505229989 12/11/2018

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5276759

SUBMISSION TYPE:		NEW ASSIGNMENT			
NATURE OF CONVEYANCE:			ASSIGNMENT		
CONVEYING PARTY D	ΑΤΑ				
			Name		Execution Date
JONATHAN STEEN					11/10/2015
MIKHAIL KOZLOV					11/10/2015
HERBERT LUTZ					10/13/2015
JOSEPH PARRELLA					12/17/2015
ELIZABETH M. GOODR	ICH				10/13/2015
BALA RAGHUNATH					10/05/2015
RECEIVING PARTY DA					
Name:			ORE CORPORATION		
Street Address:			Γ DRIVE		
City:	BURLINGTON				
State/Country:	MASSACHUSETTS				
Postal Code:	01803				
PROPERTY NUMBERS	Total: 1				
Property Type			Number		
Application Number:		1620	8018		
CORRESPONDENCE D	ΑΤΑ				
			341-0136		· ·· ··· ·
			e-mail address first; if that is hat is unsuccessful, it will be		
Phone:		•	341-0036		
		.varno@hbsr.com			
Correspondent Name: ALICI		E O. CARROLL			
•		/IRGINIA ROAD, P.O. BOX 9 ⁻	33		
Address Line 2: HAMI		ILTON, BROOK, SMITH & RE	YNOLDS, P.C.		
Address Line 4: CONC		CORD, MASSACHUSETTS 0	742-9133		
ATTORNEY DOCKET NU	JMBER:		0046.2047-009		
NAME OF SUBMITTER:		KELLIE J. VARNO			
SIGNATURE:					
SIGNATURE:			/Kellie J. Varno/		

12/11/2018

DATE SIGNED:

Total Attachments: 20

source=0046.2047-009 Assignment#page1.tif source=0046.2047-009 Assignment#page2.tif source=0046.2047-009 Assignment#page3.tif source=0046.2047-009 Assignment#page4.tif source=0046.2047-009 Assignment#page5.tif source=0046.2047-009 Assignment#page6.tif source=0046.2047-009 Assignment#page7.tif source=0046.2047-009 Assignment#page8.tif source=0046.2047-009 Assignment#page9.tif source=0046.2047-009 Assignment#page10.tif source=0046.2047-009 Assignment#page11.tif source=0046.2047-009 Assignment#page12.tif source=0046.2047-009 Assignment#page13.tif source=0046.2047-009 Assignment#page14.tif source=0046.2047-009 Assignment#page15.tif source=0046.2047-009 Assignment#page16.tif source=0046.2047-009 Assignment#page17.tif source=0046.2047-009 Assignment#page18.tif source=0046.2047-009 Assignment#page19.tif source=0046.2047-009 Assignment#page20.tif

Joint

Apcand/

ASSIGNMENT

WHEREAS, we, Jonathan Steen, Mikhail Kozlov, Herbert Lutz, Joseph Parrella, Elizabeth M. Goodrich and Bala Raghunath, have invented a certain improvement in Single Pass Tangential Flow Filtration Systems And Tangential Flow Filtration Systems With Recirculation Of Retentate described in an application for Patent,

- the specification of which is about to be filed in the United States Patent Office (use for utility (37 CFR § 1.53(b)) and design filings only);
- is about to be filed in the United States Patent Office as a Provisional Application;
- the specification of which is United States Application No. 14/839,779, filed August 28, 2015;
- the specification of which is a Patent Cooperation Treaty Application, International Application No. [], filed [], which designates the United States of America [and is assigned United States Application No.];

which was patented under United States Patent No. [11].

WHEREAS, EMD Millipore Corporation (hereinafter "ASSIGNEE"), a corporation organized and existing under the laws of the Commonwealth of Massachusetts, and having a usual place of business at 290 Concord Road, <u>Concord</u>, Massachusetts 01821 desires to confirm its interest therein in accordance with agreements duly entered into with us;

NOW, THEREFORE, to all whom it may concern be it known that for and in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged, we have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, the entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to said invention as described in said application, together with the entire right, title and interest in and to said application and such Letters Patent as may issue on said invention; said invention, application and Letters Patent to be held and enjoyed by said ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by us had this assignment and sale not been made; we hereby convey all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for Letters Patent. We hereby acknowledge that this assignment, being of the entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for any and all related provisional and nonprovisional, international and national phase applications, including any and all substitution, reissue, divisional, continuation, and continuation-in-part applications, and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all such Letters Patent to ASSIGNEE for its own name as assignee of the entire right, title and interest therein; we hereby expressly authorize the filing of an International Patent Application under the

Patent Cooperation Treaty which corresponds to and claims the priority of the above-identified application;

AND, we hereby further agree for ourselves and our executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid invention to said ASSIGNEE, its successors, assigns and legal representatives, but at its or their expense and charges, including the execution of applications for patents in foreign countries, and the execution of any future applications including substitution, reissue, divisional or continuation, continuation-in-part applications, and all related provisional and nonprovisional, international and national phase applications, and preliminary or other statements and the giving of testimony in any interference or other proceeding in which said invention or any application or patent directed thereto may be involved;

AND, we do hereby authorize and request each Patent Office and the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said invention to said ASSIGNEE, its successors, assigns, and legal representatives.

IN TESTIMONY WHER	EOF, we have hereunto set our hands and affixed our seals the
date set forth below.	1 SA
an an an air an	SALTO
Inventor's Signature:	T/VA.
Inventor a Bigillatore.	/ Jonathan Steen
Otata / Canada and the	Portalinari Octobri
State/Commonwealth	
of Maysag Augas	
County of Michael	
and in The	November 2017, before me, the undersigned notary
public, personally appeared Jonat	han Steen,
personally known to me, o	Jr .
proved to me through sati	sfactory evidence of identification, which was
Massachuretts	Driver's License
to be the person whose name was	s signed on the foregoing instrument in my presence, and
acknowledged that he/she signed	the foregoing instrument as his/her free act and deed.
uovito mougen and martine region a	
(SEAL)	Notary Public Selle Man and Mar
	Anne the M. Marchan + (print name)
	THINK WE MAN COURT (Print name)
	My Commission expires 11/28/119

- 2 -

		Docket No. 0046.2047-001 (P 14/158)
Inventor's Signature	:ll	ky l
State/Commonweal		Mikhail Kozlov
of Massacher M	<u><u>+</u></u>	
County of Made		
On this		2015, before me, the undersigned notary
public, personally a		JZIJZ,
personally k	nown to me, or	
— ·	—	ry evidence of identification, which was
Massae	heet Dr.	uns L'icense
to be the person wh acknowledged that l	ose name was signe he/she signed the fo	ed on the foregoing instrument in my presence, and pregoing instrument as his/her frec act and deed.
(SEAL)		Notary Public Culton Mach
(SEALA		Annette M Marchant (print name
• • •		My Commission expires <u>11 128 12019</u>
Inventor's Signature		Herbert Lutz
State/Commonweal	th	
of County of		
•		20 , before me, the undersigned notary
On this public, personally a	day of ppeared Herbert Lu	
	nown to me, or	
		bry evidence of identification, which was
<u> </u>		
to be the person wh	ose name was signed the fu	ed on the foregoing instrument in my presence, and pregoing instrument as his/her free act and deed.
	ne/ane signed the R	
(SEAL)		Notary Public(print name
		My Commission expires//

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Ĭr	Date
I	Joseph ParrellaDate
Witness	Signature
Print Wit	tness Name
Address	
	Signature
Print Wit	tness Name
Address	
	's Signature:
	Elizabeth M. Goodrich
	mmonwealth
County c	of
On this _ public, p	day of, before me, the undersigned notary ersonally appeared Elizabeth M. Goodrich,
р	ersonally known to me, or
р	roved to me through satisfactory evidence of identification, which was
	person whose name was signed on the foregoing instrument in my presence, and

to be the person whose name was signed on the foregoing instrument in my presence, a acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public_____(print name)

My Commission expires ____/___/



- 4 -

Inventor	Date		
······································	Bala Raghunath		
Witness Signature		······	
Print Witness Name			
Address			
Witness Signature			
Print Witness Name	a a construction of the second sec		
Address			



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<u>Joint</u>

ASSIGNMENT

WHEREAS, we, Jonathan Steen, Mikhail Kozlov, Herbert Lutz, Joseph Parrella, Elizabeth M. Goodrich and Bala Raghunath, have invented a certain improvement in Single Pass Tangential Flow Filtration Systems And Tangential Flow Filtration Systems With Recirculation Of Retentate described in an application for Patent,

- the specification of which is about to be filed in the United States Patent Office (use for utility (37 CFR § 1.53(b)) and design filings only);
- is about to be filed in the United States Patent Office as a Provisional Application;
- the specification of which is United States Application No. 14/839,779, filed
 August 28, 2015;
- the specification of which is a Patent Cooperation Treaty Application,
 International Application No. [], filed [], which designates the United States
 of America [and is assigned United States Application No.];
- which was patented under United States Patent No. [].

WHEREAS, EMD Millipore Corporation (hereinafter "ASSIGNEE"), a corporation organized and existing under the laws of the Commonwealth of Massachusetts, and having a usual place of business at 290 Concord Road, Concord, Massachusetts 01821 desires to confirm its interest therein in accordance with agreements duly entered into with us;

NOW, THEREFORE, to all whom it may concern be it known that for and in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged, we have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, the entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to said invention as described in said application, together with the entire right, title and interest in and to said application and such Letters Patent as may issue on said invention; said invention, application and Letters Patent to be held and enjoyed by said ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by us had this assignment and sale not been made; we hereby convey all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for Letters Patent. We hereby acknowledge that this assignment, being of the entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for any and all related provisional and nonprovisional, international and national phase applications, including any and all substitution, reissue, divisional, continuation, and continuation-in-part applications, and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all such Letters Patent to ASSIGNEE for its own name as assignee of the entire right, title and interest therein; we hereby expressly authorize the filing of an International Patent Application under the

Patent Cooperation Treaty which corresponds to and claims the priority of the above-identified application;

AND, we hereby further agree for ourselves and our executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid invention to said ASSIGNEE, its successors, assigns and legal representatives, but at its or their expense and charges, including the execution of applications for patents in foreign countries, and the execution of any future applications including substitution, reissue, divisional or continuation, continuation-in-part applications, and all related provisional and nonprovisional, international and national phase applications, and preliminary or other statements and the giving of testimony in any interference or other proceeding in which said invention or any application or patent directed thereto may be involved;

AND, we do hereby authorize and request each Patent Office and the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said invention to said ASSIGNEE, its successors, assigns, and legal representatives.

IN TESTIMONY WHEREOF, we have hereunto set our hands and affixed our seals the date set forth below.

Inventor's Signature:	
	Jonathan Steen
State/Commonwealth of County of	
On this day of public, personally appeared Jonatha	20, before me, the undersigned notary an Steen,
personally known to me, or	
proved to me through satisfa	actory evidence of identification, which was
to be the person whose name was si acknowledged that he/she signed th	igned on the foregoing instrument in my presence, and the foregoing instrument as his/her free act and deed.
(SEAL)	Notary Public(print name)
	My Commission expires//

	Docket No. 0046.2047-001 (P14/158)
A	
Inventor's Signature:	
Mik State/Commonwealth of <u>Messachingtt</u> County of <u>Alighelliser</u>	hail Kozlov
On this day of day of public, personally appeared Mikhail Kozlov,	6-2015, before me, the undersigned notary
personally known to me, or	
proved to me through satisfactory evi	dence of identification, which was
acknowledged that he/she signed the foregoin	he foregoing instrument in my presence, and ng instrument as his/her free act and deed. Notary Public
Notary Public	<u>ClizabethDHbbaccl</u> (print name) My Commission expires <u>09 / 19 / 2019</u>
Inventor's Signature: Herbert	erbert Lutz
State/Commonwealth of <u>Mamealust</u> County of <u>Avid dence</u>	
On this <u>13</u> day of <u><i>October</i></u> public, personally appeared Herbert Lutz,	$20 \frac{15}{5}$, before me, the undersigned notary
personally known to me, or	
proved to me through satisfactory evi	idence of identification, which was Employee Delectification
to be the person whose name was signed on acknowledged that he/she signed the foregoi	the foregoing instrument in my presence, and ng instrument as his/her free act and deed.
(SEAL) ELIZABETH D. HUBBARD	Notary Public_J_D(400) 21172 betl_D Helsord (print isame)
Commonwealth of Massachusetts My Commission Expires September 19, 2019	My Commission expires $09 / 19 / 2019$

Inventor	Date
	Joseph Parrella
Witness Signature	
Print Witness Name	
Witness Signature	
Print Witness Name	
State/Commonwealth of <u>Ma section the</u> County of <u>Milellesse</u>	Li M. M. Elizabeth M. Goodrich
On this <u>13</u> day public, personally appeared	of <u>Octaber</u> <u>2015</u> , before me, the undersigned notary I Elizabeth M. Goodrich,
personally known to	o me, or
proved to me throug	gh satisfactory evidence of identification, which was Massachustie Fieme
acknowledged that he/she s	ne was signed on the foregoing instrument in my presence, and signed the foregoing instrument as his/her free act and deed. TH D. HUBBARC Notary Public Hary Public Hory Public Hary P

ELIZABETH D. HUBBARD Notary Public Commonwealth of Massachusens My Commission Expires September 19, 2019 Notary Public CliZabeth D. Hubbard (print name) My Commission expires 09 / 19 / 2019

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Inventor	Date			
	Bala Raghunath			
Witness Signature				
Witness Signature				
Print Witness Name				
Address				

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ASSIGNMENT

WHEREAS, we, Jonathan Steen, Mikhail Kozlov, Herbert Lutz, Joseph Parrella, Elizabeth M. Goodrich and Bala Raghunath, have invented a certain improvement in Single Pass Tangential Flow Filtration Systems And Tangential Flow Filtration Systems With Recirculation Of Retentate described in an application for Patent,

	the specification of which is about to be filed in the United States Patent Office (use for utility (37 CFR § 1,53(b)) and design filings only);
	is about to be filed in the United States Patent Office as a Provisional Application;
X	the specification of which is United States Application No. 14/839,779, filed August 28, 2015;
\boxtimes	the specification of which is a Patent Cooperation Treaty Application, International Application No. [13], filed [13], which designates the United States of America [and is assigned United States Application No. 3];
	which was patented under United States Patent No. [].

WHEREAS, EMD Millipore Corporation (hereinafter "ASSIGNEE"), a corporation organized and existing under the laws of the Commonwealth of Massachusetts, and having a usual place of business at 290 Concord Road, Concord, Massachusetts 01821 desires to confirm its interest therein in accordance with agreements duly entered into with us;

NOW, THEREFORE, to all whom it may concern be it known that for and in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged, we have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, the entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to said invention as described in said application, together with the entire right, title and interest in and to said application and such Letters Patent as may issue on said invention; said invention, application and Letters Patent to be held and enjoyed by said ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by us had this assignment and sale not been made; we hereby convey all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for Letters Patent. We hereby acknowledge that this assignment, being of the entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for any and all related provisional and nonprovisional, international and national phase applications, including any and all substitution, reissue, divisional, continuation, and continuation-in-part applications, and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all such Letters Patent to ASSIGNEE for its own name as assignee of the entire right, title and interest therein; we hereby expressly authorize the filing of an International Patent Application under the

Patent Cooperation Treaty which corresponds to and claims the priority of the above-identified application;

AND, we hereby further agree for ourselves and our executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid invention to said ASSIGNEE, its successors, assigns and legal representatives, but at its or their expense and charges, including the execution of applications for patents in foreign countries, and the execution of any future applications including substitution, reissue, divisional or continuation, continuation-in-part applications, and all related provisional and nonprovisional, international and national phase applications, and preliminary or other statements and the giving of testimony in any interference or other proceeding in which said invention or any application or patent directed thereto may be involved;

AND, we do hereby authorize and request each Patent Office and the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said invention to said ASSIGNEE, its successors, assigns, and legal representatives.

IN TESTIMONY WHEREOF, we have hereunto set our hands and affixed our seals the date set forth below.

My Commission expires ____/ __/___

Inventor's Signature:				
Mikhail Kozlov				
State/Commonwealth of				
County of				
On this day of public, personally appeared Mikhail	20, before me, the undersigned notary Kozlov,			
personally known to me, or				
proved to me through satisfac	ctory evidence of identification, which was			
	gned on the foregoing instrument in my presence, and foregoing instrument as his/her free act and deed.			
(SEAL)	Notary Public			
	(print name)			
	My Commission expires//			
Inventor's Signature:	I Jacob and Backer			
State/Commonwealth	Herbert Lutz			
of				
County of				
On this day of public, personally appeared Herbert				
personally known to me, or				
proved to me through satisfa	etory evidence of identification, which was			
to be the person whose name was sig acknowledged that he/she signed the	gned on the foregoing instrument in my presence, and e foregoing instrument as his/her free act and deed.			
(SEAL)	Notary Public			
N= 7	(print name)			
	My Commission expires//			

- 3 -

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Inventor	Date (7-DEC20)5
	Joseph Parrella
Witness Signature 4 Mg	utte Dulue
2 N	Earbeth Sullivan
Address 200 Wille	in Ave Unit 3, Somerville Ma
02144	·
Witness Signature	- hy
Print Witness Name/	Gina Kwong
Address 195 Thomas	Gina Kwong <u>Parkway</u> Burgin Parkway, APT410 Quincy, MA 02169
Inventor's Signature:	Elizabeth M. Goodrich
State/Commonwealth	
of County of	
On this day public, personally appeared	of, before me, the undersigned notary
public, personally appeared	
personally known t	o me, or
proved to me throu	gh satisfactory evidence of identification, which was
to be the person whose nar acknowledged that he/she	ne was signed on the foregoing instrument in my presence, and signed the foregoing instrument as his/her free act and deed.

(SEAL)

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Notary Public______(print name)

My Commission expires ____/___/

- 4 -

Inventor		Date			
	Bala Raghunath				
Witness Signature			,		
Print Witness Name	······································				
Address					
······································					
Witness Signature					
Print Witness Name					
Address					

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- 5 -

Joint

ASSIGNMENT

WHEREAS, wc, Jonathan Steen, Mikhail Kozlov, Herbert Lutz, Joseph Parrella, Elizabeth M. Goodrich and Bala Raghunath, have invented a certain improvement in Single Pass Tangential Flow Filtration Systems And Tangential Flow Filtration Systems With Recirculation Of Retentate described in an application for Patent,

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- X the specification of which is United States Application No. 14/839,779, filed August 28, 2015;
- the specification of which is a Patent Cooperation Treaty Application,
 International Application No. [], filed [], which designates the United States of America [and is assigned United States Application No.];

which was patented under United States Patent No. [].

WHEREAS, EMD Millipore Corporation (hereinafter "ASSIGNEE"), a corporation organized and existing under the laws of the Commonwealth of Massachusetts, and having a usual place of business at 290 Concord Road, Concord, Massachusetts 01821 desires to confirm its interest therein in accordance with agreements duly entered into with us;

NOW, THEREFORE, to all whom it may concern he it known that for and in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged, we have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, the entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to said invention as described in said application, together with the entire right, title and interest in and to said application and such Letters Patent as may issue on said invention; said invention, application and Letters Patent to be held and enjoyed by said ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by us had this assignment and sale not been made; we hereby convey all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for Letters Patent. We hereby acknowledge that this assignment, being of the entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for any and all related provisional and nonprovisional, international and national phase applications, including any and all substitution, reissue, divisional, continuation, and continuation-in-part applications, and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all such Letters Patent to ASSIGNEE for its own name as assignee of the entire right, title and interest therein; we hereby expressly authorize the filing of an International Patent Application under the

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Patent Cooperation Treaty which corresponds to and claims the priority of the above-identified application;

AND, we hereby further agree for ourselves and our executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid invention to said ASSIGNEE, its successors, assigns and legal representatives, but at its or their expense and charges, including the execution of applications for patents in foreign countries, and the execution of any future applications including substitution, reissue, divisional or continuation, continuation-in-part applications, and all related provisional and nonprovisional, international and national phase applications, and preliminary or other statements and the giving of testimony in any interference or other proceeding in which said invention or any application or patent directed thereto may be involved;

AND, we do hereby authorize and request each Patent Office and the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said invention to said ASSIGNEE, its successors, assigns, and legal representatives.

IN TESTIMONY WHEREOF, we have hereunto set our hands and affixed our seals the date set forth below.

Inventor's Signature:

Jonathan Steen

State/Commonwealth

of_____ County of_____

On this ______ day of ______ 20 ___, before me, the undersigned notary public, personally appeared Jonathan Steen,

personally known to me, or

proved to me through satisfactory evidence of identification, which was

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public

____(print name)

My Commission expires ____/ __/

- 2 -

Inventor's Signature:	
Mik State/Commonwealth of County of	hail Kozlov
On this day of public, personally appeared Mikhail Kozlov,	<u>20</u> , before me, the undersigned notary
personally known to me, or	
proved to me through satisfactory evi	dence of identification, which was
to be the person whose name was signed on t acknowledged that he/she signed the foregoin	
(SEAL)	Notary Public
· · · · · · · · · · · · · · · · · · ·	(print name) My Commission expires//
	erbert Lutz
State/Commonwealth of County of	
On this day of public, personally appeared Herbert Lutz,	20 , before me, the undersigned notary
personally known to me, or	
proved to me through satisfactory ev	dence of identification, which was
to be the person whose name was signed on acknowledged that he/she signed the foregoi	the foregoing instrument in my presence, and ng instrument as his/her free act and deed.
(SEAL)	Notary Public
	(print name) My Commission expires//

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- 3 -

Inven	torDate
	torDate Joseph Parrella
Witness Sign	ature
Print Witness	Name
Address	
الأقدر السنة	
Witness Sign	ature
Print Witness	s Name
Address	
	gnature:
State/Commo	Elizabeth M. Goodrich
of County of	
On this public, perso	day of 20, before me, the undersigned notary nally appeared Elizabeth M. Goodrich,
perso	nally known to me, or
prove	ed to me through satisfactory evidence of identification, which was
to be the per-	son whose name was signed on the foregoing instrument in my presence, and ad that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

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Notary Public_____

(print name)

My Commission expires ____/___/

Inventor	B·R	splith	_Date_Ocf	· 5,201
	Bala Rage	iuhath		·
Witness Signature	In they	14		
rint Witness Name	0 Jin	Neville		
Address 900 H	1, Holle sex	Rod, Elhi	M. W. pore	
Billen	20 Mit	01821		
wrmf				
Witness Signature	Mum	_ 1	·	
Print Witness Name	Me	-Agn Taix	ner .	
Address 900 M		Tucnisike B	IL . LA MA	01821

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PATENT REEL: 047740 FRAME: 0540

RECORDED: 12/11/2018