# 503137712 01/15/2015

# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3184323

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

# **CONVEYING PARTY DATA**

Name	Execution Date
TAKUYA OOTANI	01/06/2015
NAOTO NISHIMURA	01/06/2015
AKIHITO YOSHIDA	01/06/2015
HIROTAKA MIZUHATA	01/06/2015
SHOUGO ESAKI	01/06/2015
SHUMPEI NISHINAKA	01/06/2015
SATOSHI ARIMA	01/07/2015

# **RECEIVING PARTY DATA**

Name:	SHARP KABUSHIKI KAISHA	
Street Address:	22-22, Nagaike-cho, Abeno-ku, Osaka-shi	
City:	Osaka	
State/Country:	JAPAN	
Postal Code:	545-8522	

# **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	14411765

# **CORRESPONDENCE DATA**

**Fax Number:** (216)621-6165

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:** 2166211113

Email:carndt@rennerotto.comCorrespondent Name:MARK D SARALINO

Address Line 1: RENNER, OTTO, BOISSELLE & SKLAR, LLP
Address Line 2: 1621 EUCLID AVENUE, NINETEENTH FLOOR

Address Line 4: CLEVELAND, OHIO 44115

ATTORNEY DOCKET NUMBER:	NOGAP0144WOUS
NAME OF SUBMITTER:	MARK D. SARALINO
SIGNATURE:	/Mark D. Saralino/
DATE SIGNED:	01/15/2015

# **Total Attachments: 15** source=Assignment#page1.tif source=Assignment#page2.tif source=Assignment#page3.tif source=Assignment#page4.tif source=Assignment#page5.tif source=Assignment#page6.tif source=Assignment#page7.tif source=Assignment#page8.tif source=Assignment#page9.tif source=Assignment#page10.tif source=Assignment#page11.tif source=Assignment#page12.tif source=Assignment#page13.tif source=Assignment#page14.tif source=Assignment#page15.tif

RENNER	OTTO	(SHARP)
--------	------	---------

СОМІ	BINED DECLAR	ATION AND ASSIGNMENT I (ORIGINAL, DESIGN, NAT	JSING APPLICATION FIONAL STAGE OF PC	DATA SHI	EET (37 CF	R 1.76)
Title:	TAPE-SHAPE TAPE-SHAPE	D ELECTRODE, METAL-AIR D ELECTRODE REDUCING [	BATTERY EMPLOYIN DEVICE	G SAME, A	ND USED	
		I. DECLA	RATION			
As a belo	ow named inven	tor or joint inventor, I hereby d	eclare that:			
This dec	laration is direct	ed to:			No. 14/41	
(a)	the attached a	application, or	Filing Da	ate: 29 De	ecember 2	2014
(b)	United States	application or PCT internation ly 4, 2013	al application number	PCT/JP2	013/06833	2
The abov	/e-identified app	lication was made or authorize	ed by me.			
I believe	that I am the ori	ginal inventor or an original joi	nt inventor of a claimed	d invention	in the appli	cation.
		reviewed and understand the				
I hereby	acknowledge the	e duty to disclose to the U.S. F ntability as defined in 37 C.F.F	Patent and Trademark (			nown to
I hereby 1001 by t	acknowledge the fine or imprisonn	at any willful false statement r nent of not more than five (5) y	nade in this declaration vears, or both.	n is punisha	able under	18 USC
		PRIORITY	CLAIM			
for patent other that for patent other that	t or inventor's con the United Stat t or inventor's conthe United Stat	ority benefits under Title 35, Unertificate or of any PCT internates of America listed below and ertificate or any PCT internaties of America filed by me on thich priority is claimed.	ational application(s) de d have also identified be lonal application(s) des	esignating a elow any fo signating a	at least one reign applic t least one	country ation(s)
(c)	no such applic	ation have been filed.				
(d)	_ such applicatio	ons have been filed as follows				
	EARLIEST (6 M	FOREIGN APPLICATION(S) ONTHS FOR DESIGN) PRIOR	, IF ANY FILED WITHI R TO THIS U.S. APPLI	N 12 MON CATION	THS	
CC	DUNTRY	APPLICATION NUMBER	DATE OF FILING (day, month, year)		DRITY CLA ER 35 USC	
	Japan	2012-150684	04/07/2012	<b>V</b>	Yes	No
					Yes	No

As a below named assignor, for good and valuable consideration acknowledged and received I hereby sell and assign my entire worldwide right, title and interest in the application and the invention(s), so far as concerns the United States and the Territories and Possessions thereof to:

#### ASSIGNEE:

SHARP KABUSHIKI KAISHA 22-22, Nagaike-cho Abeno-ku, Osaka-shi Osaka, Japan 545-8522

# Including:

any and all related patent application(s) in the United States, including continuations, continuations-in-part, divisionals, conversions, renewals, substitutes, reissues, reexaminations, extensions, non-provisional applications, and other applications based in whole or in part upon the invention(s) or upon the application(s);

any and all Letters Patent, renewals, reissues, reexamination certificates and extensions of Letters Patent granted for the invention(s) or upon the application(s); and

every priority right that is or may be predicated upon or arise from the invention(s), the application(s) and the Letters Patent.

I additionally authorize the Assignee to file patent applications in my or the Assignee's name for Letters Patent in any country (by international convention, treaty or otherwise), to be held and enjoyed by the Assignee, its successors and assigns, to the full end of the term or terms for which Letters Patent respectively may be granted, reissued, reexamined or extended, as fully and entirely as the same would have been held and enjoyed by me/us had this Assignment and transfer not been made.

I hereby covenant that I have the full right to convey the entire interests herein assigned, and that I have not executed and will not execute any agreement in conflict herewith and that such assigned rights are not encumbered by any grant, license or other right previously given.

I agree that each time a request is made, and without undue delay, I will execute and deliver all such papers as may be necessary or desirable to perfect the title in and to the invention(s), the application(s) and the Letters Patent, to the Assignee, its successors or assigns.

I agree, without undue delay, to undertake all reasonable acts to assure that said invention(s), patent application(s) and Letters Patent shall be held and enjoyed by the Assignee as fully and entirely as the same could have been held and enjoyed by the undersigned if this assignment had not been made, and particularly: to execute and deliver to the Assignee all lawful documents including petitions, specifications, oaths, declarations, powers of attorney, assignments, invention disclaimers and lawful affidavits in form and substance which may be requested by the Assignee; to furnish the Assignee with all facts relating to said invention(s) or the history thereof and any and all documents, photographs, models, samples or other physical exhibits which may be useful for establishing the facts of conception, disclosure and reduction to practice of said invention(s); and to testify in any proceedings relating to said invention(s), patent application(s) and Letters Patent.

I authorize the patent attorney of record and/or having power of attorney in the U.S. patent application identified above to insert the serial number and filing date information for the patent application in the appropriate spaces in this document when that information becomes available.

,	
Full Name of Sole or	First Inventor and Assignor: Takuya OOTANI
Inventor's signature:	Tahuga Ootani Date: 1/6/20/5
Post Office Address:	c/o Sharp Kabushiki Kalsha, 22-22, Nagaike-cho, Abeno-ku, Osaka-shi Osaka 545-8522 Japan
· · · · · · · · · · · · · · · · · · ·	
Full Name of Second	Inventor and Assignor: Naoto NISHIMURA
Inventor's signature:	Date:
Post Office Address:	c/o Sharp Kabushiki Kalsha, 22-22, Nagalke-cho, Abeno-ku, Osaka-shi Osaka 545-8522 Japan
Full Name of Third In	ventor and Assignor; Akihito YOSHIDA
Inventor's signature:	Date:
Post Office Address:	с/o Sharp Kabushiki Kalsha, 22-22, Nagalke-cho, Abeno-ku, Osaka-shi Osaka 545-8522 Japan
Full Name of Fourth	Inventor and Assignor: Hirotaka MIZUHATA
Inventor's signature:	Date:
	c/o Sharp Kabushiki Kalsha, 22-22, Nagalke-cho, Abeno-ku, Osaka-shi Osaka 545-8522 Japan
Post Office Address:	TVO Sharp Nabushiki Naisha, 22-22, Nagaike-Cho, Aberjo-Ku, Osaka-Shi Osaka 040-0022 dapah
Full Name of Fifth In	ventor and Assignor: Shougo ESAKI
Inventor's signature:	Date:
Post Office Address:	o/o Sharp Kabushiki Kalsha, 22-22, Nagaike-cho, Abeno-ku, Osaka-shi Osaka 545-8522 Japan
FORM	ECK FOR ANY OF THE FOLLOWING ADDED PAGE(S) WHICH A PART OF THIS COMBINED DECLARATION AND ASSIGNMENT (th and subsequent joint inventors and assignors; number of pages added 4
Added page to t	his combined declaration and assignment for divisional, continuation, or part (CIP) application.

RENNER	OTTO	(SHARP)
--------	------	---------

COMBINED DECLAR	ATION AND ASSIGNMENT L (ORIGINAL, DESIGN, NAT	<b>JSING APPLICATIO</b> TONAL STAGE OF	ON DATA SHEET (37 CFR 1.76) PCT)
Title: TAPE-SHAPEI	D ELECTRODE, METAL-AIR I D ELECTRODE REDUCING D	BATTERY EMPLOY	YING SAME, AND USED
	I. DECLA	RATION	
As a below named invent	or or joint inventor, I hereby d	eclare that:	
This declaration is directed	ed to:	U.S.	Application No. 14/411,765
(a) the attached a	pplication, or	Filing	Date: 29 December 2014
(b) United States filed on _Ju	application or PCT internation ly 4, 2013	al application numb	per PCT/JP2013/068332
The above-identified appl	ication was made or authorize	d by me.	
I believe that I am the orig	inal inventor or an original joir	nt inventor of a clair	med invention in the application.
I hereby state that I have	reviewed and understand the	contents of the abo	ove-identified application.
I hereby acknowledge the me to be material to pater	duty to disclose to the U.S. Fatability as defined in 37 C.F.F	Patent and Tradema R. §1.56.	ark Office all information known to
I hereby acknowledge that 1001 by fine or imprisonm	nt any willful false statement n ent of not more than five (5) y	nade in this declara ears, or both.	ation is punishable under 18 USC
	PRIORITY	CLAIM	
other than the United State for patent or inventor's ce	artificate or of any PCT interna es of America listed below and ertificate or any PCT internati es of America filed by me on th	tional application(s have also identifie onal application(s)	§119 of any foreign application(s) ) designating at least one country d below any foreign application(s) designating at least one country tter having a filing date before that
(c) no such applic	ation have been filed.		
(d) such application	ns have been filed as follows.		
EARLIEST (6 MC	FOREIGN APPLICATION(S), DNTHS FOR DESIGN) PRIOR	IF ANY FILED WI'R TO THIS U.S. AP	THIN 12 MONTHS PLICATION
COUNTRY	APPLICATION NUMBER	DATE OF FILIN (day, month, yea	
Japan	2012-150684	04/07/2012	✓ Yes No

PATENT REEL: 034725 FRAME: 0795

Yes

As a below named assignor, for good and valuable consideration acknowledged and received I hereby sell and assign my entire worldwide right, title and interest in the application and the invention(s), so far as concerns the United States and the Territories and Possessions thereof to:

#### ASSIGNEE:

SHARP KABUSHIKI KAISHA 22-22, Nagaike-cho Abeno-ku, Osaka-shi Osaka, Japan 545-8522

# Including:

any and all related patent application(s) in the United States, including continuations, continuations-in-part, divisionals, conversions, renewals, substitutes, reissues, reexaminations, extensions, non-provisional applications, and other applications based in whole or in part upon the invention(s) or upon the application(s);

any and all Letters Patent, renewals, reissues, reexamination certificates and extensions of Letters Patent granted for the invention(s) or upon the application(s); and

every priority right that is or may be predicated upon or arise from the invention(s), the application(s) and the Letters Patent.

I additionally authorize the Assignee to file patent applications in my or the Assignee's name for Letters Patent in any country (by international convention, treaty or otherwise), to be held and enjoyed by the Assignee, its successors and assigns, to the full end of the term or terms for which Letters Patent respectively may be granted, reissued, reexamined or extended, as fully and entirely as the same would have been held and enjoyed by me/us had this Assignment and transfer not been made.

I hereby covenant that I have the full right to convey the entire interests herein assigned, and that I have not executed and will not execute any agreement in conflict herewith and that such assigned rights are not encumbered by any grant, license or other right previously given.

I agree that each time a request is made, and without undue delay, I will execute and deliver all such papers as may be necessary or desirable to perfect the title in and to the invention(s), the application(s) and the Letters Patent, to the Assignee, its successors or assigns.

I agree, without undue delay, to undertake all reasonable acts to assure that said invention(s), patent application(s) and Letters Patent shall be held and enjoyed by the Assignee as fully and entirely as the same could have been held and enjoyed by the undersigned if this assignment had not been made, and particularly: to execute and deliver to the Assignee all lawful documents including petitions, specifications, oaths, declarations, powers of attorney, assignments, invention disclaimers and lawful affidavits in form and substance which may be requested by the Assignee; to furnish the Assignee with all facts relating to said invention(s) or the history thereof and any and all documents, photographs, models, samples or other physical exhibits which may be useful for establishing the facts of conception, disclosure and reduction to practice of said invention(s); and to testify in any proceedings relating to said invention(s), patent application(s) and Letters Patent.

I authorize the patent attorney of record and/or having power of attorney in the U.S. patent application identified above to insert the serial number and filing date information for the patent application in the appropriate spaces in this document when that information becomes available.

Full Name of Sole or	First Inventor and Assignor:	Takuya	OOTANI	Western Company of the Company of th
Inventor's signature:			Date:	The state of the s
Post Office Address;	olo Sharp Kabushiki Kaisha, 22-22, Nagaike-ci	no, Abend	-ku, Osaka-s	shi Osaka 545-8522 Japan
Full Name of Second	Inventor and Assignor:	Naoto I	NISHIMUF	RA.
Inventor's signature:	nasto Vishimura		Date:	Jan. 6, 2015
Post Office Address:	c/o Sharp Kabushiki Kalsha, 22-22, Nagaike-ci	no, Abend	o-ku, Osaka-s	shi Osaka 545-8522 Japan
Full Name of Third In	ventor and Assignor:	Akihito	YOSHIDA	
Inventor's signature:	Akibito Gestida		Date:	Jan. 6, 2015
Post Office Address:	c/o Sharp Kabushiki Kaisha, 22-22, Nagaike-c	no, Abend	o-ku, Osaka-	A CONTRACTOR OF THE PROPERTY O
Full Name of Fourth Inventor and Assignor: Hirotaka MIZUHATA				
Inventor's signature:	Idirotaka Mizukata		Date:	Jan 6. 2015.
Post Office Address:	c/o Sharp Kabushiki Kaisha, 22-22, Nagaike-c	no, Abend	o-ku, Osaka-	•
Full Name of Fifth Inventor and Assignor: Shougo ESAKI				
Inventor's signature:		A STATE OF THE STA	Date:	
Post Office Address:	c/o Sharp Kabushiki Kalsha, 22-22, Nagalke-c	no, Abend	o-ku, Osaka-	shi Osaka 545-8522 Japan
CHECK FOR ANY OF THE FOLLOWING ADDED PAGE(S) WHICH FORM A PART OF THIS COMBINED DECLARATION AND ASSIGNMENT Signature for sixth and subsequent joint inventors and assignors; number of pages added				
Added page to this combined declaration and assignment for divisional, continuation, or continuation-in-part (CIP) application.				

RENNER	OTTO	(SHARP)
--------	------	---------

COMBI	NED DECLAR	ATION AND ASSIGNMENT U (ORIGINAL, DESIGN, NAT	ISING APPLICAT	TION OF PC	DATA SI	HEET (37	CFR 1.76)
Title:	ΓΑΡΕ-SHAPEI ΓΑΡΕ-SHAPEI	D ELECTRODE, METAL-AIR E D ELECTRODE REDUCING D	BATTERY EMPLO	OYING	G SAME,	AND US	ED
		I. DECLAI	RATION				
As a below	named invent	or or joint inventor, I hereby de	eclare that:				
This declar	ation is directe	ed to:	U.S	S. Ap	plication	n No. 14	1/411,765
(a)	the attached a	pplication, or	Filir	ng D	ate: 29	Deceml	per 2014
(b)	United States filed onJu	application or PCT internation ly 4, 2013	al application nun	nber	PCT/JF	2013/06	3332
The above-	identified appl	ication was made or authorize	d by me.				
I believe tha	at I am the orig	ginal inventor or an original joir	nt inventor of a cla	aimed	l inventior	n in the a	pplication.
I hereby sta	ate that I have	reviewed and understand the	contents of the al	bove-i	identified	applicati	on.
I hereby acknowledge the duty to disclose to the U.S. Patent and Trademark Office all information known to me to be material to patentability as defined in 37 C.F.R. §1.56.							
I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 USC 1001 by fine or imprisonment of not more than five (5) years, or both.							
PRIORITY CLAIM							
I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate or of any PCT international application(s) designating at least one country other than the United States of America listed below and have also identified below any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed.							
(c) no such application have been filed.							
(d) such applications have been filed as follows.							
EARLIEST FOREIGN APPLICATION(S), IF ANY FILED WITHIN 12 MONTHS (6 MONTHS FOR DESIGN) PRIOR TO THIS U.S. APPLICATION							
COU	NTRY	APPLICATION NUMBER	DATE OF FIL (day, month, y				CLAIMED JSC §119
Ja	pan	2012-150684	04/07/2012			Yes Yes	No

As a below named assignor, for good and valuable consideration acknowledged and received I hereby sell and assign my entire worldwide right, title and interest in the application and the invention(s), so far as concerns the United States and the Territories and Possessions thereof to:

#### ASSIGNEE:

SHARP KABUSHIKI KAISHA 22-22, Nagaike-cho Abeno-ku, Osaka-shi Osaka, Japan 545-8522

# Including:

any and all related patent application(s) in the United States, including continuations, continuations-in-part, divisionals, conversions, renewals, substitutes, reissues, reexaminations, extensions, non-provisional applications, and other applications based in whole or in part upon the invention(s) or upon the application(s);

any and all Letters Patent, renewals, reissues, reexamination certificates and extensions of Letters Patent granted for the invention(s) or upon the application(s); and

every priority right that is or may be predicated upon or arise from the invention(s), the application(s) and the Letters Patent.

I additionally authorize the Assignee to file patent applications in my or the Assignee's name for Letters Patent in any country (by international convention, treaty or otherwise), to be held and enjoyed by the Assignee, its successors and assigns, to the full end of the term or terms for which Letters Patent respectively may be granted, reissued, reexamined or extended, as fully and entirely as the same would have been held and enjoyed by me/us had this Assignment and transfer not been made.

I hereby covenant that I have the full right to convey the entire interests herein assigned, and that I have not executed and will not execute any agreement in conflict herewith and that such assigned rights are not encumbered by any grant, license or other right previously given.

I agree that each time a request is made, and without undue delay, I will execute and deliver all such papers as may be necessary or desirable to perfect the title in and to the invention(s), the application(s) and the Letters Patent, to the Assignee, its successors or assigns.

I agree, without undue delay, to undertake all reasonable acts to assure that said invention(s), patent application(s) and Letters Patent shall be held and enjoyed by the Assignee as fully and entirely as the same could have been held and enjoyed by the undersigned if this assignment had not been made, and particularly: to execute and deliver to the Assignee all lawful documents including petitions, specifications, oaths, declarations, powers of attorney, assignments, invention disclaimers and lawful affidavits in form and substance which may be requested by the Assignee; to furnish the Assignee with all facts relating to said invention(s) or the history thereof and any and all documents, photographs, models, samples or other physical exhibits which may be useful for establishing the facts of conception, disclosure and reduction to practice of said invention(s); and to testify in any proceedings relating to said invention(s), patent application(s) and Letters Patent.

I authorize the patent attorney of record and/or having power of attorney in the U.S. patent application identified above to insert the serial number and filing date information for the patent application in the appropriate spaces in this document when that information becomes available.

# CHECK FOR ANY OF THE FOLLOWING ADDED PAGE(S) WHICH FORM A PART OF THIS COMBINED DECLARATION AND ASSIGNMENT

the second section of the section of the second section of the section of the second section of the secti	Signature for sixth and subsequent Joint inventors and assignors; number of pages added	`
	Added page to this combined declaration and assignment for divisional, continuation, or continuation-in-part (CIP) application.	

RENNER	OTTO	(SHARP)
--------	------	---------

COMBINED DEC	LARATION AND ASSIGNMENT U (ORIGINAL, DESIGN, NAT	JSING APPLICATION TONAL STAGE OF PC	DATA SHEET (37 CFR 1.76)
Title: TAPE-SHA	APED ELECTRODE, METAL-AIR I APED ELECTRODE REDUCING D	BATTERY EMPLOYIN DEVICE	G SAME, AND USED
	I. DECLA	RATION	
As a below named in	ventor or joint inventor, I hereby d	eclare that:	
This declaration is di  (a) the attach			pplication No. 14/411,765 Date: 29 December 2014
(b) United State filed on	ates application or PCT internation July 4, 2013	al application number	PCT/JP2013/068332
The above-identified	application was made or authorize	ed by me,	
I believe that I am the	e original inventor or an original joi	nt inventor of a claimed	I invention in the application,
	ave reviewed and understand the		
I hereby acknowledgeme to be material to p	e the duty to disclose to the U.S. Foatentability as defined in 37 C.F.F	Patent and Trademark ( R. §1.56.	Office all information known to
I hereby acknowledg 1001 by fine or impris	e that any willful false statement n conment of not more than five (5) y	nade in this declaration rears, or both.	n is punishable under 18 USC
	PRIORITY	CLAIM	
other than the United for patent or inventor other than the United	priority benefits under Title 35, Ure a certificate or of any PCT internates of America listed below and so certificate or any PCT internations of America filed by me on the function of the priority is claimed.	itional application(s) de I have also identified be onal application(s) des	esignating at least one country elow any foreign application(s) signating at least one country
(c) no such a	oplication have been filed.		
(d) such appli	cations have been filed as follows.		
EARLII (	EST FOREIGN APPLICATION(S), 6 MONTHS FOR DESIGN) PRIOR	, IF ANY FILED WITHI R TO THIS U.S. APPLI	N 12 MONTHS CATION
COUNTRY	APPLICATION NUMBER	DATE OF FILING (day, month, year)	PRIORITY CLAIMED UNDER 35 USC §119
Japan	2012-150684	04/07/2012	✓         Yes         No           Yes         No           Yes         No

As a below named assignor, for good and valuable consideration acknowledged and received I hereby sell and assign my entire worldwide right, title and interest in the application and the invention(s), so far as concerns the United States and the Territories and Possessions thereof to:

#### ASSIGNEE:

SHARP KABUSHIKI KAISHA 22-22, Nagaike-cho Abeno-ku, Osaka-shi Osaka, Japan 545-8522

# Including:

any and all related patent application(s) in the United States, including continuations, continuations-in-part, divisionals, conversions, renewals, substitutes, reissues, reexaminations, extensions, non-provisional applications, and other applications based in whole or in part upon the invention(s) or upon the application(s);

any and all Letters Patent, renewals, reissues, reexamination certificates and extensions of Letters Patent granted for the invention(s) or upon the application(s); and

every priority right that is or may be predicated upon or arise from the invention(s), the application(s) and the Letters Patent.

I additionally authorize the Assignee to file patent applications in my or the Assignee's name for Letters Patent in any country (by international convention, treaty or otherwise), to be held and enjoyed by the Assignee, its successors and assigns, to the full end of the term or terms for which Letters Patent respectively may be granted, reissued, reexamined or extended, as fully and entirely as the same would have been held and enjoyed by me/us had this Assignment and transfer not been made.

I hereby covenant that I have the full right to convey the entire interests herein assigned, and that I have not executed and will not execute any agreement in conflict herewith and that such assigned rights are not encumbered by any grant, license or other right previously given.

I agree that each time a request is made, and without undue delay, I will execute and deliver all such papers as may be necessary or desirable to perfect the title in and to the invention(s), the application(s) and the Letters Patent, to the Assignee, its successors or assigns.

I agree, without undue delay, to undertake all reasonable acts to assure that said invention(s), patent application(s) and Letters Patent shall be held and enjoyed by the Assignee as fully and entirely as the same could have been held and enjoyed by the undersigned if this assignment had not been made, and particularly: to execute and deliver to the Assignee all lawful documents including petitions, specifications, oaths, declarations, powers of attorney, assignments, invention disclaimers and lawful affidavits in form and substance which may be requested by the Assignee; to furnish the Assignee with all facts relating to said invention(s) or the history thereof and any and all documents, photographs, models, samples or other physical exhibits which may be useful for establishing the facts of conception, disclosure and reduction to practice of said invention(s); and to testify in any proceedings relating to said invention(s), patent application(s) and Letters Patent.

I authorize the patent attorney of record and/or having power of attorney in the U.S. patent application identified above to insert the serial number and filing date information for the patent application in the appropriate spaces in this document when that information becomes available.

RENNER	OTTO	(SHARP)
1 2 part . 41 4 part . F		3 W 1 11 A1 34 . 1

Full Name of Sixth In	ventor and Assignor:	Shumpe	AIHSIN E	IAKA
Inventor's signature;	Shumper Niskinak		Date:	1/6/2015
Post Office Address:	c/o Sharp Kabushiki Kalsha, 22-22, Na	galke-cho, Abeno-	ku, Osaka	shi Osaka 545-8522 Japan
			**************************************	S
Full Name of Seventh	n Inventor and Assignor:	Satoshi	ARIMA	· ·
Inventor's signature:			Date:	
Post Office Address:	c/o Sharp Kabushiki Kalsha, 22-22, Nag	gaike-cho, Abeno-	ku, Osaka	shi Osaka 545-8522 Japan
And the same of th	The second secon			
Full Name of Eighth I	nventor and Assignor:	,	· · · · · · · · · · · · · · · · · · ·	
Inventor's signature:	:		Date:	
Post Office Address:				
Full Name of Ninth In	iventor and Assignor:	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	delicinatura and an annual and an
Inventor's signature:		**************************************	Date:	The state of the s
Post Office Address:	A TARLE TO THE TAR	***************************************	Date.	·
1 oct office Addiess.	 		······································	**************************************
Full Name of Tenth Ir	ventor and Assignor:	or an annual control of the control	toongareerina araba ay y	
Inventor's signature:			Date:	
Post Office Address:		÷.		<del>1.                                      </del>
	The second secon	······································		94,41

This combined declaration and assignment ends with this page.

RENNER OTTO (SHARP
--------------------

COMBINED DECL	ARATION AND ASSIGNMENT L (ORIGINAL, DESIGN, NAT	ISING APPLICATION	<b>DATA SHEET (37 CFR 1.76)</b> T)		
Title: TAPE-SHAF	PED ELECTRODE, METAL-AIR I PED ELECTRODE REDUCING D	BATTERY EMPLOYING	G SAME, AND USED		
	I. DECLAI	RATION			
As a below named inv	entor or joint inventor, I hereby de	eclare that:			
This declaration is dire	ected to:	·	plication No. 14/411,765		
(a) the attache	d application, or	Filing D	ate: 29 December 2014		
	es application or PCT internation July 4, 2013	al application number	PCT/JP2013/068332		
The above-identified a	pplication was made or authorize	d by me.			
I believe that I am the	original inventor or an original joir	nt inventor of a claimed	invention in the application.		
I hereby state that I ha	ve reviewed and understand the	contents of the above-	dentified application.		
I hereby acknowledge me to be material to pa	the duty to disclose to the U.S. Patentability as defined in 37 C.F.R	atent and Trademark ( 8. §1.56.	Office all information known to		
I hereby acknowledge 1001 by fine or impriso	that any willful false statement monment of not more than five (5) y	nade in this declaration ears, or both.	ı is punishable under 18 USC		
	PRIORITY	CLAIM			
I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate or of any PCT international application(s) designating at least one country other than the United States of America listed below and have also identified below any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed.					
(c) no such app	olication have been filed.				
(d) such application	ations have been filed as follows.				
EARLIEST FOREIGN APPLICATION(S), IF ANY FILED WITHIN 12 MONTHS (6 MONTHS FOR DESIGN) PRIOR TO THIS U.S. APPLICATION					
COUNTRY	APPLICATION NUMBER	DATE OF FILING (day, month, year)	PRIORITY CLAIMED UNDER 35 USC §119		
Japan	2012-150684	04/07/2012	✓         Yes         No           Yes         No           Yes         No		

As a below named assignor, for good and valuable consideration acknowledged and received I hereby sell and assign my entire worldwide right, title and interest in the application and the invention(s), so far as concerns the United States and the Territories and Possessions thereof to:

#### ASSIGNEE:

SHARP KABUSHIKI KAISHA 22-22, Nagaike-cho Abeno-ku, Osaka-shi Osaka, Japan 545-8522

# Including:

any and all related patent application(s) in the United States, including continuations, continuations-in-part, divisionals, conversions, renewals, substitutes, reissues, reexaminations, extensions, non-provisional applications, and other applications based in whole or in part upon the invention(s) or upon the application(s);

any and all Letters Patent, renewals, reissues, reexamination certificates and extensions of Letters Patent granted for the invention(s) or upon the application(s); and

every priority right that is or may be predicated upon or arise from the invention(s), the application(s) and the Letters Patent.

I additionally authorize the Assignee to file patent applications in my or the Assignee's name for Letters Patent in any country (by international convention, treaty or otherwise), to be held and enjoyed by the Assignee, its successors and assigns, to the full end of the term or terms for which Letters Patent respectively may be granted, reissued, reexamined or extended, as fully and entirely as the same would have been held and enjoyed by me/us had this Assignment and transfer not been made.

I hereby covenant that I have the full right to convey the entire interests herein assigned, and that I have not executed and will not execute any agreement in conflict herewith and that such assigned rights are not encumbered by any grant, license or other right previously given.

I agree that each time a request is made, and without undue delay, I will execute and deliver all such papers as may be necessary or desirable to perfect the title in and to the invention(s), the application(s) and the Letters Patent, to the Assignee, its successors or assigns.

I agree, without undue delay, to undertake all reasonable acts to assure that said invention(s), patent application(s) and Letters Patent shall be held and enjoyed by the Assignee as fully and entirely as the same could have been held and enjoyed by the undersigned if this assignment had not been made, and particularly: to execute and deliver to the Assignee all lawful documents including petitions, specifications, oaths, declarations, powers of attorney, assignments, invention disclaimers and lawful affidavits in form and substance which may be requested by the Assignee; to furnish the Assignee with all facts relating to said invention(s) or the history thereof and any and all documents, photographs, models, samples or other physical exhibits which may be useful for establishing the facts of conception, disclosure and reduction to practice of said invention(s); and to testify in any proceedings relating to said invention(s), patent application(s) and Letters Patent.

I authorize the patent attorney of record and/or having power of attorney in the U.S. patent application identified above to insert the serial number and filing date information for the patent application in the appropriate spaces in this document when that information becomes available.

Full Name of Sixth In	Shump	Shumpei NISHINAKA			
Inventor's signature:			Date:		
Post Office Address:	c/o Sharp Kabushiki Kaisha, 22-22, N	agalke-cho, Abenc	)-ku, Osaka-s	shi Osaka 545-8522 Japan	
Full Name of Seventh	n Inventor and Assignor:	Satosh	i ARIMA		
Inventor's signature:	Satoshi Arlma		Date:	Jan. 7, 20/5	
Post Office Address:	c/o Sharp Kabushiki Kaisha, 22-22, N	agalke-cho, Abend	o-ku, Osaka-	shi Osaka 545-8522 Japan	
		A STATE OF THE STA		***************************************	
Full Name of Eighth I	Inventor and Assignor:	MINE CONTRACTOR OF THE PROPERTY OF THE PROPERT		mercina de la companya de la company	
Inventor's signature:			Date:		
Post Office Address:		2662	ALL DAYS MALE CONTRACTOR OF THE SECOND CONTRAC		
A Company of the Comp				The second state of the se	
Full Name of Ninth In	ventor and Assignor:				
Inventor's signature:			Date:		
Post Office Address:					
Full Name of Tenth Inventor and Assignor:					
Inventor's signature:			Date:		
Post Office Address:					

 $\underline{\hspace{0.1cm} V}$  This combined declaration and assignment ends with this page.

PATENT REEL: 034725 FRAME: 0806

**RECORDED: 01/15/2015**