PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT7546645

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
MICHAEL HENKER	03/24/2020
YUE MA	03/24/2020
SHANGHAI ITW PLASTIC & METAL CO., LTD.	04/07/2020

RECEIVING PARTY DATA

Name:	ILLINOIS TOOL WORKS INC.
Street Address:	155 HARLEM AVENUE
City:	GLENVIEW
State/Country:	ILLINOIS
Postal Code:	60025

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16741240

CORRESPONDENCE DATA

Fax Number: (312)715-5155

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: 3127155000

Email: lucinda.marcello@QUARLES.COM

QUARLES & BRADY LLP Correspondent Name:

Address Line 1: 300 N. LASALLE STREET, SUITE 4000

Address Line 4: CHICAGO, ILLINOIS 60654

ATTORNEY DOCKET NUMBER:	480805.00692-68074-US-A			
NAME OF SUBMITTER:	NICHOLAS P. SCHMIDBAUER			
SIGNATURE:	/NPSchmidbauer/			
DATE SIGNED:	09/20/2022			

Total Attachments: 9

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PATENT REEL: 061144 FRAME: 0686 507499755

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PATENT REEL: 061144 FRAME: 0687

ASSIGNMENT

THIS ASSIGNMENT is made by and between

- 1) Michael HENKER (近克尔・汉克) Buillding #2, 66 Tianying Road Qingpu Industrial Development Zone Shanghai 201700, China
- 2) Yue MA (馬跃) Buillding #2, 66 Tianying Road Qingpu Industrial Development Zone Shanghai 201700, China

3)

4)

(hereinafter referred to as inventor(s)), and

Shanghai ITW Plastic & Metal Co., Ltd. (上海線工塑料五金有限公司) having a place of business at Buillding #2, 66 Tianying Road, Oingpu Industrial Development Zone, Shanghai 201700, China (中国上海市青浦工业园区天盈路 66 号 2 條、鄉線 201700)

individually and collectively as Assignor(s), and

ILLINOIS TOOL WORKS INC., a corporation of the State of Delaware, U.S.A., having a place of business at 155 Harlem Avenue, Glenview, Illinois 60025, USA ("ITW")

as Assignee.

WHEREAS, inventor(s) is (are) employed in a technical capacity by Shanghai ITW Plastic & Metal Co., Ltd.;

WHEREAS, Shanghai ITW Plastic & Metal Co., Ltd. is a division, subsidiary, business unit or other entity of ITW;

WHEREAS, inventor(s) has (have) made one or more inventions (as identified below) (hereinafter individually) or collectively referred to as "Invention"); and

WHEREAS, the parties hereto have at all times desired that ITW shall absolutely hold any and all rights (including, but not limited to, Application rights, Patent Rights, Utility Patent rights, Plant Patent rights, Design Patent rights, Priority rights) in the Invention in accordance with the assignment made herein.

NOW THEREFORE, for valuable and sufficient consideration from ITW to Assignor(s), receipt of such consideration being hereby acknowledged and intending to be legally sufficient, I/we hereby sell, assign and convey unto Assignee, its successors and assigns, my/our entire right, title and interest:

(1) in and to the Invention entitled "N (Valve)" for which I/we have executed, a PCT Patent Application and/or United States Patent Application on even date herewith, and, if applicable, which claims the benefit of United States Provisional Application No(s).

[Provisional Application No(s).

[Invented States Patent Application



Page 1 of 3

(2) 111	and to an invention entitled "	· · · · · · · · · · · · · · · · · · ·	" for which I/we previously filed
United Sta	tes Provisional Application No(s)	·an	
(3) in and/or Chi throughout application in thereon or said patent	and to said PCT Patent Applications of the most of the	on, United States Patent Applicat and to all other patent applica crefrom, as well as any division used upon said forgoing Inventiones or the like thereof, if any, to use if the processory for recordation	ion, United States Provisional Application(s), tions now or hereafter filed in any country nal, continuation, reexamination and reissue in, and in and to any patent or patents granted the full end of the term or terms for which purposes with any national or foreign patent being specifically identified as follows)
	Country		Filing / Issue or Grant Date
	Country	Application / Patent No.	Filing / Issue or Grant Date
; and			

(4) in and to any and all priority rights, and any other application and patent rights in all of the above mentioned patent applications and patents.

I/we hereby authorize the Assignee and/or its agent or attorney to enter the Application No(s), and filing date(s) of the subject patent application(s) in the spaces provided above once received.

For the avoidance of any doubt, and without restricting the generality of this Assignment, it is confirmed by the Assignor(s) that the Assignee had the right to file the PCT Patent Application, United States Patent Application(s), and/or Chinese Patent Application, and shall have the right to file additional applications for protection of whatever form and in whichever countries it may choose to do so.

I/we agree that the PCT Parent Application, United States Patent Application, United States Provisional Application(s), and/or Chinese Patent Application, and any patent applications of any countries which may be filed under any applicable international treaties and/or conventions based upon said Invention, shall be filed in the name of Assignee with the right to claim priority to the PCT Patent Application, United States Patent Application, United States Provisional Application(s), and/or Chinese Patent Application based upon said Invention.

I/we further agree and authorize the Commissioner of Patents and Trademarks of the United States and all other appropriate government officials for applicable countries foreign to the United States to issue any and all above-identified patents to Assignce.

I/we hereby further agree that I/we shall, upon demand of Assignce, its successors or assigns, and without further consideration to me/us, execute any and all papers, make all rightful oaths and perform all acts that may be necessary, or deemed by Assignce, its successors or assigns, to be necessary, to be a complete fulfillment of the intent and purposes of this Assignment, it being understood that any expense incident to the execution of such papers and oaths, and performance of all applicable acts, shall be paid by Assignce, its successors and assigns, and not by me/us.

Any and all rights Assignce takes under this Assignment are freely assignable or otherwise transferable by Assignce without any restriction whatsoever.

I/we hereby confirm my/our assignment absolutely to Assignee of any and all rights whatsoever that I/we may have in the subject matter hereof to the full extent that I/we would have had, had this assignment not been made.

The consideration for the Assignment is in the premises above but in deference to those jurisdictions where a monetary consideration is required to effect an assignment, Assignee agrees to pay each of the Assignors the sum of \$1 (one U.S.

Page 2 of 3

dollar) or such other sufficient amount as agreed to by the parties, the receipt, adequacy and sufficiency of which the Assignor(s) acknowledge on signature hereto.

1) Michael Henter	2019.05.09	2) Yue Ma	2019.5.>
Name: Michael HENKER	Date	Name: Yue MA	,
3)	·····	4)	
Name:	Date	Name:	
	DECLARATIO	N OF WITNESS	
t. Ellen Huak hereby declare that I was personally person(s) named in this Assignment, d	whose post office a present and did see the	ddress is Bua Life # 2 L	6 Jian Yry Roac known to me to be the
(Signature of Witness)		Joseph 1 T 114 te of Signature)	
(organization, withtens)	1178	e or signature)	
For and on behalf of		COMPANY SEA	ž.
Shanghai ITW Piastic & Metal Co., Li	4. ,		
Name: Blen Huay.	·		
Name: Ellen Huay. Title: HR Manager			
Date: Was 15 416	s	v.	
For and on behalf of		COMPANY SEA	ſ.
LLINOIS TOOL WORKS INC.			
12-P12	ORDONO CONTRACT		
lamoChretopher P. S	Pauch		
millhief IP Counsel			
a	- Sadou	i VX Ai	

Page 3 of 3

ASSIGNMENT

THIS ASSIGNM	ENT is	made by	/ and	between
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- 1) Michael HENKER (近克尔·汉克) #91 Yuandian Road Xinzimang Industrial Development Zone Shanghai 201108, China
- 2) Yue MA (与跃) #91 Yuandian Road Xinzhuang Industrial Development Zone Shanghai 201108, China

3)

4)

(hereinafter referred to as inventor(s)), and

Shanghai ITW Plastic & Metal Co., Ltd. (上海旅工業計五套資料公司) having a place of business at #91 Yuandisp Read, Xiuzhuang Industrial Development Zone, Shanghai 201108, China (中国上海市美度工业开发展文章38-91 号、報路 201108)

individually and collectively as Assignor(s), and

ILLINOIS TOOL WORKS INC., a corporation of the State of Delaware, U.S.A., having a place of business at 155 Harlem Avenue, Glenview, Illinois 60025, USA ("ITW")

as Assignee,

WHEREAS, inventor(s) is (arc) employed in a technical capacity by Shanghai ITW Plastic & Metal Co., Ltd.:

WHEREAS, Shanghai ITW Plastic & Metal Co., Ltd. is a division, subsidiary, business unit or other entity of ITW;

WHEREAS, inventor(s) has (have) made one or more inventions (as identified below) (hereinafter individually or collectively referred to as "Invention"); and

WHEREAS, the parties hereto have at all times desired that ITW shall absolutely hold any and all rights (including, but not limited to, Application rights, Patent Rights, Utility Patent rights, Plant Patent rights, Design Patent rights, Priority rights) in the Invention in accordance with the assignment made herein.

NOW THEREFORE, for valuable and sufficient consideration from ITW to Assignor(s), receipt of such consideration being hereby acknowledged and intending to be legally sufficient, I/we hereby sell, assign and convey unto Assignee, its successors and assigns, my/our entire right, title and interest:

(1) in and to the invention entitle	d "图 (Valve)" for which	I/we have execute	d, a PCT Patent A	pplication and/o
United States Patent Application on e				
Provisional Application No(s),	filed on	; or which	is the subject of	a Chinese Pater
Application or a PCT Patent Applic	ation having Chinese Pat	ent Application N	o. <u>202</u> 0100[8409.1	or PCT Pater
Application No. and	was filed on January 8, 20	20:	32222	**
(2) in and to an Invention entitled	»×		" for which I/w	e previonsly file
United States Provisional Application N	√o(s),	(222		- pri - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -

Page 1 of 3

in and to said PCT Patent Application, United States Patent Application, United States Provisional Application(s), and/or Chingge Patent Application, and in and to all other patent applications now or hereafter filed in any country throughout the world claiming priority therefrom, as well as any divisional, continuation, reexamination and reissue applications, and legal equivalents thereof, based upon said forgoing Invention, and in and to any patent or patents granted thereon or issued therefrom, including reissues or the like thereof, if any, to the full end of the term or terms for which said patent or patents may be granted or assued, (if necessary for recordation purposes with any national or foreign patent office throughout the world, said other patent application(s)s and/or patent(s) being specifically identified as follows)

Социну	Application / Patent No.	Filing / Issue or Grant Date
Country	Application / Patent No.	Filing / Issue or Grant Date

; and

(4) in and to any and all priority rights, and any other application and patent rights in all of the above mentioned patent applications and patents.

I/we hereby authorize the Assignee and/or its agent or attorney to enter the Application No(s), and filing date(s) of the subject patent application(s) in the spaces provided above once received.

For the avoidance of any doubt, and without restricting the generality of this Assignment, it is confirmed by the Assignor(s) that the Assignee had the right to file the PCT Patent Application. United States Patent Application, United States Provisional Application(s), and/or Chinese Patent Application, and shall have the right to file additional applications for protection of whatever form and in whichever countries it may choose to do so.

I/we agree that the PCT Patent Application, United States Patent Application, United States Provisional Application(s), and/or Chinese Patent Application, and any patent applications of any countries which may be filed under any applicable international treaties and/or conventions based upon said Invention, shall be filed in the name of Assignee with the right to claim priority to the PCT Patent Application, United States Patent Application, United States Provisional Application(s), and/or Chinese Patent Application based upon said Invention.

I/we further agree and authorize the Commissioner of Patents and Trademarks of the United States and all other appropriate government officials for applicable countries foreign to the United States to issue any and all above-identified patents to Assignee.

I/we hereby further agree that I/we shall, upon demand of Assignee, its successors or assigns, and without further consideration to mc/us, execute any and all papers, make all rightful oaths and perform all acts that may be necessary, or deemed by Assignee, its successors or assigns, to be necessary, to be a complete fulfillment of the intent and purposes of this Assignment, it being understood that any expense incident to the execution of such papers and oaths, and performance of all applicable acts, shall be paid by Assignee, its successors and assigns, and not by me/us.

Any and all rights Assignee takes under this Assignment are freely assignable or otherwise transferable by Assignee without any restriction whatsoever.

I/we hereby confirm my/our assignment absolutely to Assignce of any and all rights whatsoever that I/we may have in the subject matter hereof to the full extent that I/we would have had, had this assignment not been made.

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Page 2 of 3

1)	2020/03/24	2) YHE MA	26%.03.44
Name: Michael HENKER	Date	Name: Yue MA	Date
3)		4)	
Name:	Date	Name;	Date
	DECLARATION	OF WITNESS	
I. Hu and Xian yun hereby declare that I was personally person(s) named in this Assignment.	whose post office ad present and did see the duly sign and execute the	dress is <u>91 Yuandian Ro</u> nbove named inventoris), personal c same:	ad , Sharghai y known to (d.: to be the
Huart Xiaoyun (Signature of Waness)		Jo Bo / 4 / 7 e of Signature)	
(Signature of Wancess)	(Dat	e of Signature)	
For and on behalf of		COMPANY SE	EAL
Shanghai ITW Plastic & Metal Co., I	id.		
:			
Name: Hung Xiaoyun Title: HPD			
Date: Jolo / 4-/7			
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For and on behalf of		COMPANY SE	AL
ILLINOIS TOOL WORKS INC.		e e e e e e e e e e e e e e e e e e e	egeneti ^{non} :
Name: Christopher P.	Rauch		
rinc Chief It Couns		-	
Date: 9/11/22	Sucr	ary \	

Page 3 of 3

ASSIGNMENT

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 in and to the Invention entitled " 	图 (Valve)" for which I/w	ve have executed, a !	PCT Patent App	dication and/or
United States Patent Application on even				
Provisional Application No(s),	filed on	; or which is t	he subject of a	Chinese Patent
Application or a PCT Patent Application Application Noand wa	on having <u>Chinese</u> Patent	Application No. 20	2010018409.1	or PCT Patent
(2) in and to an Invention entitled "			for which I/we p	reviously filed

Page 1 of 3

PATENT REEL: 061144 FRAME: 0694 in and to said PCT Patent Application, United States Patent Application, United States Provisional Application(s), and/or Chingge Patent Application, and in and to all other patent applications now or hereafter filed in any country throughout the world claiming priority therefrom, as well as any divisional, continuation, reexamination and reissue applications, and legal equivalents thereof, based upon said forgoing Invention, and in and to any patent or patents granted thereon or issued therefrom, including reissues or the like thereof, if any, to the full end of the term or terms for which said patent or patents may be granted or assued, (if necessary for recordation purposes with any national or foreign patent office throughout the world, said other patent application(s)s and/or patent(s) being specifically identified as follows)

Country	Application / Patent No.	Filing / Issue or Grant Date
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I/we hereby authorize the Assignee and/or its agent or attorney to enter the Application No(s), and filing date(s) of the subject patent application(s) in the spaces provided above once received.

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I/we hereby further agree that I/we shall, upon demand of Assignee, its successors or assigns, and without further consideration to mc/us, execute any and all papers, make all rightful oaths and perform all acts that may be necessary, or deemed by Assignee, its successors or assigns, to be necessary, to be a complete fulfillment of the intent and purposes of this Assignment, it being understood that any expense incident to the execution of such papers and oaths, and performance of all applicable acts, shall be paid by Assignee, its successors and assigns, and not by me/us.

Any and all rights Assignee takes under this Assignment are freely assignable or otherwise transferable by Assignee without any restriction whatsoever.

I/we hereby confirm my/our assignment absolutely to Assignce of any and all rights whatsoever that I/we may have in the subject matter hereof to the full extent that I/we would have had, had this assignment not been made.

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Page 2 of 3

n	2020/03/24	V . A.	3550 07 500
1)	2020101126	2) YHE Ma	ON 20 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Name: Michael HENKER	Date	Name: Yue MA	Date
3)		4)	
Name:	Date	Name;	Date
	DECLARATION	OF WITNESS	
i. Hu and Xian yun hereby declare that I was personally person(s) named in this Assignment.	duly sign and execute the	same:	**
Huar X Yao yun (Signature of Winess)	(Dat	<u> </u>	
	,, · · · ·		
For and on behalf of		COMPANY	SEAL
Shanghai ITW Plastic & Metal Co., I	<u>.ul</u> .		
Name: Huash Xiaoyun Title: HPD			
Date: Jolo [4-17]			
For and on behalf of		COMPANY	SEAL
ILLINOIS TOOL WORKS INC.			
Name Milder D	Daring L		A
Title: Chief IP Cours Date: 9/7/22	. Produktilist () Cata P. L. Landon ()		
MCCHETA COM	KISHOOSWOT Skippi	inu V	77
Date: 9/11/22	A STATE OF THE STA	TJ 🦎	

Page 3 of 3