505895009 01/31/2020

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5941710

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
ATSUKI TACHIBANA	12/16/2019
TETSUO TANAKA	12/12/2019
HIDENORI SUZUKI	12/12/2019
YOSHIKI TAKAHARA	12/12/2019
ATSUHIRO TSUCHIYA	12/16/2019

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:	29722815

CORRESPONDENCE DATA

Fax Number: (703)390-1277

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)390-9051

Email: info@sbpatentlaw.com

Correspondent Name: STUDEBAKER & BRACKETT PC Address Line 1: 8255 GREENSBORO DRIVE

Address Line 2: SUITE 300

Address Line 4: TYSONS, VIRGINIA 22102

ATTORNEY DOCKET NUMBER:	002500-ME0318
NAME OF SUBMITTER:	DONALD R. STUDEBAKER
SIGNATURE:	/Donald R. Studebaker/
DATE SIGNED:	01/31/2020
	This document serves as an Oath/Declaration (37 CFR 1.63).

PATENT 505895009 REEL: 051694 FRAME: 0150

Total Attachments: 10		
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PATENT REEL: 051694 FRAME: 0151



COMBINED DECLARATION (37 CFR 1.63) AND ASSIGNMENT OF APPLICATION FOR UNITED STATES LETTERS PATENT

Title of Invention:	
INVERTER	
私は、以下に記名された発明者として、ここに下記 の通り宣言する:	As a below named inventor, I hereby declare that:
本宣言書は、以下の出願に対するものである: 図 添付された出願、あるいは、 □ 米国出願番号またはPCT国際出願番号は、 であり、且つ の日に出願された出願(該当 する場合)	This declaration is directed to: The attached application, or United States application or PCT international application number filed on
上記出願書(明細書及び図面)は、私が作成したものか、あるいは私がその作成を許可したものである。	The above-identified application was made or authorized to be made by me.
私は、本米国出願の請求範囲で記載された発明に対	I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.
する原発明者であるか、或いは、原共同発明者であると信じている。	I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.
100 Sec. 100 Sec. 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	STATEMENT OF ACCURATE TRANSLATION IN ACCORDANCE WITH 37 CFR 1.69(b):
私は、ここでの宣誓または陳述において故意に偽り を述べた場合、合衆国法典第18巻第1001条に基づ き、罰金あるいは5年以下の懲役、または、両方の 懲罰を受けることを認める。	The Declaration and Assignment for Patent and Design Applications is an accurate translation of the corresponding English language Declaration and Assignment for Patent and Design Applications
	Signature: 700 Date: 11/15/2012

Page 1 of 10



Attorney Docket No. <u>002500-ME</u> **WHEREAS** the undersigned, hereinafter referred to as the assignor, has invented a certain improvement relating to the above identified application.

The inventor declaration for said application is combined herewith. X] said application to be filed in the United States Patent and Trademark Office;] said application having been filed in the United States Patent and Trademark Office on, nuthorization being hereby given to the practitioners associated with STUDEBAKER & BRACKETT PC's CUSTOMER NUMBER 78198, to insert here in parentheses (Application Serial No) the application serial number of said application when known;] said application having been filed under the Patent Cooperation Treaty on, as Serial No, the United States of America being designated. AND WHEREAS MITSUBISHI ELECTRIC CORPORATION of _7-3, Marunouchi 2-chome.
Chiyoda-ku, Tokyo 100-8310 JAPAN, hereinafter referred to as the assignee, is desirous of acquiring the entire right, litle and interest in and to said application, including any and all divisions and continuations thereof, and in and to said invention and any and all patents which may be granted therefor, including any and all enewals, reissues and prolongations thereof;
NOW, that for and in consideration of One Dollar (\$1.00), and other good and valuable consideration haid by said assignee to said assignor, the receipt of which is hereby acknowledged, said assignor hereby essigns, sells and transfers to said assignee, and said assignee's successors and assigns, the full and exclusive right, little and interest in and to said application, including any and all divisions and continuations hereof, and in and to said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof; said assignee, and said assignee's successors and assigns, to have, hold, exercise and enjoy the said application, including any and all divisions and continuations thereof, and the said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof, with all the rights, powers, privileges and advantages in anywise arising from or appentaining thereto, for and during the term or terms of any and all such patents when granted, including any and all renewals, reissues and prolongations thereof, for the use and benefit of said assignee, and said assignee's successors and assigns, in as ample and beneficial a manner as the said assignee, or could have held and enjoyed the same, if this assignment had not been made. AND said assignor hereby agrees to perform, upon the request of said assignee, or said assignee's successors or assigns, any and all acts relating to the obtaining or to the asserting of said patents, including any and all renewals, reissues and prolongations thereof. AND said assignor authorizes and requests the Commissioner of Patents and Trademarks to issue acters patent on said application, and on any and all divisions and continuations thereof, to said assignee, and said assignee's successors and assigns, in accordance herewith. The undersigned hereby grants the law firm of STUDEBAKER & BRACKETT PC the power to insert on the assignment portion of this doc
Atsuki TACHIBANA
部落の著名/ Signature 日付/ Date
Atsuki Tachibana December 16, 2019



COMBINED DECLARATION (37 CFR 1.63) AND ASSIGNMENT OF APPLICATION FOR UNITED STATES LETTERS PATENT

Title of Invention:	
INVERTER	
私は、以下に記名された発明者として、ここに下記 の通り宣言する:	As a below named inventor, I hereby declare that:
本宣言書は、以下の出願に対するものである: ② 添付された出願、あるいは、	This declaration is directed to: The attached application, or United States application or PCT international
□ 米国出願番号またはPCT国際出願番号は、 であり、品つ の日に出願された出願〈該当 する場合〉	application number
上記出願書(明細書及び図面)は、私が作成したものか、あるいは私がその作成を許可したものである。	The above-identified application was made or authorized to be made by me.
私は、本米国出籍の請求範囲で記載された発明に対	I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.
する原発明者であるか、或いは、原共同発明者であ ると信じている。	I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.
10 C 16 10 C 1 10 6	STATEMENT OF ACCURATE TRANSLATION IN ACCORDANCE WITH 37 CFR 1,69(b):
私は、ここでの宣誓または陳述において故意に偽り を述べた場合、合衆国法典第18巻第1001条に基づ き、劉金あるいは5年以下の懲役、または、両方の 懲罰を受けることを認める。	The Declaration and Assignment for Patent and Design Applications is an accurate translation of the corresponding English language Declaration and Assignment for Patent and Design Applications
	Signature: // / / / / / / / / / / / / / / / / /

Page 3 of 10



Attorney Docket No. <u>002500-ME</u> **WHEREAS** the undersigned, hereinafter referred to as the assignor, has invented a certain improvement relating to the above identified application.

The inventor declaration for said application is combine	
[X] said application to be filed in the United States Pa	
[] said application having been filed in the United Sta	
authorization being hereby given to the practitioners a	
CUSTOMER NUMBER 78198, to insert here in parer	
application serial number of said application when known	
[] said application having been filed under the Patent	Cooperation Treaty on as
Serial No, the United S	itates of America being designated.
AND WHEREAS MITSUBISHI ELECTRIC C	ORPORATION of 7-3, Marunouchi 2-chome,
Chiyoda-ku, Tokyo 100-8310 JAPAN, hereinafter refe	erred to as the assignee, is desirous of acquiring the
entire right, title and interest in and to said application.	including any and all divisions and continuations thereof,
and in and to said invention and any and all patents w	
renewals, reissues and prolongations thereof,	
A CONTRACT OF THE CONTRACT OF	
NOW, that for and in consideration of One Do	ollar (\$1.00), and other good and valuable consideration
paid by said assignee to said assignor, the receipt of	
assigns, sells and transfers to said assignee, and said	d assignee's successors and assigns, the full and
exclusive right, title and interest in and to said applica	tion, including any and all divisions and continuations
	atents which may be granted therefor, including any and
all renewals, reissues and prolongations thereof; said	assignee, and said assignee's successors and assigns,
to have hold exercise and enjoy the said application,	including any and all divisions and continuations thereof.
and the said invention and any and all patents which i	may be granted therefor, including any and all renewals,
	powers, privileges and advantages in anywise arising
from or appertaining thereto, for and during the term of	
	itions thereof, for the use and benefit of said assignee.
	nple and beneficial a manner as the said assignor might
or could have held and enjoyed the same, if this assig	
	upon the request of said assignee, or said assignee's
	obtaining or to the asserting of said patents, including
any and all renewals, reissues and prolongations ther	
	he Commissioner of Patents and Trademarks to issue
	divisions and continuations thereof, to said assignee, and
said assignee's successors and assigns, in accordant	
	CE REFEWRIT. EBAKER & BRACKETT PC the power to insert on the
Assignment portion of this combined Declaration and	Assissment and further identification which may be
Assignment portion of this committee creamanan and	Assignment any functional medium and which may be
necessary or desirable in order to comply with the rule	38 Of the U.S. materit and Traversark Onice to:
recordation of this document.	Liver and the state and sufficient all the state down an analysis this
· · · · · · · · · · · · · · · · · · ·	executed by the undersigned on the date opposite the
undersigned name.	
発明者氏法/ Legal Name of inventor	
	Tetsuo TANAKA
発明者の署名/ Signature	요한/ Date
ALMEN TO ME CONTROL	in the control of



COMBINED DECLARATION (37 CFR 1.63) AND ASSIGNMENT OF APPLICATION FOR UNITED STATES LETTERS PATENT

Title of Invention:	
INVERTER	
私は、以下に記名された発明者として、ここに下記 の通り宣言する:	As a below named inventor, I hereby declare that:
本宣書書は、以下の出願に対するものである: ※ 「	This declaration is directed to: The attached application, or United States application or PCT international application number filled 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 hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both. STATEMENT OF ACCURATE TRANSLATION IN ACCORDANCE WITH 37 CFR 1.69(b): The Declaration and Assignment for Palent and Design Applications is an accurate translation of the corresponding English language Declaration and Assignment for Patent and Design Applications Signature: Date: 11/15/2012
	COSE. INTERVIE

Page 5 of 10



Afterney Docket No. <u>002500-ME</u> **WHEREAS** the undersigned, hereinafter referred to as the assignor, has invented a certain improvement relating to the above identified application.

[] said application having been filed authorization being hereby given to the CUSTOMER NUMBER 78198, to insupplication serial number of said application having been filed to be a said application having been filed and the said application having the said application have a said application having the said application have a said applic	United States Patent and Trademark Office; in the United States Patent and Trademark Office on, ne practitioners associated with <u>STUDEBAKER & BRACKETT PC's</u> sert here in parentheses (Application Serial No) the
Chiyoda-ku, Tokyo 100-8310 JAPAN entire right, title and interest in and to:	HI ELECTRIC CORPORATION of 7-3, Marunouchi 2-chome, hereinafter referred to as the assignee, is desirous of acquiring the said application, including any and all divisions and continuations thereof, and all patents which may be granted therefor, including any and all thereof;
paid by said assignee to said assignor assigns, sells and transfers to said as exclusive right, title and interest in anothereof, and in and to said invention a all renewals, reissues and prolongation to have, hold, exercise and enjoy the said the said invention and any and all reissues and prolongations thereof, we from or appertaining thereto, for and coincluding any and all renewals, reissue and said assignee's successors and a cornect of the said assigner hereby ag successors or assigns, any and all accepts any and all renewals, reissues and propertain and assigner authorizes. Letters Patent on said application, and said assignee's successors and assigned assignment portion of this combined in necessary or desirable in order to conrecordation of this document. This combined Declaration and Assigundersigned name.	s and requests the Commissioner of Patents and Trademarks to issue I on any and all divisions and continuations thereof, to said assignee, and
發明者氏名/ Legal Name of Inventor	. Hidenori SUZUKI
条明者の署名/ Signature	81)/ Date
<i>徐木秀</i> 奥	December 12, 2019

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COMBINED DECLARATION (37 CFR 1.63) AND ASSIGNMENT OF APPLICATION FOR UNITED STATES LETTERS PATENT

	· · · · · · · · · · · · · · · · · · ·
Title of Invention:	
INVERTER	
私は、以下に記名された発明者として、ここに下記 の通り宣言する:	As a below named inventor, I hereby declare that:
本宣言書は、以下の出願に対するものである:	This declaration is directed to: The attached application, or
図 添付された出願、あるいは、 □ 米国出願番号またはPCT国際出願番号は、 □ アあり、且つ	United States application or PCT international application number filed on
上記出願書(明細書及び図面)は、私が作成したものか、あるいは私がその作成を許可したものである。	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.
私は、本米国出願の請求範囲で記載された発明に対	Α.
する原発明者であるか、或いは、原共同発明者であ	I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.
ると信じている。	STATEMENT OF ACCURATE TRANSLATION IN ACCORDANCE WITH 37 CFR 1.69(b):
私は、ここでの宣誓または陳述において故意に偽り を述べた場合、合衆国法典第18巻第1001条に基づ き、罰金あるいは5年以下の懲役、または、両方の 懲罰を受けることを認める。	The Declaration and Assignment for Patent and Design Applications is an accurate translation of the corresponding English language Declaration and Assignment for Patent and Design Applications
	Signature:

Page 7 of 10



Attorney Docket No. <u>002500-ME</u>

WHEREAS the undersigned, hereinafter referred to as the assignor, has invented a certain improvement relating to the above identified application.

The inventor declaration for said application is combi [X] said application to be filed in the United States P. [] said application having been filed in the United States P. [] said application having been filed in the United State authorization being hereby given to the practitioners of CUSTOMER NUMBER 78198, to insert here in pare application serial number of said application when kn [] said application having been filed under the Paten Serial No, the United States and provided the complex serial No, the United States are considered to the complex serial No, the United States are considered to the complex serial No, the United States are considered to the constant of the c	atent and Trademark Office; ates Patent and Trademark Office on, associated with <u>STUDEBAKER & BRACKETT PC's</u> otheses (Application Serial No) the own; t Cooperation Treaty onas
Chiyoda-ku, Tokyo 100-8310 JAPAN, hereinafter refe	including any and all divisions and continuations thereof
paid by said assignee to said assignor, the receipt of assigns, sells and transfers to said assignee, and said exclusive right, title and interest in and to said applica thereof, and in and to said invention and any and all pall renewals, reissues and prolongations thereof; said to have, hold, exercise and enjoy the said application, and the said invention and any and all patents which reissues and prolongations thereof, with all the rights, from or appertaining thereto, for and during the term of including any and all renewals, reissues and prolongal and said assignee's successors and assigns, in as an or could have held and enjoyed the same, if this assignances are assigns, any and all acts relating to the any and all renewals, reissues and prolongations there any and all renewals reissues and prolongations there are patent on said application, and on any and all deals assignee's successors and assigns, in accordance The undersigned hereby grants the law firm of STUDE Assignment portion of this combined Declaration and necessary or desirable in order to comply with the rule recordation of this document. This combined Declaration and Assignment has been undersigned name.	d assignee's successors and assigns, the full and tion, including any and all divisions and continuations atents which may be granted therefor, including any and assignee, and said assignee's successors and assigns including any and all divisions and continuations thereof, may be granted therefor, including any and all renewals, powers, privileges and advantages in anywise arising or terms of any and all such patents when granted, tions thereof, for the use and benefit of said assignee, aple and beneficial a manner as the said assigner might promote that not been made. upon the request of said assignee, or said assignee's obtaining or to the asserting of said patents, including eof. The Commissioner of Patents and Trademarks to issue divisions and continuations thereof, to said assignee, and the herewith. EBAKER & BRACKETT PC the power to insert on the Assignment any further identification which may be
笺明者氏名/ Legal Name of Inventor	Yoshiki TAKAHARA
発明者の署名/ Signature	日件/ Date
專展 養柑	December 17 2019



COMBINED DECLARATION (37 CFR 1.63) AND ASSIGNMENT OF APPLICATION FOR UNITED STATES LETTERS PATENT

Title of Invention:	
INVERTER	
私は、以下に配名された発明者として、ここに下記 の通り宣言する:	As a below named inventor, I hereby declare that:
本宣言書は、以下の出願に対するものである: ② 添付された出額、あるいは、 □ 米国出願番号またはPCT国際出願番号は、	This declaration is directed to: The attached application, or United States application or PCT international application number filed on
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	Signature: 7 Date: 11/15/2012

Page 9 of 10



RECORDED: 01/31/2020

Attorney Docket No. <u>002500-ME</u>

WHEREAS the undersigned, hereinafter referred to as the assignor, has invented a certain improvement

relating to the above identified application.
The inventor declaration for said application is combined herewith. [X] said application to be filed in the United States Patent and Trademark Office; [] said application having been filed in the United States Patent and Trademark Office on, authorization being hereby given to the practitioners associated with STUDEBAKER & BRACKETT PC's CUSTOMER NUMBER 78198, to insert here in parentheses (Application Serial No.) the application serial number of said application when known; [] said application having been filed under the Patent Cooperation Treaty on, as Serial No, the United States of America being designated.
AND WHEREAS MITSUBISHI ELECTRIC CORPORATION of 7-3, Marunouchi 2-chome. Chivoda-ku, Tokyo 100-8310 JAPAN, hereinafter referred to as the assignee, is desirous of acquiring the entire right, title and interest in and to said application, including any and all divisions and continuations thereof, and in and to said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof;
NOW, that for and in consideration of One Dollar (\$1.00), and other good and valuable consideration paid by said assignee to said assigner, the receipt of which is hereby acknowledged, said assigner hereby assigns, sells and transfers to said assignee, and said assignee's successors and assigns, the full and exclusive right, title and interest in and to said application, including any and all divisions and continuations thereof, and in and to said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof; said assignee, and said assignee's successors and assigns to have, hold, exercise and enjoy the said application, including any and all divisions and continuations thereof, and the said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof, with all the rights, powers, privileges and advantages in anywise arising from or appertaining thereto, for and during the term or terms of any and all such patents when granted, including any and all renewals, reissues and prolongations thereof, for the use and benefit of said assignee, and said assignee's successors and assigns, in as ample and beneficial a manner as the said assignee, and said assignee's successors and assigns, in as ample and beneficial a manner as the said assignee's successors or assigns, any and all acts relating to the obtaining or to the asserting of said patents, including any and all renewals, reissues and prolongations thereof. AND said assignor hereby agrees to perform, upon the request of said assignee, or said assignee's successors or assigns, any and all acts relating to the obtaining or to the asserting of said patents, including any and all renewals, reissues and prolongations thereof. AND said assignor authorizes and requests the Commissioner of Patents and Trademarks to issue Letters Patent on said application, and on any and all divisions and continuations thereof, to said assignee, a
Atsuhiro TSUCHIYA
發明者の署名/ Signature 目付/ Date
Atsuhira Tsuchiya December 16, 2019

Page 10 of 10