505568822 07/12/2019

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5615619

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
MASAAKI SHIMATANI	06/10/2019
SHIMPEI OGAWA	06/11/2019
DAISUKE FUJISAWA	06/11/2019
SATOSHI OKUDA	06/11/2019

RECEIVING PARTY DATA

Name:	MITSUBISHI ELECTRIC CORPORATION
Street Address:	7-3, Marunouchi 2-chome, Chiyoda-ku
City:	Tokyo
State/Country:	Japan
Postal Code:	100-8310

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16477641

CORRESPONDENCE DATA

Fax Number: (703)413-2220

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: (703) 413-3000 cmoran@oblon.com

Correspondent Name: OBLON, ET AL.

Address Line 1: 1940 DUKE STREET

Address Line 4: ALEXANDRIA, VIRGINIA 22314

ATTORNEY DOCKET NUMBER: 523641US

NAME OF SUBMITTER: CASEY MORAN

SIGNATURE: /Casey Moran/

DATE SIGNED: 07/12/2019

Total Attachments: 4

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PATENT 505568822 REEL: 049735 FRAME: 0772

source=523641USAssignment#page4.tif

Title of Invention	DETECTOR ARRAY, AND ELECTROMA METHOD	
As the below name	d inventor, I hereby declare that:	
This declaration [The attached application, or	
is directed to:	United States application or PCT international applifiled on October 19, 2017	
The above-identific	ed 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.
(hereinafter referre	subishi Electric Corporation of to as "ASSIGNEE") having places of business a JAPAN is desirous of acquiring the entire right, tit Patent that may be granted therefore in the United St ntries;	le and interest in and to said invention and in
acknowledged, and ASSIGNEE, the fu all foreign countrie relevant Internation in and to any and a	FORE, in consideration of the sum of FIVE DOLL for other good and valuable consideration, I, by these ill and exclusive right to the said invention in the Unit is (including the right to claim priority under the termal Treaties and Arrangements from the aforesaid appull Letters Patent which may be granted therefor in the foreign countries and in and to any and all division	presents do sell, assign and transfer unto said ed States and its territorial possessions and in ms of the International Convention and other lication) and the entire right, title and interest e United States and its territorial possessions
and all foreign cou of my entire right, successors and assi	ze and request the Patent Office Officials in the Unite ntries to issue any and all of said Letters Patent, when title and interest in and to the same, for the sole uigns, to the full end of the term for which said Letters have been held by me had this Assignment and sale not be the said to	n granted, to said ASSIGNEE as the assignee use and behoof of said ASSIGNEE, its (his) as Patent may be granted, as fully and entirely
respecting said in continuation, subst all of said Letters P to aid said ASSIGI	that I will communicate to said ASSIGNEE or its vention, and testify in any legal proceeding, signitute, renewal and reissue applications, execute all nature to be issued to said ASSIGNEE, make all rightfunee, its (his) successors and assigns, to obtain and end its territorial possessions and in any and all foreign	n all lawful papers, execute all divisional, ecessary assignment papers to cause any and all oaths, and, generally do everything possible inforce proper protection for said invention in
	viedge that any willful false statement made in this de ament of not more than five (5) years, or both.	colaration is punishable under 18 U.S.C. 1001
LEGAL NAME O	F INVENTOR	
Inventor: Masaal	d SHIMATANI	Date: June 10,2019
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OBLON, McCLELLAND, MAIER & NEUSTADT, L.L.P.
ATTORNEYS AT LAW
1940 DUKE STREET

ALEXANDRIA, VIRGINIA 22314

Title of Invention		ETECTOR, ELECTROMAGNETIC WAVE CTROMAGNETIC WAVE DETECTION
As the below name	d inventor, I hereby declare that:	
This declaration	The attached application, or	
is directed to:	United States application or PCT intern filed on October 19, 2017	national application number PCT/JP2017/037817
The above-identific	ed application was made or authorized to l	be made by me.
I believe that I am	the original inventor or an original joint in	eventor of a claimed invention in the application.
	subishi Electric Corporation	
TOKYO 100-8310	JAPAN, is desirous of acquiring the ent Patent that may be granted therefore in the	f business at: 7-3, Marunouchi 2-chome, Chiyoda-ku, ire right, title and interest in and to said invention and in the United States and its territorial possessions and in any
acknowledged, and ASSIGNEE, the fu all foreign countrie relevant Internation in and to any and a	for other good and valuable consideration Il and exclusive right to the said invention as (including the right to claim priority ur nal Treaties and Arrangements from the af all Letters Patent which may be granted the	IVE DOLLARS (\$5.00), the receipt whereof is hereby in, I, by these presents do sell, assign and transfer unto said in the United States and its territorial possessions and in inder the terms of the International Convention and other foresaid application) and the entire right, title and interest herefor in the United States and its territorial possessions if all divisions, reissues, continuations, substitutions and
and all foreign cou of my entire right, successors and assi	ntries to issue any and all of said Letters I title and interest in and to the same, fo	in the United States and its territorial possessions and any Patent, when granted, to said ASSIGNEE as the assignee or the sole use and behoof of said ASSIGNEE, its (his) said Letters Patent may be granted, as fully and entirely nt and sale not been made.
respecting said in continuation, subst all of said Letters P to aid said ASSIG?	vention, and testify in any legal proce itute, renewal and reissue applications, ea atent to be issued to said ASSIGNEE, male	NEE or its (his) representatives any facts known to me seeding, sign all lawful papers, execute all divisional, xecute all necessary assignment papers to cause any and ke all rightful oaths, and, generally do everything possible obtain and enforce proper protection for said invention in ad all foreign countries.
	viedge that any willful false statement ma ument of not more than five (5) years, or b	de in this declaration is punishable under 18 U.S.C. 1001 ooth.
LEGAL NAME O	FINVENTOR	~7 110
Inventor: Shimpe	i OGAWA	Date: Jue 11 2019
Sionature:	Shipmai Acause	

OBLON, McCLELLAND, MAIER & NEUSTADT, L.L.P.

ATTORNEYS AT LAW 1940 DUKE STREET ALEXANDRIA, VIRGINIA 22314

Title of Invention	ELECTROMAGNETIC WAVE DETECTOR, ELECTROMAGNETIC WAVE DETECTOR ARRAY, AND ELECTROMAGNETIC WAVE DETECTION METHOD
As the below name	d inventor, I hereby declare that:
This declaration	The attached application, or
is directed to:	United States application or PCT international application number PCT/JP2017/037817 filed on October 19, 2017
The above-identific	ed 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.
WHEREAS, Min	subishi Electric Corporation
TOKYO 100-8310	ed to as "ASSIGNEE") having places of business at: 7-3, Marunouchi 2-chome, Chiyoda-ku, IJAPAN, is desirous of acquiring the entire right, title and interest in and to said invention and in Patent that may be granted therefore in the United States and its territorial possessions and in any intries;
acknowledged, and ASSIGNEE, the fu all foreign countrie relevant Internation in and to any and a	FORE, in consideration of the sum of FIVE DOLLARS (\$5.00), the receipt whereof is hereby a for other good and valuable consideration, I, by these presents do sell, assign and transfer unto said all and exclusive right to the said invention in the United States and its territorial possessions and in es (including the right to claim priority under the terms of the International Convention and other nat Treaties and Arrangements from the aforesaid application) and the entire right, title and interest all Letters Patent which may be granted therefor in the United States and its territorial possessions foreign countries and in and to any and all divisions, reissues, continuations, substitutions and
and all foreign cou of my entire right, successors and ass	ze and request the Patent Office Officials in the United States and its territorial possessions and any intries to issue any and all of said Letters Patent, when granted, to said ASSIGNEE as the assignee, title and interest in and to the same, for the sole use and behoof of said ASSIGNEE, its (his) igns, to the full end of the term for which said Letters Patent may be granted, as fully and entirely have been held by me had this Assignment and sale not been made.
respecting said in continuation, substall of said Letters F to aid said ASSIG	that I will communicate to said ASSIGNEE or its (his) representatives any facts known to me evention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, titute, renewal and reissue applications, execute all necessary assignment papers to cause any and Patent to be issued to said ASSIGNEE, make all rightful oaths, and, generally do everything possible NEE, its (his) successors and assigns, to obtain and enforce proper protection for said invention in and its territorial possessions and in any and all foreign countries.
	wledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 nment of not more than five (5) years, or both.
LEGAL NAME O	F INVENTOR
Inventor: Daisuk	e FUJISAWA Date: June 11, 20/9
Signature:	Daisuke Fujisaum

OBLON, McCLELLAND, MAIER & NEUSTADT, L.L.P.
ATTORNEYS AT LAW
1940 DUKE STREET
ALEXANDRIA, VIRGINIA 22314

little of Invention	DETECTOR ARRAY, AND ELECTROMAGNETIC WAVE DETECTION
Ac the helen man	METHOD ad inventor, I hereby declare that:
This declaration [_	The attached application, or
is directed to:	United States application or PCT international application number PCT/JP2017/037817 filed on October 19, 2017
The above-identific	ed 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.
WHEREAS, Mit	tsubishi Electric Corporation
TOKYO 100-8310	ed to as "ASSIGNEE") having places of business at: 7-3, Marunouchi 2-chome, Chiyoda-ku, JAPAN, is desirous of acquiring the entire right, title and interest in and to said invention and in Patent that may be granted therefore in the United States and its territorial possessions and in any ntries;
acknowledged, and ASSIGNEE, the fu all foreign countrie relevant Internation in and to any and a	FORE, in consideration of the sum of FIVE DOLLARS (\$5.00), the receipt whereof is hereby I for other good and valuable consideration, I, by these presents do sell, assign and transfer unto said all and exclusive right to the said invention in the United States and its territorial possessions and in es (including the right to claim priority under the terms of the International Convention and other nal Treaties and Arrangements from the aforesaid application) and the entire right, title and interest all Letters Patent which may be granted therefor in the United States and its territorial possessions I foreign countries and in and to any and all divisions, reissues, continuations, substitutions and
and all foreign cou of my entire right, successors and ass	ize and request the Patent Office Officials in the United States and its territorial possessions and any intries to issue any and all of said Letters Patent, when granted, to said ASSIGNEE as the assignee, title and interest in and to the same, for the sole use and behoof of said ASSIGNEE, its (his) igns, to the full end of the term for which said Letters Patent may be granted, as fully and entirely have been held by me had this Assignment and sale not been made.
respecting said in continuation, subst all of said Letters F to aid said ASSIG	e that I will communicate to said ASSIGNEE or its (his) representatives any facts known to me evention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, titute, renewal and reissue applications, execute all necessary assignment papers to cause any and Patent to be issued to said ASSIGNEE, make all rightful oaths, and, generally do everything possible NEE, its (his) successors and assigns, to obtain and enforce proper protection for said invention in and its territorial possessions and in any and all foreign countries.
	wledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 ment of not more than five (5) years, or both.
LEGAL NAME O	F INVENTOR
Inventor: Satosh	i.OKUDA Date: June 11, 2019
	toute Olouda

OBLON, McCLELLAND, MAIER & NEUSTADT, L.L.P. ATTORNEYS AT LAW

1940 DUKE STREET ALEXANDRIA, VIRGINIA 22314

> PATENT REEL: 049735 FRAME: 0777

RECORDED: 07/12/2019