504100929 11/17/2016

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4147598

SUBMISSION TYPE:		NEW ASSIGNMENT			
ATURE OF CONVEYAN	ICE:	ASSIGNMENT	ASSIGNMENT		
CONVEYING PARTY DA	ATA				
		Name	Execution Date		
TOMOFUMI KUBOTA			09/02/2016		
KAZUSHIGE MIYAMOT	S		09/02/2016		
YASUHIRO MIMURA			09/02/2016		
YASUHIRO NAKATAKE			09/02/2016		
KAZUYA NAKAJIMA			09/02/2016		
RECEIVING PARTY DA	 TA				
Name:	SHARF	P KABUSHIKI KAISHA			
Street Address:	1, TAK	UMI-CHO, SAKAI-KU			
City:	SAKAI	CITY, OSAKA			
State/Country:	JAPAN				
Postal Code:	590-85	22			
PROPERTY NUMBERS	Total: 1	Number	1		
Property Type			-		
Application Number:		15312016			
CORRESPONDENCE D	ΔΤΔ				
		(703)816-4100			
Fax Number: <i>Correspondence will be</i>	e sent to	(703)816-4100 • the e-mail address first; if that is un			
Fax Number: Correspondence will be using a fax number, if p	e sent to provideo	the e-mail address first; if that is un ; if that is unsuccessful, it will be sei			
Fax Number: <i>Correspondence will be using a fax number, if µ</i> Phone:	e sent to provideo	<i>the e-mail address first; if that is un</i> <i>i; if that is unsuccessful, it will be sei</i> 703-816-4000			
Fax Number: <i>Correspondence will be using a fax number, if p</i> Phone: Email:	e sent to provideo	<i>the e-mail address first; if that is un</i> <i>i; if that is unsuccessful, it will be sei</i> 703-816-4000 PTOMAIL@nixonvan.com			
Fax Number: <i>Correspondence will be using a fax number, if p</i> Phone: Email: Correspondent Name:	e sent to provideo	<i>the e-mail address first; if that is un</i> <i>; if that is unsuccessful, it will be sei</i> 703-816-4000 PTOMAIL@nixonvan.com H. WARREN BURNAM, JR.			
Fax Number: <i>Correspondence will be using a fax number, if p</i> Phone: Email: Correspondent Name: Address Line 1:	e sent to provideo	<i>the e-mail address first; if that is un t; if that is unsuccessful, it will be sei</i> 703-816-4000 PTOMAIL@nixonvan.com H. WARREN BURNAM, JR. NIXON & VANDERHYE, PC	nt via US Mail.		
Fax Number: <i>Correspondence will be using a fax number, if p</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 2:	e sent to provideo	<i>the e-mail address first; if that is un</i> <i>; if that is unsuccessful, it will be sei</i> 703-816-4000 PTOMAIL@nixonvan.com H. WARREN BURNAM, JR.	nt via US Mail.		
Fax Number: <i>Correspondence will be using a fax number, if p</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 2: Address Line 4:	e sent to provideo	o the e-mail address first; if that is un d; if that is unsuccessful, it will be set 703-816-4000 PTOMAIL@nixonvan.com H. WARREN BURNAM, JR. NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLC ARLINGTON, VIRGINIA 22203	nt via US Mail.		
Fax Number: <i>Correspondence will be</i> <i>using a fax number, if p</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 2: Address Line 4:	e sent to provideo	b the e-mail address first; if that is un d; if that is unsuccessful, it will be sel 703-816-4000 PTOMAIL@nixonvan.com H. WARREN BURNAM, JR. NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLC ARLINGTON, VIRGINIA 22203 HWB-4282-19	nt via US Mail.		
Fax Number: <i>Correspondence will be</i> <i>using a fax number, if p</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 2: Address Line 4: ATTORNEY DOCKET NUMATE OF SUBMITTER:	e sent to provideo	b the e-mail address first; if that is un d; if that is unsuccessful, it will be sel 703-816-4000 PTOMAIL@nixonvan.com H. WARREN BURNAM, JR. NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLC ARLINGTON, VIRGINIA 22203 HWB-4282-19 H. WARREN BURNAM, JR.	nt via US Mail.		
Fax Number: Correspondence will be using a fax number, if p Phone: Email: Correspondent Name: Address Line 1: Address Line 2:	e sent to provideo	b the e-mail address first; if that is un d; if that is unsuccessful, it will be sel 703-816-4000 PTOMAIL@nixonvan.com H. WARREN BURNAM, JR. NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLC ARLINGTON, VIRGINIA 22203 HWB-4282-19	nt via US Mail.		

Total Attachments: 5

source=4282-19_Declaration_Assignment#page1.tif source=4282-19_Declaration_Assignment#page2.tif source=4282-19_Declaration_Assignment#page3.tif source=4282-19_Declaration_Assignment#page4.tif source=4282-19_Declaration_Assignment#page5.tif

	Attorney Docket Number	HWB-	
	First Named Inventor	Tomofumi KUBOTA	
INVENTOR'S DECLARATION AND ASSIGNMENT FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63) USING AN APPLICATION DATA SHEET (37 CFR 1.76)			
CR			
Declaration Submitted After Initial Filing (surcharge (37 C.F.R. § 1	.16(f)) required)		
CONNECTING WIRE			
(Title of the Invention)			
As a below named inventor, I hereby declare that:			
This declaration is directed to: the attached application, or United States Application Number filed , or PCT International application number PCT/JP2015/055760 filed or	n February 27, 2015.		
The above-identified application was made or authorized to be made by me.			
I believe I am the original inventor or an original joint inventor of a claimed inve			
I hereby acknowledge that any willful faise statement made in this declaration by fine or imprisonment of not more than five (5) years, or both.	is punishable under 18 U.S.C.	1001	
WHEREAS, the undersigned (hereinafter ASSIGNOR), has made an inventior	in the Application Identified a	bove,	
WHEREAS, Sharp Kabushiki Kalsha (hereinafter ASSIGNEE), an entity, havin ku, Sakai City, Osaka 590-8522, Japan, is desirous of acquiring an interest the	ig an office and place of busin erein;	ess at 1, Takumi-cho, Sakai-	
NOW, THEREFORE, in consideration of Ten Dollars (\$10.00) and/or other goo of which are hereby acknowledged, the said ASSIGNOR by these presents he ASSIGNEE, its successors, assigns, and legal representatives, ASSIGNOR'S America and all foreign countries, in and to the invention as described in the ai subsequent applications based thereon including any and all continuations, div all resulting patents, together with the right of priority under the International C American Convention Relating to Patents, Designs and Industrial Models, and States of America adheres, and the ASSIGNOR hereby authorizes and reques said Letters Patent to ASSIGNEE, for its Interest as ASSIGNEE, its successor- agreed that ASSIGNEE'S attorneys Nixon & Vanderhye P.C. have represented ASSIGNEE with respect to this invention;	reby sells, assigns, and transf entire right, title and interest in foresaid application, and to the visions, reissues, and substitut onvention for the Protection of any other international agree sts the Commissioner of Pater s, assions, and legal represen	ers unto the said the United States of a said application and to all res of said application, and industrial Property, Inter- nents to which the United its and Trademarks to issue tatives. It is understood and	
ASSIGNOR hereby agrees to transfer a like interest upon request of said ASSIGNEE, its successors, assigns, and legal representatives, and without further remuneration, in and to any improvements, and applications for patents based thereon, growing out of or related to the said invention;			
ASSIGNOR hereby agrees to execute any papers by ASSIGNEE, its successors, assigns, and legal representatives, deemed essential to ASSIGNEE'S full protection and title in and to the invention hereby transferred; and			
ASSIGNOR hereby agrees, upon request of ASSIGNEE, and without further remuneration, to execute any and all papers desired by ASSIGNEE, for the filing and granting of foreign applications and the perfecting of title thereto in ASSIGNEE.			
AGREED and executed as noted below:			
LEGAL NAME OF INVENTOR/JOINT INVENTOR: (E.g., Given Name (first and middle (if any)) and Family Name or Surname)		· · · · · · · · · · · · · · · · · · ·	
Tomofumi	ومرتبا فينان والمتعاد والمناف والمنفا المتعاد والمتحا والمناب والمتحد والمتحا والمتعاد والمتعاد والمتعاد والمتعاد والمتحاد	КИВОТА	
Inventor's Signature: Tomehumi Hubrtal	Date:	September /2016	
Witnessed by: V		- u	
Name:			
Signature of wilness:	Date:		

IWe acknowledge the duty to disclose information which is material to the patentability of this application as defined in 37 CFR §1.56,

PATENT REEL: 040360 FRAME: 0113

	Attorney Docket Number	HWB-
	First Named Inventor	Tomofuml KUBOTA
INVENTOR'S DECLARATION AND ASSIGNMENT FOR UTILITY O USING AN APPLICATION DATA SH Declaration Submitted With Initial Filing		ICATION (37 CFR 1.63)
OR Declaration Submitted After Initial Filing (surcharge (37 C.F.R. § 1.	.16(f)) required)	
CONNECTING WIRE		
(Title of the Invention)		
As a below named inventor, I hereby declare that:		
This declaration is directed to: the attached application, or United States Application Number filed , or PCT International application number PCT/JP2015/055760 filed on	ı February 27, 2015.	
The above-identified application was made or authorized to be made by me.		
I believe I am the original Inventor or an original joint inventor of a claimed inve	• •	
I hereby acknowledge that any willful false statement made in this declaration is by fine or imprisonment of not more than five (δ) years, or both.	s punishable under 18 U.S.C.	1001
WHEREAS, the undersigned (hereinafter ASSIGNOR), has made an invention	in the Application Identified a	bove,
WHEREAS, Sharp Kabushiki Kalsha (hereinafter ASSIGNEE), an entity, havin ku, Sakal City, Osaka 590-8522, Japan, is desirous of acquiring an interest the	g an office and place of busine rein;	əss at 1, Takumi-cho, Sakal-
NOW, THEREFORE, in consideration of Ten Dollars (\$10.00) and/or other goo of which are hereby acknowledged, the sald ASSIGNOR by these presents he ASSIGNEE, its successors, assigns, and legal representatives, ASSIGNOR'S America and all foreign countries, in and to the invention as described in the af subsequent applications based thereon including any and all continuations, div all resulting patents, together with the right of priority under the International Co American Convention Relating to Patents, Designs and Industrial Models, and States of America adheres, and the ASSIGNOR hereby authorizes and reques said Letters Patent to ASSIGNEE, for its interest as ASSIGNEE, its successors agreed that ASSIGNEE'S attorneys Nixon & Vanderhye P.C. have represented ASSIGNEE with respect to this invention;	reby sells, assigns, and transf entire right, title and interest ir ioresaid application, and to the islons, reissues, and substitut ionvention for the Protection of any other international agreer to the Commissioner of Paten a, assigns, and legal represent only ASSIGNEE and will con	ers unto the said the United States of o said application and to all es of said application, and Industrial Property, Inter- nents to which the United ts and Trademarks to Issue tatives. It is understood and tinue to represent only
ASSIGNOR hereby agrees to transfer a like interest upon request of said ASSI representatives, and without further remuneration, in and to any improvements of or related to the said invention;	GNEE, its successors, assign , and applications for patents	s, and legal based thereon, growing out
ASSIGNOR hereby agrees to execute any papers by ASSIGNEE, its successo to ASSIGNEE'S full protection and title in and to the invention hereby transferred	rs, assigns, and legal represe ed; and	ntatives, deemed essential
ASSIGNOR hereby agrees, upon request of ASSIGNEE, and without further re ASSIGNEE, for the filing and granting of foreign applications and the perfecting	muneration, to execute any a g of title thereto in ASSIGNEE	nd all papers desired by
AGREED and executed as noted below;		
LEGAL NAME OF INVENTOR/JOINT INVENTOR: (E.g., Given Name (first and middle (if any)) and Family Name or Surname)		
Kazushige		ΙΥΑΜΟΤΟ
Inventor's Signature: Kozushiga Miyamato	Date: 2/5e	prember /2016
Witnessed by:		
Name:		111 / 1
Signature of witness:	Date:	

IWe acknowledge the duty to disclose information which is material to the patentability of this application as defined in 37 CFR §1.56.

PATENT REEL: 040360 FRAME: 0114

	Attorney Docket Number	HWB-
r	First Named Inventor	Tomofumi KUBOTA
INVENTOR'S DECLARATION AND ASSIGNMENT FOR UTILITY OF	R DESIGN PATENT APPL	ICATION (37 CFR 1.63)
USING AN APPLICATION DATA SHI	EET (37 CFR 1.76)	
OR		
Declaration Submitted After Initial Filing (surcharge (37 C.F.R. § 1.	16(f)) required)	
CONNECTING WIRE		
(Title of the Invention)		
As a below named inventor, I hereby declare that:		
This declaration is directed to: the attached application, or United States Application Number filed , or PCT International application number PCT/JP2015/055760 filed on	February 27, 2015.	
The above-Identified application was made or authorized to be made by me.		
I believe I am the original inventor or an original joint inventor of a claimed inve	ntion in the application.	
i hereby acknowledge that any willful false statement made in this declaration is by fine or imprisonment of not more than five (5) years, or both.	s punishable under 18 U.S.C.	1001
WHEREAS, the undersigned (hereinafter ASSIGNOR), has made an invention	in the Application Identified a	bove.
WHEREAS, Sharp Kabushiki Kalsha (herelnafter ASSIGNEE), an entity, having ku, Sakai City, Osaka 590-8522, Japan, is desirous of acquiring an interest the	an office and place of busine ein;	əss at 1, Takuml-cho, Sakal-
NOW, THEREFORE, in consideration of Ten Dollars (\$10.00) and/or other goo of which are hereby acknowledged, the said ASSIGNOR by these presents her ASSIGNEE, its successors, assigns, and legal representatives, ASSIGNOR'S e America and all foreign countries, in and to the invention as described in the atc subsequent applications based thereon including any and all continuations, divi all resulting patents, together with the right of priority under the International Co American Convention Relating to Patents, Designs and industrial Models, and a States of America adheres, and the ASSIGNOR hereby authorizes and request said Letters Patent to ASSIGNEE, for its interest as ASSIGNEE, its successors agreed that ASSIGNEE'S attorneys Nixon & Vanderhye P.C. have represented ASSIGNEE with respect to this invention;	eby sells, assigns, and transf entire right, title and interest in presaid application, and to the sions, reissues, and substitut nvention for the Protection of any other international agreer is the Commissioner of Paten , assigns, and legal represent only ASSIGNEE and will con	ers unto the said the United States of said application and to all es of said application, and Industrial Property, Inter- nents to which the United ts and Trademarks to issue tatives. It is understood and tinue to represent only
ASSIGNOR hereby agrees to transfer a like interest upon request of said ASSI representatives, and without further remuneration, in and to any improvements, of or related to the said invention;	GNEE, its successors, assign and applications for patents	s, and legal based thereon, growing out
ASSIGNOR hereby agrees to execute any papers by ASSIGNEE, its successor to ASSIGNEE'S full protection and title in and to the Invention hereby transferre	rs, assigns, and legal represe id; and	ntatives, deemed essential
ASSIGNOR hereby agrees, upon request of ASSIGNEE, and without further rel ASSIGNEE, for the filling and granting of foreign applications and the perfecting	muneration, to execute any a of title thereto in ASSIGNEE	nd all papers desired by
AGREED and executed as noted below:		
Legal Name of Additional Joint Inventor, if any:		
(E.g., Given Name (first and middle (if any)) and Family Name or Surname) Yasuhiro	1	VIMURA
Inventor's	Date:	
Inventor's Signature: Yasuhiro Mimura	2/5	eptember (2015
Witnessed by:		,
Name;		
Signature of witness:	Date:	
		······································

I/We acknowledge the duty to disclose information which is material to the patentability of this application as defined in 37 CFR §1,56.

PATENT REEL: 040360 FRAME: 0115

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Doc code: Oath Document Description: Oath or declaration filed		
• • • • • • • • • • • • • • • • • • •	Attorney Docket Number	HWB-
·	First Named Inventor	Tomofumi KUBOTA
INVENTOR'S DECLARATION AND ASSIGNMENT FOR UTILITY C USING AN APPLICATION DATA SH Declaration Submitted With Initial Filing OR Declaration Submitted After Initial Filing (surcharge (37 C.F.R. § 1	IEET (37 CFR 1.76)	ICATION (37 CFR 1.63)
CONNECTING WIRE		
(Tille of the invention)		
As a below named inventor, I hereby declare that:		
This declaration is directed to: the attached application, or United States Application Number filed , or PCT International application number PCT/JP2015/055760 filed or	n February 27, 2015.	
The above-Identified application was made or authorized to be made by me.		
I believe I am the original inventor or an original joint inventor of a claimed inve		
I hereby acknowledge that any willful false statement made in this declaration by fine or imprisonment of not more than five (5) years, or both.	ls punishable under 18 U.S.C.	1001
WHEREAS, the undersigned (hereinafter ASSIGNOR), has made an inventior	n in the Application Identified a	bove.
WHEREAS, Sharp Kabushiki Kaisha (hereinafter ASSIGNEE), an entity, havir ku, Sakal City, Osaka 590-8522, Japan, is desirous of acquiring an interest the	ig an office and place of busin	
NOW, THEREFORE, in consideration of Ten Dollars (\$10.00) and/or other goo of which are hereby acknowledged, the said ASSIGNOR by these presents he ASSIGNEE, its successors, assigns, and legal representatives, ASSIGNOR'S America and all foreign countries, in and to the invention as described in the ar subsequent applications based thereon including any and all continuations, div all resulting patents, together with the right of priority under the international C American Convention Relating to Patents, Designs and Industrial Models, and States of America adheres, and the ASSIGNOR hereby authorizes and reques said Letters Patent to ASSIGNEE, for its interest as ASSIGNEE, its successor agreed that ASSIGNEE'S attorneys Nixon & Vanderhye P.C. have represented ASSIGNEE with respect to this Invention;	reby sells, assigns, and transf entire right, title and interest in foresaid application, and to the visions, reissues, and substitut onvention for the Protection of any other international agreer sts the Commissioner of Paten s, assigns, and legal represen d only ASSIGNEE and will con	ers unto the said the United States of said application and to all es of said application, and industrial Property, Inter- nents to which the United ts and Trademarks to issue tatives. It is understood and tinue to represent only
ASSIGNOR hereby agrees to transfer a like Interest upon request of said ASS representatives, and without further remuneration, in and to any improvements of or related to the said invention;	IGNEE, its successors, assign a, and applications for patents i	s, and legal based thereon, growing out
ASSIGNOR hereby agrees to execute any papers by ASSIGNEE, its successor to ASSIGNEE'S full protection and title in and to the Invention hereby transferred	ors, assigns, and legal represe ed; and	ntatives, deemed essentlal
ASSIGNOR hereby agrees, upon request of ASSIGNEE, and without further re ASSIGNEE, for the filling and granting of foreign applications and the perfecting	emuneration, to execute any an g of title thereto in ASSIGNEE.	nd all papers desired by
AGREED and executed as noted below:		
Legal Name of Additional Joint Inventor, if any:		
(E.g., Given Name (first and middle (if any)) and Family Name or Surname) Yasuhiro	N	AKATAKE
Inventor's Signature: Journhizo Makatake	Date:	20/6
Witnessed by:		
Name:		
Signature of witness:	Date:	

I/We acknowledge the duty to disclose information which is material to the patentability of this application as defined in 37 CFR §1.56.

PATENT REEL: 040360 FRAME: 0116

i i i i i i i i i i i i i i i i i i i	Attorney Docket Number	HWB-		
	First Named Inventor	Tomofumi KUBOTA		
INVENTOR'S DECLARATION AND ASSIGNMENT FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63)				
USING AN APPLICATION DATA SHI	=E1 (37 CFR 1.76)			
Declaration Submitted After Initial Filing (surcharge (37 C.F.R. § 1.	16(f)) required)			
CONNECTING WIRE	······			
(Title of the Invention)				
As a below named inventor, I hereby declare that:				
This declaration is directed to: the attached application, or United States Application Number filed , or PCT International application number PCT/JP2015/055760 filed on	February 27, 2015.			
The above-identified application was made or authorized to be made by me.				
I believe I am the original inventor or an original joint inventor of a claimed inver	ntion in the application.			
I hereby acknowledge that any willful false statement made in this declaration is by fine or imprisonment of not more than five (5) years, or both.	punishable under 18 U.S.C.	1001		
WHEREAS, the undersigned (hereinafter ASSIGNOR), has made an invention	in the Application Identified a	bove.		
WHEREAS, Sharp Kabushiki Kaisha (hereinafter ASSIGNEE), an entity, having ku, Sakal City, Osaka 590-8522, Japan, is desirous of acquiring an interest ther	an office and place of busine	əss at 1, Takuml-cho, Sakal-		
NOW, THEREFORE, in consideration of Ten Dollars (\$10.00) and/or other good of which are hereby acknowledged, the said ASSIGNOR by these presents here ASSIGNEE, its successors, assigns, and legal representatives, ASSIGNOR'S e America and all foreign countries, in and to the Invention as described in the afc subsequent applications based thereon including any and all continuations, divis all resulting patents, together with the right of priority under the International Co American Convention Relating to Patents, Designs and Industrial Models, and a States of America adheres, and the ASSIGNOR hereby authorizes and request said Letters Patent to ASSIGNEE, for its interest as ASSIGNEE, its successors, agreed that ASSIGNEE'S attorneys Nixon & Vanderhye P.C. have represented ASSIGNEE with respect to this invention;	aby selis, assigns, and transf ntire right, title and interest in resald application, and to the slons, reissues, and substitut nvention for the Protection of any other international agreer s the Commissioner of Paten , assigns, and legal represen only ASSIGNEE and will con	ers unto the said a the United States of a said application and to all tes of said application, and Industrial Property, Inter- nents to which the United ts and Trademarks to issue tatives. It is understood and tinue to represent only		
ASSIGNOR hereby agrees to transfer a like interest upon request of said ASSIC representatives, and without further remuneration, in and to any improvements, of or related to the said invention;	GNEE, its successors, assign and applications for patents	s, and legal based thereon, growing out		
ASSIGNOR hereby agrees to execute any papers by ASSIGNEE, its successor to ASSIGNEE'S full protection and title in and to the invention hereby transferred	s, assigns, and legal represe d; and	ntatives, deemed essential		
ASSIGNOR hereby agrees, upon request of ASSIGNEE, and without further rer ASSIGNEE, for the filing and granting of foreign applications and the perfecting	nuneration, to execute any a of title thereto in ASSIGNEE.	nd all papers desired by		
AGREED and executed as noted below:				
Legal Name of Additional Joint Inventor, if any: (E.g., Given Name (first and middle (if any)) and Family Name or Surname) Kazuya	N	 AKA.IIMA		
Inventor's Signature: Rayuya Rakajima	Date: 2/	inter her back		
Witnessed by:	-/ -4	eptember/2016		
Name:				
Signature of witness:	Date:			
· · · ·				
I/We acknowledge the duty to disclose information which is material to the pater	htability of this application as	defined in 37 CFR §1.56.		

PATENT REEL: 040360 FRAME: 0117

RECORDED: 11/17/2016