aug 24, 2011	-	
Mueller International, LLC	United States of America	Gasket for Parabolic Ramp Self Restraining Bell Joint	13543763	Jul 6, 2012	8544851	Oct 1, 2013
Mueller International, LLC	United States of America	Gasket for Parabolic Ramp Self Restraining Bell Joint	13955692	Jul 31, 2013	8870188	Oct 28, 2014
Mueller International, LLC	United States of America	Gasket for Parabolic Ramp Self Restraining Bell Joint	14448655	Jul 31, 2014		
Mueller International, LLC	United States of America	Gate Valve with Track Cleanout	13834016	Mar 15, 2013	-	
Mueller International, LLC	United States of America	Groove Rolling of Piping Elements	09363922	Jul 30, 1999	6196039	Mar 6, 2001
Mueller International, LLC	United States of America	Height and Accessory Adaptable Meter Setter	11149060	Jun 8, 2005	7281545	Oct 16, 2007
Mueller International, LLC	United States of America	High Traffic Data Transmission	13559572	Jul 26, 2012	-	
Mueller International, LLC	United States of America	High Traffic Data Transmission	13559573	Jul 26, 2012	-	
Mueller International, LLC	United States of America	Hydrant Security Device	10360687	Feb 7, 2003	6691732	Feb 17, 2004
Mueller International, LLC	United States of America	Hydrant Security Device	29155240	Feb 8, 2002	D484026	Dec 23, 2003
Mueller International, LLC	United States of America	Hydrant Shoe	29280983	Jun 12, 2007	D591831	May 5, 2009
Mueller International, LLC	United States of America	Hydrant Shoe with Backflow Prevention Assembly	11761825	Jun 12, 2007	7520294	Apr 21, 2009

Grantor	Country	Title	Application Number	Application Date	Patent Number	Grant Date
		77 1 01				
Mueller International,	United States of	Hydrant Shoe with Backflow	12409583	Mar 24, 2009	7686031	Mar 30, 2010
LLC	America	Prevention				2010
LLC	America	Assembly				
Mueller	United	Hydraulic	09630496	Aug 2, 2000	6408664	Jun 25,
International,	States of	Positioning	07030470	7 tug 2, 2000	0400004	2002
LLC	America	Assembly for				2002
		Cold Rolling				
		Tubes				
Mueller	United	Hydrostatic Test	10608458	Jun 27, 2003	6843108	Jan 18,
International,	States of	Plug for Water				2005
LLC	America	Service Line				
Mueller	United	Infrastructure	12784300	May 20,	8823509	Sep 2,
International,	States of	Monitoring		2010		2014
LLC	America	Devices, Systems,				
		and Methods				
Mueller	United	Infrastructure	13101235	May 5, 2011	-	
International,	States of	Monitoring				
LLC	America	Devices, Systems,				
M11	T.L. Sec. A	and Methods	14450452	A 4 2014		
Mueller	United States of	Infrastructure	14450452	Aug 4, 2014		
International, LLC	America	Monitoring Devices, Systems,				
LLC	America	and Methods				
Mueller	United	Infrastructure	12606957	Oct 27, 2009	_	
International,	States of	Monitoring	12000)37	000 27, 2009		
LLC	America	System and				
		Method				
Mueller	United	In-Ground	13971282	Aug 20,	-	
International,	States of	Flushing Device		2013		
LLC	America					
Mueller	United	Insertable	11497637	Aug 2, 2006	7748411	Jul 6,
International,	States of	Piggable Plug				2010
LLC	America	System				
Mueller	United	Keyless Fire	11498695	Aug 3, 2006	7559338	Jul 14,
International,	States of	Hydrant				2009
LLC	America	Protection System	12102701	T 0 2012		
Mueller	United	Leak Detector	13492794	Jun 8, 2012	-	
International,	States of					
LLC Mueller	America United	Leak Detector and	13492792	Lun 9 2012		
International,	States of	Sensor	13492792	Jun 8, 2012	-	
LLC	America	Schsol				
Mueller	United	Main Valve with	13836154	Mar 15, 2013	_	
International,	States of	Internal Rigid	1505015	17101 13, 2013		
LLC	America	Structure				
Mueller	United	Mechanical	12824303	Jun 28, 2010	8646732	Feb 11,
International,	States of	Elbow Clamp				2014
LLC	America					
Mueller	United	Mechanical	13161461	Jun 15, 2011	8596295	Dec 3,
International,	States of	Position Indicator				2013
LLC	America					

Grantor	Country	Title	Application Number	Application Date	Patent Number	Grant Date
Mueller International, LLC	United States of America	Mechanical Stop for Actuator and Orifice	14273823	May 9, 2014		
Mueller International, LLC	United States of America	Method and Apparatus for Inexpensively Monitoring and Contrilling Remotely Distributed Appliances	12243452	Oct 1, 2008	7752309	Jul 6, 2010
Mueller International, LLC	United States of America	Method and Apparatus for Inexpensively Monitoring and Controlling Remotely Distributed Appliances	10298300	Nov 18, 2002	7444401	Oct 28, 2008
Mueller International, LLC	United States of America	Method and Apparatus for Inexpensively Monitoring and Controlling Remotely Distributed Appliances	12490867	Jun 24, 2009	8140667	Mar 20, 2012
Mueller International, LLC	United States of America	Method and Apparatus for Inexpensively Monitoring and Controlling Remotely Distributed Appliances	12490925	Jun 24, 2009	7792946	Sep 7, 2010
Mueller International, LLC	United States of America	Method and Apparatus for Inexpensively Monitoring and Controlling Remotely Distributed Appliances	12490957	Jun 24, 2009	7783738	Aug 24, 2010
Mueller International, LLC	United States of America	Method and Apparatus for Inexpensively Monitoring and Controlling Remotely Distributed Appliances	13372408	Feb 13, 2012	8407333	Mar 26, 2013

Grantor	Country	Title	Application Number	Application Date	Patent Number	Grant Date
Mueller	United	Method and	13590954	Aug 21,	8549131	Oct 1,
International,	States of	Apparatus for		2012		2013
LLC	America	Inexpensively				
		Monitoring and				
		Controlling				
		Remotely				
		Distributed				
		Appliances				
Mueller	United	Method for	08422817	Apr 17, 1995	5538029	Jul 23,
International,	States of	Adjusting Valve				1996
LLC	America	Sealing				
		Engagement				
Mueller	United	Method of	13103126	May 9, 2011	8533926	Sep 17,
International,	States of	Coupling at Least				2013
LLC	America	Two Conduits				
Mueller	United	Method of	13475335	May 18,	8528184	Sep 10,
International,	States of	Creating and		2012		2013
LLC	America	Maintaining a				
		Sealed Interface				
		Between a Spigot				
		and Bell				
Mueller	United	Mode Activation	14490381	Sep 18, 2014		
International,	States of	Using Light		1 ,		
LLC	America	Detection				
Mueller	United	Monitoring of	11766288	Jun 21, 2007	7810378	Oct 12,
International,	States of	Leakage in				2010
LLC	America	Wastewater Force				
		Mains and Other				
		Pipes Carrying				
		Fluid Under				
		Pressure				
Mueller	United	Multi-Band	14331196	Jul 14, 2014		
International,	States of	Antenna				
LLC	America	Assembly				
Mueller	United	Non-Conductive	13895945	May 16,	_	
International,	States of	Roller Assembly		2013		
LLC	America					
Mueller	United	Non-Destructive	09570922	May 15,	6561032	May 13,
International,	States of	Measurement of	0,370,22	2000	0301032	2003
LLC	America	Pipe Wall		2000		2003
LLC	7 Hillerieu	Thickness				
Mueller	United	Non-Destructive	11156573	Jun 21, 2005	7328618	Feb 12,
International,	States of	Testing of Pipes	11130373	3411 21, 2003	7.520010	2008
LLC	America	Tosting of Tipes				2000
Mueller	United	Non-Destructive	11952582	Dec 7, 2007	7475596	Jan 13,
International,	States of	Testing of Pipes	11752562	DCC 1, 2001	1713330	2009
LLC	America	resume of ripes				2009
Mueller	United	Non-Interrupt	13272135	Oct 12, 2011	8667980	Mar 11,
			13414133	OCt 12, 2011	000/900	2014
International,	States of	Meter Change Out				2014
LLC	America	Devices and				
		Methods				

Grantor	Country	Title	Application Number	Application Date	Patent Number	Grant Date
3.5 22	T	N. 35 1"				
Mueller	United	Non-Metallic	13646892	Oct 8, 2012	8613220	Dec 24,
International,	States of America	Enclosure with Metal Threads				2013
LLC Mueller	United	Nozzle Check	13072702	Mar 26, 2011	8443834	Mov. 21
		Valve	13072702	Mar 20, 2011	8443834	May 21, 2013
International, LLC	States of	vaive				2013
Mueller	America United	PC Multimedia-	09482317	Jan 14, 2000	6453247	San 17
International,	States of	Based Leak	09482317	Jan 14, 2000	0433247	Sep 17, 2002
LLC	America	Detection System				2002
LLC	America	for Water				
		Transmission and				
		Distribution Pipes				
Mueller	United	Pipe Coupling	10815275	Apr 1, 2004	7004511	Feb 28,
International,	States of	Device	10013273	Прі 1, 200-	700-511	2006
LLC	America	Bevice				2000
Mueller	United	Pipe Coupling	13035788	Feb 25, 2011	_	
International,	States of	Device	15055700	100 23, 2011		
LLC	America	Bevice				
Mueller	United	Pipe Repair and	09711958	Nov 15,	6336472	Jan 8,
International,	States of	Replacement	05,11550	2000	0330172	2002
LLC	America	Apparatus and		2000		2002
220	1 111101104	Method				
Mueller	United	Pipe Tapping	11504921	Aug 16,	7901162	Mar 8,
International,	States of	Apparatuses and	110000	2006	/3 0 1 1 0 2	2011
LLC	America	Systems				
Mueller	United	Pit Lid Antenna	14341211	Jul 25, 2014		
International,	States of	and Casing		, in the second second		
LLC	America					
Mueller	United	Plastic Water	12356240	Jan 20, 2009	7854165	Dec 21,
International,	States of	Meter with Metal				2010
LLC	America	Threads				
Mueller	United	Plastic Water	12947272	Nov 16,	8047072	Nov 1,
International,	States of	Meter with Metal		2010		2011
LLC	America	Threads				
Mueller	United	Plastic Water	13220739	Aug 30,	8281654	Oct 9,
International,	States of	Meter with Metal		2011		2012
LLC	America	Threads				
Mueller	United	Position Indicator	13902092	May 24,	-	
International,	States of	for Valves		2013		
LLC	America				1	
Mueller	United	Real-Time Flow	14490375	Sep 18, 2014		
International,	States of	Compensation in				
LLC	America	Usage				
	1	Accumulation				
Mueller	United	Relay Modules	13800717	Mar 13, 2013	-	
International,	States of	for				
LLC	America	Communication				
		Within a Mesh				
		Network				

Grantor	Country	Title	Application Number	Application Date	Patent Number	Grant Date
Mueller International, LLC	United States of America	Remotely Actuated Quick Connect/Disconne ct Coupling	10856035	May 28, 2004	7434781	Oct 14, 2008
Mueller International, LLC	United States of America	Resilient Plug Apparatus and Method of Use	12792566	Jun 2, 2010	8104517	Jan 31, 2012
Mueller International, LLC	United States of America	Resilient Plug Apparatus and Method of Use	13341516	Dec 30, 2011	8739834	Jun 3, 2014
Mueller International, LLC	United States of America	Restraining Joint Device	14084013	Nov 19, 2013		
Mueller International, LLC	United States of America	Reverse Flow Detection and Annunciation	14490412	Sep 18, 2014		
Mueller International, LLC	United States of America	Self-Restrained Pipe Joint Method of Assembly	14469755	Aug 27, 2014		
Mueller International, LLC	United States of America	Self-Restrained Pipe Joint System and Method of Assembly	12902888	Oct 12, 2010	8857861	Oct 14, 2014
Mueller International, LLC	United States of America	Sensor Enabled Gate Valve	13753428	Jan 29, 2013	-	
Mueller International, LLC	United States of America	Sensor Enabled Gate Valve	13753431	Jan 29, 2013	-	
Mueller International, LLC	United States of America	Simplified Low Insertion Force Sealing Device Capable of Self Restraining and Joint Deflection	12711050	Feb 23, 2010	-	
Mueller International, LLC	United States of America	Simplified Low Insertion Force Sealing Device Capable of Self Restraining and Joint Deflection	13113684	May 23, 2011	8511690	Aug 20, 2013
Mueller International, LLC	United States of America	Simplified Low Insertion Force Sealing Device Capable of Self Restraining and Joint Deflection	13284915	Oct 30, 2011	-	

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Mueller International, LLC	United States of America	Simplified Low Insertion Force Sealing Device Capable of Self Restraining and Joint Deflection	13475353	May 18, 2012	8511691	Aug 20, 2013
Mueller International, LLC	United States of America	Sleeve Valve With Sync Cam	13741326	Jan 14, 2013	-	
Mueller International, LLC	United States of America	Slip On Groove Coupling with Multiple Sealing Gasket	12490113	Jun 23, 2009	8282136	Oct 9, 2012
Mueller International, LLC	United States of America	Slip On Groove Coupling with Multiple Sealing Gasket	13300718	Nov 21, 2011	-	
Mueller International, LLC	United States of America	Slip On Groove Coupling with Multiple Sealing Gasket	13554721	Jul 20, 2012	8550502	Oct 8, 2013
Mueller International, LLC	United States of America	Slip On Groove Coupling with Multiple Sealing Gasket	14019182	Sep 5, 2013		
Mueller International, LLC	United States of America	Slip On Groove Coupling with Multiple Sealing Gasket	14088865	Nov 25, 2013		
Mueller International, LLC	United States of America	Slip-On Coupling	13354459	Jan 20, 2012	-	
Mueller International, LLC	United States of America	Slip-On Coupling Assembly	29406887	Nov 21, 2011	D680630	Apr 23, 2013
Mueller International, LLC	United States of America	Slip-On Coupling Gasket	13354470	Jan 20, 2012	-	
Mueller International, LLC	United States of America	Slip-On Coupling Segment	29406886	Nov 21, 2011	D680629	Apr 23, 2013
Mueller International, LLC	United States of America	Slip-On Gasket	29405039	Oct 27, 2011	D696751	Dec 31, 2013
Mueller International, LLC	United States of America	Snubber with Secondary Fluid Reservoir	12793840	Jun 4, 2010	-	
Mueller International, LLC	United States of America	Storm Drain Movable Baffle	10624951	Jul 21, 2003	6955756	Oct 18, 2005

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Mueller International, LLC	United States of America	Sway Brace Retaining Clip	13917455	Jun 13, 2013	-	
Mueller International, LLC	United States of America	Symmetrical Valve Configuration	10866400	Jun 11, 2004	6886586	May 3, 2005
Mueller International, LLC	United States of America	System for Contaminant Isolation and Flushing	13216905	Aug 24, 2011	-	
Mueller International, LLC	United States of America	System For Measuring Properties of Water in a Water Distribution System	14209257	Mar 13, 2014		
Mueller International, LLC	United States of America	Systems and Methods for Controlling Flushing Apparatus and Related Interfaces	13117963	May 27, 2011	-	
Mueller International, LLC	United States of America	Systems and Methods for Distributing Data Within a Mesh Network	13556272	Jul 24, 2012	-	
Mueller International, LLC	United States of America	Systems and Methods for Dynamic Squelching in Radio Frequency Devices	13339655	Dec 29, 2011	8855569	Oct 7, 2014
Mueller International, LLC	United States of America	Systems and Methods for Generating Power Through the Flow of Water	12038151	Feb 27, 2008	7605485	Oct 20, 2009
Mueller International, LLC	United States of America	Systems and Methods for Generating Power Through the Flow of Water	13492410	Jun 8, 2012	-	
Mueller International, LLC	United States of America	Systems and Methods For Recovering an Out-Of-Service Node in a Hierarchical Network	14490081	Sep 18, 2014		

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Mueller International, LLC	United States of America	Systems and Methods for Remote Utility Metering and Meter Monitoring	11760200	Jun 8, 2007	8279080	Oct 2, 2012
Mueller International, LLC	United States of America	Systems and Methods for Remote Utility Metering and Meter Monitoring	12201429	Aug 29, 2008	7671480	Mar 2, 2010
Mueller International, LLC	United States of America	Systems and Methods for Remote Utility Metering and Meter Monitoring	13585046	Aug 14, 2012	-	
Mueller International, LLC	United States of America	Systems and Methods for Time-Based Hailing of Radio Frequency Devices	13283526	Oct 27, 2011	8660134	Feb 25, 2014
Mueller International, LLC	United States of America	Tamper Detection Through Magnetic Sensing	14490403	Sep 18, 2014		
Mueller International, LLC	United States of America	Tamper-Resistant Relay Modules for Communication Within a Mesh Network	13840637	Mar 15, 2013	-	
Mueller International, LLC	United States of America	Thread Cutting Device	09555925	Jun 6, 2000	6487946	Dec 3, 2002
Mueller International, LLC	United States of America	Transmitting Data Within a Mesh Network	13556270	Jul 24, 2012	-	
Mueller Systems, LLC	United States of America	Utility Meter Remote Reader	09640864	Aug 18, 2000	6674371	Jan 6, 2004
Mueller International, LLC	United States of America	Vacuum Pressure Breaker and Freeze Protection for a Water Flushing System	10856465	May 28, 2004	7093608	Aug 22, 2006
Henry Pratt Company, LLC	United States of America	Valve Actuator Apparatus	09725087	Nov 29, 2000	6543747	Apr 8, 2003
Mueller International, LLC	United States of America	Valve Meter Assembly and Method	13149720	May 31, 2011	8833390	Sep 16, 2014

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Mueller International,	United States of	Valve Meter Assembly and	14451896	Aug 5, 2014		
LLC	America	Method				
Mueller	United	Valve Position	08411889	Mar 28, 1995	5654885	Aug 5,
International,	States of	Controller		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		1997
LLC	America	77.1 77.1 C	12741220	T 14 2012		
Mueller	United	Valve With Sync	13741329	Jan 14, 2013	-	
International, LLC	States of America	Cam				
Mueller	United	Water Flushing	10856000	May 28,	7276159	Oct 2,
International,	States of	System Providing		2004		2007
LLC	America	Treated Discharge				
Mueller	United	Water Meter	29302557	Jan 18, 2008	D583692	Dec 30,
International,	States of	Housing				2008
LLC	America					
Mueller	United	Water Meter	29302559	Jan 18, 2008	D582814	Dec 16,
International,	States of	Housing				2008
LLC	America					
Mueller	United	Wet Barrel Fire	10741866	Dec 19, 2003	7128083	Oct 31,
International,	States of	Hydrant Flow				2006
LLC	America	Preventer				
Mueller	United	Wet Barrell Fire	11545140	Oct 10, 2006	7267136	Sep 11,
International,	States of	Hydrant Flow				2007
LLC	America	Preventer				
Mueller	United	Wet Barrell Fire	11842374	Aug 21,	7516751	Apr 14,
International,	States of	Hydrant Flow		2007		2009
LLC	America	Preventer				

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