PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6015115

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
DAVE BERRY	10/11/2016
BARRY L. TUCKER	10/13/2016
EDWARD J. RHINEHART	10/19/2016
GERALD W. CALLAN	10/14/2016
ARTHUR E. UBER III	10/27/2016
KEVIN P. COWAN	10/14/2016
RAYMOND C. HOFFMAN	10/25/2016
BENJAMIN T. KRUPP	10/20/2016
MARTIN J. GIBLER	10/14/2016
MICHAEL A. SPOHN	10/14/2016

RECEIVING PARTY DATA

Name:	BAYER HEALTHCARE LLC
Street Address:	100 BAYER BOULEVARD
City:	WHIPPANY
State/Country:	NEW JERSEY
Postal Code:	07981

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16812912

CORRESPONDENCE DATA

Fax Number:

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: 7245960281

Email: susan.vresh@bayer.com
Correspondent Name: BAYER HEALTHCARE LLC

Address Line 1: 1 BAYER DRIVE

Address Line 4: INDIANOLA, PENNSYLVANIA 15051

ATTORNEY DOCKET NUMBER: CT/14-011 PCT-US N

PATENT REEL: 052121 FRAME: 0456

505968408

NAME OF SUBMITTER:	JOSEPH L. KENT, REG. NO. 54216		
SIGNATURE:	/JOSEPH L. KENT/		
DATE SIGNED: 03/16/2020			
Total Attachments: 16	·		

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> **PATENT REEL: 052121 FRAME: 0457**

Docket No.: CT/14-011 PCT-

ASSIGNMENT WITH DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63)

Whereas, I/We, the undersigned inventor(s) hereinafter called assignor(s), have invented certain improvements described in the application identified below; and

Whereas, Bayer HealthCare LLC a corporation organized and existing under the laws of the State of Delaware and having a place of business at 100 Bayer Boulevard, Whippany, NJ 07981, (assignee), desires to acquire the entire right, title, and interest in the application and invention, and to any United States patents to be obtained therefor;

Now therefore, for valuable consideration, receipt whereof is hereby acknowledged,

I/We, the above named assignor(s), hereby sell, assign and transfer to the above named assignee, its successors, legal representatives, and assigns, the entire right, title and interest in the invention and the application for the United States of America, including all direct and indirect divisions, continuations, and continuations-in-part thereof, and all original, extended, reviewed, and reexamined Letters Patent of the United States, and all countries foreign thereto, that may be granted thereon, including rights of priority under the International Convention of Paris (1883) as amended, including the right to claim priority under 35 U.S.C. §119, and I/we request the Director of the U.S. Patent and Trademark Office to issue any Letters Patent granted upon the invention set forth in the application to the assignee, its successors and assigns; and I/we hereby agree that the assignee may apply for foreign Letters Patent on the invention and I/we will execute without further consideration all papers deemed necessary by the assignee in connection with the United States and foreign applications when called upon to do so by the assignee, its successors, legal representatives, or assigns. I/We further represent and warrant that I/We have the full right to convey the interest assigned by this assignment, and that I/We have not granted any rights inconsistent with the rights granted herein. I/We further acknowledge an obligation of assignment of this invention to assignee at the time the invention was made and we further irrevocably designate and appoint assignee and its counsel as my/our attorney-in-fact and agent to act for and on my/our behalf to execute and file any document and to do all other lawfully permitted acts to further the purposes of this Agreement with the same legal force and effect as if executed by assignor himself/herself. I/We acknowledge that assignee is the real party in interest to any and all patent applications described in connection with this Agreement, and to any and all patent rights gran

nd appoint assignee and its counsel as my/our attorney-in-fact and a o do all other lawfully permitted acts to further the purposes of this	
as the below named inventor I hereby declare that:	
This Assignment with Declaration is directed to:	■ The attached application, or
The application is entitled: Syringe with Rolling Diaphragm	United States Application or PCT International Application Number filed on (Confirmation No).
The above identified application was made or was authorized t	to be made by me.
I believe that I am the original inventor or an original joint inventor	entor of a claimed invention in the application.
I have reviewed and understand the contents of the application me to be material to patentability as defined in 37 CFR 1.56.	and I am aware of the duty to disclose to the Office all information known
I hereby acknowledge that any willful false statement made i fine or imprisonment of not more than five (5) years, or both.	n this Assignment with Declaration is punishable under 18 USC 1001 by
Authorization To Permit Access To Application by Participating	Office
he Korean Intellectual Property Office (KIPO), the World Intellectual foreign application claiming priority to the above-identified applicat	o provide the European Patent Office (EPO), the Japan Patent Office (JPO), I Property Office (WIPO), and any other intellectual property offices in which is filed access to the above-identified patent application. See 37 CFR not wish the EPO, JPO, KIPO, or other intellectual property office in which an is filed to have access to the application.
patent application-as-filed, 2) any foreign application to which the a	copy of the application-as-filed with respect to: 1) the above-identified bove-identified application claims priority under 35 USC 119(a)-(d) if a rement of 37 CFR 1.55 has been filed in the above-identified patent is sought in the above-identified patent application.
in accordance with 37 CFR 1.14(c), access may be provided to inform Application by Participating Office.	rmation concerning the date of filing the Authorization to Permit Access
	1

NAME OF SOLE OR FIRST I	NVENTOR:				
Given Name					
(first and middle [if any]): Dave		Family Name or Sur	Family Name or Surname: Berry		
Inventor's signature	MB-		Oct. 11, 2016		
Residence: City: Kittanning	State: PA	Country: U.S.	U·S. Citizenship		
Mailing Address: 277 Ping Win	g Hollow Road, Kittanning, PA	16201 U.S.			
BEFORE ME, the undersigned a	uthority, on this day personally app lged to me that he/sheexecuted the f office, this day o	same for the purposes and cons			
Notary Public Signature	te C Skel	Notary Public Printed Name:	ucrette C. Shield:		
[seal]		[stamp]	MONWEALTH OF PENNSYLVANIA NOTARIAL SEAL		
<u> </u>			Lucietie C. Shields, Notary Public Indiana Twp., Allegheny County Commission Expires June 10, 2018		
NAME OF SECOND INVENT	OR:	WEMDE	R. PENNSYLVANIA ASSOCIATION OF NOTARIES		
Given Name					
(first and middle [if any]): Barr	v L.	Family Name or Sur	name: Tucker		
0	wust Tuch)			
Residence: City: Verona	State: PA	Country: U.S.	Date 0.13.16 VSA Citizenship		
Mailing Address: 219 McGreun	or Drive, Verona, PA 15147 U.S.				
NOTARIZATION BEFORE ME, the undersigned a	uthority, on this day personally app	uted the same for the purposes			
Notary Public Signature	ute C Skul	Notary Public Printed Name:	wietle C. Shields		
[seal]		[stamp]			
		СОМ	MONWEALTH OF PENNSYLVANIA		
			NUIARIAI CEAI		
			NOTARIAL SEAL Luciette C. Shields, Notary Public Indiana Twp., Allegheny Geunty y Commission Expires June 10, 2018		

NAME OF THIRD INVENTOR:	
Given Name	
(first and middle [if any]): Edward J.	Family Name or Surname: Rhinehart
Inventor's signature	Date 15-19-2016
Residence: City: Monroeville State: PA	Date 18-19-2816 Country: U.S. Citizenship U.S.A.
Mailing Address: 1780 McClure Road, Monroeville, PA 15146 U.S.	
NOTARIZATION	
BEFORE ME, the undersigned authority, on this day personally appeare whose name is subscribed above, and acknowledged to me that boshe exerpressed. Given under my hand and seal of office, this	d Edward J. Rhinehart, known to me to be the person secuted the same for the purposes and consideration therein of 20/6
Notary Public Signature Sugartte Sheells	Notary Public Printed Name: Kucyette C. Shields
[scal]	[stamp] COMMONWEALTH OF PENNSYLVANIA NOTARIAL SEAL Luciette C. Shields, Notary Public Indiana Twp., Allegheny County My Commission Expires June 10, 2018
 	MENBER, PENNSYLVANIA ASSOCIATION OF NOTAHIES
NAME OF FOURTH INVENTOR:	
Given Name	
(first and middle [if any]): Mark	Family Name or Surname: Trocki
Inventor's signature Mad Let	Date OCT. 11. 16
Residence: City: Cheswick State: PA	Country: U.S. Citizenship USA.
Mailing Address: 130 Reaghard Drive, Cheswick, PA 15024 U.S.	
NOTARIZATION	
BEFORE ME, the undersigned authority, on this day personally appeare is subscribed above, and acknowledged to me that be/she executed the sa Given under my hand and seal of office, this	
Notary Public Signature	Notary Public Printed Name: Lucy the C. Shields
Signature () Lecurity	MILLE VAILE, RUCKTE (
[scal]	[stamp]
Marie C Druss	

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NAME OF FIFTH INVENTOR:	
Given Name	·
(first and middle [if any]): Gerald W.	Family Name or Surname: Callan
Inventor's signature Sund W Colla	Date 20/14/2016
Residence: City: Cranberry Twp. State: PA	Date 20 /14/2016 Country: U.S. Citizenship USA
Mailing Address: 108 Hunter Drive, Cranberry Twp., PA 16066 U	J.S.
NOTARIZATION	
BEFORE ME, the undersigned authority, on this day personally appea whose name is subscribed above, and acknowledged to me that he street expressed. Given under my hand and seal of office, this	executed the same for the purposes and consideration therein day of , 2016
Notary Public Signature Ducutte C Shull.	Notary Public Printed Name: Lucie He C. Shield
[seal]	[stamp]
	COMMONWEALTH OF PENNSYLVANIA
	NOTARIAL SEAL Luciette C. Shields, Notary Public
<u> </u>	Indiana Twp., Allegheny County My Commission Expires June 10, 2018
	MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES
NAME OF SIXTH INVENTOR:	
Given Name	
(first and middle [if any]): Arthur E.	Family Name or Surname: Uber, III
Inventor's signature drither When, 11	Oct 27, 2016
Residence: City: Pittsburgh State: PA	Country: U.S. Citizenship
Mailing Address: 7426 Ben Hur Street, Pittsburgh, PA 15208 U.S.	
NOTARIZATION	
BEFORE ME, the undersigned authority, on this day personally appear	ared Arthur E. Uber, III, known to me to be the person
whose name is subscribed above, and acknowledged to me that he she expressed. Given under my hand and seal of office, this	day of , 206
Notary Public	Notary Public /
Signature Junette Che	Printed Name:
[seal]	[stamp] COMMONWEALTH OF PENNSYLVANIA
	NOTARIAL SEAL Luciette C. Shields, Notary Public
	Indiana Twp., Allegheny County My Commission Expires June 10, 2018

	 		
NAME OF SEVENTH INVENTO	R:		
Given Name			
(first and middle [if any]): Martin	J	Family Name or S	urname: Uram
Inventor's signature	 	т	Date
Residence: City: Pittsburgh	State: PA	Country: U.S.	Citizenship
Mailing Address: 924 Irwin Drive,	Pittsburgh, PA 15236 U.S.		
NOTARIZATION BEFORE ME, the undersigned authorname is subscribed above, and ackno expressed. Given under my hand an	wledged to me that he/she execute		
Notary Public Signature		Notary Public Printed Name:	
[seal]	•	[stamp]	
NAME OF EIGHTH INVENTOR	l:		
(first and middle [if any]): Dave	1	Family Name or S	
Inventor's signature	1.6m		Date 10/18/16
Residence: City: Pittsburgh	State: PA	Country: U.S.	Date 10/18/16 Citizenship U.S.
Mailing Address: 475 Irwin Lane, NOTARIZATION BEFORE ME, the undersigned author is subscribed above, and acknowledge	Pittsburgh, PA 15212 U.S. ority, on this day personally appeared to me that he sheep executed the	red Dave Callen , known to	o me to be the person whose name
Mailing Address: 475 Irwin Lane, NOTARIZATION BEFORE ME, the undersigned author is subscribed above, and acknowledg Given under my hand and seal of of	Pittsburgh, PA 15212 U.S. ority, on this day personally appeared to me that he sheep executed the	red Dave Callen, known to same for the purposes and Notary Public Printed Name:	o me to be the person whose name consideration therein expressed.

NAME OF NINTH IN	VENTOR:			·		
Given Name	, v En (T Ozu					
(first and middle [if an	vl): Kevin P.			Family Name or S	umame: Cowa	7
(mass and masses (mass	<u> </u>			Tanniy Isanie of B	diname. Cowa	
Inventor's signature					Date	
				···	1 32,0	
Residence: City: Allis	on Park	State: PA	Co	untry: U.S.	l ci	tizenship
		L-XXXXXV		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		· · · · · · · · · · · · · · · · · · ·
Mailing Address: 4242	Estates Cou	rt, Allison Park, PA 1510)	I II S			
NOTARIZATION	2,000	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
BEFORE ME, the unde	ersigned author	rity, on this day personally a	appeared Ke	evin P. Cowan, know	wn to me to be t	he person whose
		wledged to me that he/she er			es and considera	tion therein
expressed. Given unde	r my hand and	I seal of office, this	day	y of		. 20
Notary Public				Notary Public		
Signature				Printed Name:		
[seal]				[stamp]		
						
NAME OF TENTH I	NVENTOR:					
Given Name						
(first and middle (if an	y]): Raymon	d C.	,	Family Name or S	urname: Hoffu	ian
·		117/1		<u> </u>		
Inventor's signature 🕺	Henry	mac Hell	/	-	Date	10/25/16
	7	Po			14	10/15/16 5 Citizen
Residence: City: Gibs	einos	State: PA	Ca	untry: U.S.		tizenship
residence. City. Giba	, only			uning. Days		оленир
Mailing Address: 204	MacDuff Cor	ırt, Gibsonia, PA 15044 U				
NOTARIZATION	MacDun Cot	iri, Gibsonia, FA 13044 C	-0-			
	ersioned autho	rity, on this day personally a	mneared Re	ovmend C. Hoffma	n known to me	to be the person
		acknowledged to me that h				
		d seal of office, this 25		y of October		20/6
Notam Dublic		m. 1				
Notary Public Signature		(a) me ()		Printed Name	land a	(i /
Signature	nwa	Glood Kow		Trinica rianici	18991Ca	Gudnow
[seal]				[stamp]	- 	
✓ ,		ALTH OF PENNSYLVANIA FARIAL SEAL		1		
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1	No	otary Public	ŀ	†		
	LY OF PITTSBU	RGH, ALLECHENY COUNTY	 	1		
1	My Commissio	n Expires Jun 24, 2020	l			

NAME OF ELEVENTH INVENT	OR:				
Given Name					
(first and middle [if any]): Matthew	<u> </u>	Family Name or Surna	Family Name or Surname: McGee		
			1_		
Inventor's signature			Date		
Residence: City: Cranberry Twp.	State: PA	Country: U.S.	Citizenship		
Residence, City. Cranberry 1 wp.	istate. I M	Country, 0.5.	Citizensinp		
Mailing Address: 210 Drake Circle,	Cranberry Twp., PA 16066 U.	S.			
NOTARIZATION					
BEFORE ME, the undersigned author name is subscribed above, and acknown					
expressed. Given under my hand and		d the same for the purposes at day of	. 20 .		
Notary Public		Notary Public			
Signature		Printed Name:			
[seal]		[stamp]			
L					
NAME OF TWELFTH INVENTO	R:				
Given Name					
(first and middle [if any]): Michael	А.	Family Name or Surna	ame: Spohn		
31 1	1011		477.4.4.4		
Inventor's signature	I fahr	T	Date 10/14/16		
Residence: City: Fenelton	State: PA	Country: U.S.	Citizenship O5A		
Residence, City. Fenerion	State. FA	Country, C.S.	Chizenship -37		
Mailing Address: 2814 Old Route 4	22 East, Fenelton, PA 16034 U.	S.	:		
NOTARIZATION	, .,,				
BEFORE ME, the undersigned author	rity, on this day personally appear	ed Michael A. Spohn, known	to me to be the person whose		
name is subscribed above, and acknown expressed. Given under my hand and	wiedged to me that he/she except I seal of office, this	d the same for the purposes ar	nd consideration therein, 20/		
Notary Public		Notary Public	, E		
Clamatium 4	a ll no	Printed Name:	11 0 57 10		
Jucutte Jucutte	C' Thelps		elette C. Shields		
[seal]		[stamp] COMMON	WEALTH OF PENNSYLVANIA		
		1 100	NOTARIAL SEAL siette C. Shields, Notary Public		
		inc	ilana Twp., Allegheny County		
			MINISTON Expires June 10, 2018 MNSYLVANIA ASSOCIATION OF NOTARIES		
			The second secon		

NAME OF THIRTEENTH INVEN	NTOR:		
Given Name			
(first and middle [if any]): Benjamin	n T.	Family N	Name or Surname: Krupp
Inventor's signature Beny	mun T Krup	þ	Date 10/20/2016
Residence: City: Cincinnati	State: OH	Country: U.S.	Citizenship U.S.
Mailing Address: 114 Congress Rur	a Road, Cincinnati, OH 45215 I	J .S.	
NOTARIZATION			
BEFORE ME, the undersigned author whose name is subscribed above, and expressed. Given under my hand and	acknowledged to me that he/she e	executed the sam	. Krupp, known to me to be the person ne for the purposes and consideration therein 24066
Notary Public Signature	Junter	Notary Pi Printed N	
Note In end for t My Comm	Y GENTRY ary Public the State of Ohio hission Expires ther 12, 2017	[stamp]	
ATE OF O			
NAME OF FOURTEENTH INVE	NTOR:		
Given Name			
(first and middle [if any]): Martin J	<i>I</i>	Family N	Name or Surname: Gibler
Inventor's signature			Date
	!		
Residence; City: West Chester	State: OH	Country: U.S.	Citizenship
Mailing Address: 5854 Old Forest I	Lane, West Chester, OH 45069	U.S.	·····
NOTARIZATION			
			ibler, known to me to be the person whose he purposes and consideration therein
expressed. Given under my hand and		day of	, 20
Notary Public Signature		Notary P	
[seal]		[stamp]	
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PATENT REEL: 052121 FRAME: 0465

Docket No.: CT/14-011 PCT-

ASSIGNMENT WITH DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63)

Whereas, I/We, the undersigned inventor(s) hereinafter called assignor(s), have invented certain improvements described in the application identified below; and

Whereas, Bayer HealthCare LLC a corporation organized and existing under the laws of the State of Delaware and having a place of business at 100 Bayer Boulevard, Whippany, NJ 07981, (assignce), desires to acquire the entire right, title, and interest in the application and invention, and to any United States patents to be obtained therefor;

Now therefore, for valuable consideration, receipt whereof is hereby acknowledged,

I/We, the above named assignor(s), hereby sell, assign and transfer to the above named assignee, its successors, legal representatives, and assigns, the entire right, title and interest in the invention and the application for the United States of America, including all direct and indirect divisions, continuations, and continuations-in-part thereof, and all original, extended, reissued, reviewed, and reexamined Letters Patent of the United States, and all countries foreign thereto, that may be granted thereon, including rights of priority under the International Convention of Paris (1883) as amended, including the right to claim priority under 35 U.S.C. §119, and I/we request the Director of the U.S. Patent and Trademark Office to issue any Letters Patent granted upon the invention set forth in the application to the assignee, its successors and assigns; and I/we hereby agree that the assignee may apply for foreign Letters Patent on the invention and I/we will execute without further consideration all papers deemed necessary by the assignee in connection with the United States and foreign applications when called upon to do so by the assignee, its successors, legal representatives, or assigns. I/We further represent and warrant that I/We have the full right to convey the interest assigned by this assignment, and that I/We have not granted any rights inconsistent with the rights granted herein. I/We further acknowledge an obligation of assignment of this invention to assignee at the time the invention was made and we further irrevocably designate and appoint assignee and its counsel as my/our attorney-in-fact and agent to act for and on my/our behalf to execute and file any document and to do all other lawfully permitted acts to further the purposes of this Agreement with the same legal force and effect as if executed by assignor himself/herself. I/We acknowledge that assignee is the real party in interest to any and all patent applications described in connection with this Agreement, and to any and all patent r

As the below named inventor I hereby declare that:

This Assignment with Declaration is directed to: $\hfill \begin{tabular}{c} \hfill \h$	
The application is entitled: Syringe with Rolling Diaphragm	Number filed on (Confirmation No).
The above identified application was made or was authorized to be	made by me.
I believe that I am the original inventor or an original joint invento	of a claimed invention in the application.
I have reviewed and understand the contents of the application and me to be material to patentability as defined in 37 CFR 1.56.	I am aware of the duty to disclose to the Office all information known
I hereby acknowledge that any willful false statement made in the fine or imprisonment of not more than five (5) years, or both.	is Assignment with Declaration is punishable under 18 USC 1001 by

Authorization To Permit Access To Application by Participating Office

If checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the above-identified application is filed access to the above-identified patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, or other intellectual property office in which a foreign application claiming priority to the above-identified application is filed to have access to the application.

In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the application-as-filed with respect to: 1) the above-identified patent application-as-filed, 2) any foreign application to which the above-identified application claims priority under 35 USC 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the above-identified patent application, and 3) any U.S. application-as-filed from which benefit is sought in the above-identified patent application.

In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing the Authorization to Permit Access to Application by Participating Office.

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to

NAME OF SOLE OR FIRST IN	NVENTOR:		
Given Name			
(first and middle [if any]): Dave		Family Name or Surna	me: Berry
Inventor's signature			Date
Residence: City: Kittanning	State: PA	Country: U.S.	Citizenship
		•	·
Mailing Address: 277 Ping Wing	Hollow Road, Kittanning, PA 162	01 U.S.	
NOTARIZATION			
	thority, on this day personally appeared to me that he/she executed the san office, this day of		
Notary Public		Notary Public	
Signature		Printed Name:	
[seal]		[stamp]	
NAME OF SECOND INVENTO	OR:		
Given Name			
(first and middle [if any]): Barry	L.	Family Name or Surna	me: Tucker
Inventor's signature			Date
Residence: City: Verona	State: PA	Country: U.S.	Citizenship
Mailing Address: 219 McGregor	Drive, Verona, PA 15147 U.S.		
NOTARIZATION	a . a. a. a.	1D T 7D 1 1	
	thority, on this day personally appeare mowledged to me that he/she executed		
expressed. Given under my hand			, 20
NI-4 De-1-12-		Notary Public	
Notary Public Signature		Printed Name:	
[seal]		[stamp]	
		1	

NAME OF THIRD INVENTOR	<u> </u>				
Given Name	<u>-</u>				
(first and middle [if any]): Edwar	[.] d J.		Family Name or Surna	me: Rl	hinehart
	<u> </u>				
Inventor's signature				Date	
-					
Residence: City: Monroeville	State: PA	Co	untry: U.S.		Citizenship
Mailing Address: 1780 McClure	Road, Monroeville, PA 15146 U.	.S <u>.</u>			
NOTARIZATION	<u> </u>				
	thority, on this day personally appearand acknowledged to me that he/she and seal of office, this				d consideration therein
Notary Public			Notary Public		
Signature			Printed Name:		
[seal]			[stamp]		
[SCarj			[Stamp]		
NAME OF FOURTH INVENTO	OR:				
Given Name	744				
(first and middle [if any]): Mark			Family Name or Surnar	me: Tı	rocki
			l v		
Inventor's signature				Date	
Residence: City: Cheswick	State: PA	Co	untry: U.S.		Citizenship
·					•
Mailing Address: 130 Reaghard	Drive, Cheswick, PA 15024 U.S.				
NOTARIZATION					
	thority, on this day personally appea				
	dged to me that he/she executed the	same		iderati	on therein expressed.
Given under my hand and seal of	office, this day of		, 20 <u> </u>		
Notary Public			Notary Public		
Signature			Printed Name:		
[seal]			[stamp]		

NAME OF FIFTH INVENTOR:				
Given Name				
(first and middle [if any]): Gerald V	v.	Family Name or Surna	me: C	allan
Inventor's signature			Date	•
inventor 5 signature			Date	
Residence: City: Cranberry Twp.	State: PA	Country: U.S.		Citizenship
		_		
Mailing Address: 108 Hunter Drive	, Cranberry Twp., PA 16066 U	<u>.S.</u>		
NOTARIZATION		10 1177 0 11 1		
BEFORE ME, the undersigned author whose name is subscribed above, and				
expressed. Given under my hand and		day of	oses ai	, 20
•	sear of office, and			, 20
Notary Public		Notary Public		
Signature		Printed Name:		
[seal]		[stamp]		
[sear]		[ourney]		
NAME OF SIXTH INVENTOR:				
Given Name				
(first and middle [if any]): Arthur B	ī	Family Name or Surna	ma: I	bor III
(mst and middle [n any]). Arthur E	56	Taining Name of Suma		bei, 111
, , , , ,				
Inventor's signature			Date	
Residence: City: Pittsburgh	State: PA	Country: U.S.		Citizenship
Mailing Address: 7426 Ben Hur Str	eet, Pittsburgh, PA 15208 U.S.			
NOTARIZATION				
BEFORE ME, the undersigned author				*
whose name is subscribed above, and			oses ar	
expressed. Given under my hand and	i seal of office, this	day of		, 20
Notary Public		Notary Public		
Signature		Printed Name:		
[seal]		[stamp]		
1				

<u> </u>			
NAME OF SEVENTH INVENTO	OR:		
Given Name			
(first and middle [if any]): Martin	J	Family Name or Surr	name: Uram
Inventor's signature Mari	tim J. Wram	 	Date 10/15/2016
Residence: City: Pittsburgh	State: PA	Country: U.S.	Citizenship USA
Mailing Address: 924 Irwin Drive	, Pittsburgh, PA 15236 U.S.		
NOTARIZATION BEFORE ME, the undersigned authorane is subscribed above, and acknown expressed. Given under my hand a	owledged to me that he/she execute		
Notary Public Signature		Notary Public Printed Name:	
[seal]	the state of the s	L. Kaitha [stamp] COMMONWE	RATH OF PENNSYLVANIA
		Lakeitha Pleasant Hir	OTARIAL SEAL Barrett, Notary Public Is Boro, Allegheny County Mon Express Cen. 14, 2019.
NAME OF EIGHTH INVENTO	R:		
Given Name			
(first and middle [if any]): Dave	 	Family Name or Sun	name: Callen
Inventor's signature	e.	Transition of the second	Date
Residence: City: Pittsburgh	State: PA	Country: U.S.	Citizenship
Mailing Address: 475 Irwin Lane,	Pittsburgh, PA 15212 U.S.		
BEFORE ME, the undersigned auth is subscribed above, and acknowled Given under my hand and seal of o	lged to me that he/she executed the		
Notary Public Signature		Notary Public Printed Name:	
[seal]		[stamp]	

PATENT REEL: 052121 FRAME: 0470

***************************************	***************************************		**************************************
NAME OF NINTH INVENTOR:	-		
Given Name			
(first and middle [if any]): Kevin P.	738	Family Name or Surna	ame: Cowan
Inventor's signature	A Court		Date 14 OCT 2016
Residence: City: Allison Park	State: PA	Country: U.S.	Date 14 OCT 2016 Citizenship USA
Mailing Address: 4242 Estates Com	rt, Allison Park, PA 15101 U.S.		
NOTARIZATION			
BEFORE ME, the undersigned author name is subscribed above, and acknow expressed. Given under my hand and	wledged to me that he/she execute	ed Kevin P. Cowan, known to d the same for the purposes ar day of	o me to be the person whose ad consideration therein , 20/4
Notary Public Signature [seal]	C. Skell	Notary Public Printed Name:	icipho C. Shield
[seal]		[stamp]	TH CE PENNSYLVANIA THE PENNSYLVANIA OTAPIC STOPPHONE Shiptes N. P.
			NO. CONTROL OF NOTABLES
NAME OF TENTH INVENTOR:			
Given Name			
(first and middle [if any]): Raymon	đ C.	Family Name or Surna	ame: Hoffman
Inventor's signature			Date
Residence: City: Gibsonia	State: PA	Country: U.S.	Citizenship
Mailing Address: 204 MacDuff Con NOTARIZATION BEFORE ME, the undersigned author whose name is subscribed above, and expressed. Given under my hand and	rity, on this day personally appear acknowledged to me that he/she of		
Notary Public Signature	www.van v.a U.A.A.Veg NAALV	Notary Public Printed Name:	
[seal]		[stamp]	

Given Name (first and middle [if any]): Matthew Inventor's signature Residence: City: Cranberry Twp. State: PA Country Mailing Address: 210 Drake Circle, Cranberry Twp., PA 16066 U.S. NOTARIZATION	Date	100 11 17
Inventor's signature Residence: City: Cranberry Twp. State: PA Country Mailing Address: 210 Drake Circle, Cranberry Twp., PA 16066 U.S.	Date	10-11-16
Residence: City: Cranberry Twp. State: PA Country Mailing Address: 210 Drake Circle, Cranberry Twp., PA 16066 U.S.		
Residence: City: Cranberry Twp. State: PA Country Mailing Address: 210 Drake Circle, Cranberry Twp., PA 16066 U.S.		
Mailing Address: 210 Drake Circle, Cranberry Twp., PA 16066 U.S.	v. U.S.	Citizenship
Mailing Address: 210 Drake Circle, Cranberry Twp., PA 16066 U.S.	/: U.S.	Citizenship
NOTARIZATION		
1		
BEFORE ME, the undersigned authority, on this day personally appeared Matthe name is subscribed above, and acknowledged to me that he/she, executed the same		
expressed. Given undommy hand and seal of office, this day of	Octobel	, 20
No. Div.	tary Public	
	nted Name:	()
Joseph De	UDa	L DNG C
[seal] [sta	amp] July 110A	SHEA
·		mission # FF 912978
	1	res December 25, 2019
	Property Bonded	Thru Troy Fain Insurance 800-385-7019
NAME OF TWELFTH INVENTOR:		
Given Name		
(first and middle [if any]): Michael A. Far	mily Name or Surname: Sp	pohn
Inventor's signature	Date	
Residence: City: Fenelton State: PA Country	y: U.S.	Citizenship
Mailing Address: 2814 Old Route 422 East, Fenelton, PA 16034 U.S.		
NOTARIZATION		
	e for the purposes and cons	20
	turns Disklip	
	nted Name:	
organiaro 1111		
[seal] [st	amp]	·
-		•
2.0.000	e for the purposes and cons	ideration therein

NAME OF THIRTEENTH INVE	NTOR.			
Given Name	ATOK.			
	in T	Family Name on C		
(first and middle [if any]): Benjam	III 1.	Family Name or S	urname: K	rupp
nventor's signature	T		Date	
	}			
Residence: City: Cincinnati	State: OH	Country: U.S.		Citizenship
Mailing Address: 114 Congress Ru	ın Road, Cincinnati, OH	45215 U.S.		
NOTARIZATION				
BEFORE ME, the undersigned auth				
whose name is subscribed above, an expressed. Given under my hand as		the/she executed the same for the production day of	purposes an	d consideration therein
expressed. Given under my hand at	iu scar of office, this	uay or		, 20
Notary Public	1	Notary Public		
lignature		Printed Name:		
seal]		[stamp]		
	ENTOR:			
NAME OF FOURTEENTH INVI				
		Family Name or S		
Given Name		Family Name or S		
Given Name first and middle [if any]): Martin		Family Name or S		
Given Name first and middle [if any]): Martin nventor's signature		Family Name or S		ibler 10 - 14 - 16 Citizenship U.S.
Given Name first and middle [if any]): Martin nventor's signature	s. DDAG			10-14-16
Siven Name first and middle [if any]): Martin nventor's signature Residence: City: West Chester	J. State; OH	Country: U.S.		10-14-16
Siven Name first and middle [if any]): Martin nventor's signature Residence: City: West Chester Mailing Address: 5854 Old Forest	J. State; OH	Country: U.S.		10-14-16
Given Name first and middle [if any]): Martin nventor's signature Residence: City: West Chester Mailing Address: 5854 Old Forest NOTARIZATION BEFORE ME, the undersigned auth	State: OH Lane, West Chester, OH ority, on this day personall	Country: U.S. 1 45069 U.S. y appeared Martin J. Gibler, know	Date	10-14-/6 Citizenship U.S.
Given Name first and middle [if any]): Martin nventor's signature Residence: City: West Chester Mailing Address: 5854 Old Forest NOTARIZATION BEFORE ME, the undersigned auth name is subscribed above, and acknown	J. State: OH Lane, West Chester, OH ority, on this day personally owledged to me that he/she	Country: U.S. I 45069 U.S. y appeared Martin J. Gibler, known executed the same for the purpose	Date	Citizenship U. S.
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Given Name (first and middle [if any]): Martin nventor's signature Residence: City: West Chester Mailing Address: 5854 Old Forest NOTARIZATION BEFORE ME, the undersigned auth name is subscribed above, and acknown pressed. Given under my hand an	State: OH Lane, West Chester, OH ority, on this day personally owledged to me that he/she and seal of office, this	Country: U.S. I 45069 U.S. y appeared Martin J. Gibler, know executed the same for the purpose day of Notary Public Printed Name:	Date was to me to sea and cons	Citizenship U. S.
Given Name (first and middle [if any]): Martin nventor's signature Residence: City: West Chester Mailing Address: 5854 Old Forest NOTARIZATION BEFORE ME, the undersigned auth name is subscribed above, and acknocapressed. Given under my hand an Notary Public Signature	State: OH Lane, West Chester, OH ority, on this day personally owledged to me that he/she and seal of office, this	Country: U.S. I 45069 U.S. y appeared Martin J. Gibler, know executed the same for the purpose day of Notary Public Printed Name:	Date was to me to sea and cons	Citizenship U. S.
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