PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5267295

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
TATSUYA ITO	11/07/2018
NAOTO IKEDA	11/07/2018
SHUNJI MANDAI	11/22/2018

RECEIVING PARTY DATA

Name:	MURATA MANUFACTURING CO., LTD.	
Street Address:	10-1, HIGASHIKOTARI 1-CHOME	
City:	NAGAOKAKYO-SHI, KYOTO-FU	
State/Country:	JAPAN	
Postal Code:	617-8555	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16210291

CORRESPONDENCE DATA

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ARENT FOX LLP **Correspondent Name:**

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ATTORNEY DOCKET NUMBER:	036458.00082
NAME OF SUBMITTER:	INGA HILDRETH
SIGNATURE:	/ih/
DATE SIGNED:	12/05/2018
	This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 3

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> **PATENT REEL: 047678 FRAME: 0830**

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PATENT REEL: 047678 FRAME: 0831

DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT		
Title of Invention	ARTICLE MANAGEMENT SYSTEM	
As the below	named inventor, I declare that:	
This declaraties directed to	· · · ·	
	United States application or PCT international application number filed on	
The above-ide	ntified application was made or authorized to be made by me.	
I believe that I	am the original inventor or an original joint inventor of a claimed invention in the application.	
I have reviewe	d and understand the contents of the above-identified application, including the claims.	
I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT International filing date of the continuation-in-part application.		
For good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, i, as assignor, hereby sell, assign and set over to Murata Manufacturing Co., Ltd., having an address at 10-1, Higashikotari 1-chome, Nagaokakyo-shi, Kyoto-fu 617-8555, Japan, as assignee, the entire right, title and interest for the United States and all other countries in and to all inventions disclosed and/or plained in the above-identified application, all original, divisional, continuation, substitute or reissue applications and patents applied for or granted therefor in the United States and all other countries, including all rights of priority from the filling of said application, and all rights for past infringement, and the Commissioner of Patents and Trademarks is hereby authorized and requested to issue all patents on said inventions or resulting there from to said assignee herein, as assignee of the entire interest therein; and the undersigned for myself and my legal representatives, heirs and assigns do hereby agree and covernant without further remuneration, to execute and deliver all divisional, continuation, reissue and other applications for Patent on said inventions and all assignments thereof to said assignee or its assigns, to communicate to said assignee or its representatives all facts known to the undersigned respecting said inventions, whenever requested, to testify in any interferences or other legal proceedings in which any of said applications or patents may become involved, to sign all lawful papers, make all rightful oeths, and to do generally everything necessary to assist assignee, its successors, assigns and nominees to obtain patent protection for said inventions in the United States and all other countries, the expenses incident to said applications to be borne and paid by said assignee.		
entered into w	led hereby covenants that no assignment, sale, agreement or encumbrance has been or will be made or hich would conflict with this assignment.	
All statements made herein of my/our own knowledge are true, all statements made herein on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like are punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both, and may jeopardize the validity of the application or any patent issuing thereon.		
LEGAL NAM	E OF INVENTOR	
Inventor:	Tatsuya Ito Date: November 7, 2018	
**Signature:	Taraya Iro	

** An electronic S-signature is permitted. The S-signature must consist only of letters, or Arabic numerals, or both, with appropriate spaces and commas, periods, apostrophes, or hyphens for punctuation, and the person signing the correspondence must insert his or her own S-signature with a first single forward slash mark before and a second single forward slash mark after the S-signature (e.g., /Dr. James T. Jones, Jr./).

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DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT		
Title of Invention	ARTICLE MANAGEMENT SYSTEM	
As the below	w named inventor, I declare that:	
This declars is directed t		
	United States application or PCT International application number filed on	
The above-id	entified application was made or authorized to be made by me.	
I believe that	I am the original inventor or an original joint inventor of a claimed invention in the application.	
I have review	ed and understand the contents of the above-identified application, including the claims.	
material to pa became avail	e the duty to disclose to the United States Patent and Trademark Office all information known to me to be stentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which able between the filing date of the prior application and the national or PCT International filing date of the in-part application.	
For good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I, as assignor, hereby sell, assign and set over to Murata Manufacturing Co., Ltd., having an address at 10-1, Higashikotari 1-chome, Nagaokakyo-shi, Kyoto-fu 617-8555, Japan, as assignee, the entire right, title and interest for the United States and all other countries in and to all inventions disclosed and/or claimed in the above-identified application, all original, divisional, continuation, substitute or reissue applications and patents applied for or granted therefor in the United States and all other countries, including all rights of priority from the filling of said application, and all rights for past infringement, and the Commissioner of Patents and Trademarks is hereby authorized and requested to issue all patents on said inventions or resulting there from to said assignee herein, as assignee of the entire interest therein; and the undersigned for myself and my legal representatives, heirs and assigns do hereby agree and covernant without further renumeration, to execute and deliver all divisional, continuation, reissue and other applications for Patent on said inventions and all assignments thereof to said assignee or its assigns, to communicate to said assignee or its representatives all facts known to the undersigned respecting said inventions, whenever requested, to testify in any interferences or other legal proceedings in which any of said applications or patents may become involved, to sign all lawful papers, make all rightful oaths, and to do generally everything necessary to assist assignee, its successors, assigns and nominees to obtain patent protection for said inventions in the United States and all other countries, the expenses incident to said applications to be borne and paid by said assignee.		
The undersigned hereby covenants that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment.		
All statements made herein of mylour own knowledge are true, all statements made herein on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like are punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both, and may jeopardize the validity of the application or any patent issuing thereon.		
LEGAL NAME OF INVENTOR		
Inventor:	Naoto Ikeda Date: Holember 7. 2015	
**Signature	Naoto Skeda	

** An electronic S-signature is permitted. The S-signature must consist only of letters, or Arabic numerals, or both, with appropriate spaces and commas, periods, apostrophes, or hyphens for punctuation, and the person signing the correspondence must insert his or her own S-signature with a first single forward stash mark before and a second single forward stash mark after the S-signature (e.g., /Or. James T. Jones, Jr./).

Initial 10/02/12

DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT Title of ARTICLE MANAGEMENT SYSTEM invention As the below named inventor, I declare that: This declaration is directed to X The attached application, or United States application or PCT international application number filed on The above-identified application was made or authorized to be made by me. I believe that I am the original inventor or an original joint inventor of a claimed invention in the application. I have reviewed and understand the contents of the above-identified application, including the claims. I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT International filing date of the continuation-in-part application. For good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I, as assignor, hereby sell, assign and set over to Murata Manufacturing Co., Ltd., having an address at 10-1, Higashikotari 1-chome, Nagaokakyo-shi, Kyoto-fu 617-8555, Japan, as assignee, the entire right, title and interest for the United States and all other countries in and to all inventions disclosed and/or claimed in the above-identified application, all original, divisional, continuation, substitute or reissue applications and patents applied for or granted therefor in the United States and all other countries, including all rights of priority from the filing of said application, and all rights for past infringement, and the Commissioner of Patents and Trademarks is hereby authorized and requested to issue all patents on said inventions or resulting there from to said assignee herein, as assignee of the entire interest therein, and the undersigned for myself and my legal representatives, heirs and assigns do hereby agree and covenant without further remuneration, to execute and deliver all divisional, continuation, reissue and other applications for Patent on said inventions and all assignments thereof to said assignee or its assigns, to communicate to said assignee or its representatives all facts known to the undersigned respecting said inventions, whenever requested, to testify in any interferences or other legal proceedings in which any of said applications or patents may become involved, to sign all lawful papers, make all rightful oaths, and to do generally everything necessary to assist assignee, its successors, assigns and nominees to obtain patent protection for said inventions in the United States and all other countries, the expenses incident to said applications to be bome and paid by said assignee. The undersigned hereby covenants that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment. All statements made herein of my/our own knowledge are true, all statements made herein on information and belief are believed to be true, and further that these statements were made with the knowledge that withful false statements and the like are punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both, and may jeopardize the validity of the application or any patent issuing thereon. LEGAL NAME OF INVENTOR Date: 22 Nov. 2018 Shunji Mandai inventor: "Signature:

** An electronic S-signature is permitted. The S-signature must consist only of letters, or Arabic numerals, or both, with appropriate spaces and commas, periods, apostrophas, or hyphens for punctuation, and the person signing the correspondence must insert his or her own S-signature with a first single forward stash mark before and a second single forward stash mark after the S-signature (e.g., iDr. James T. Jones, Jr./).

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RECORDED: 12/05/2018