

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT7499133

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
SHUNSAKU EGUCHI	07/28/2022
MINEMASA OMURA	07/28/2022
YOICHI UEFUJI	07/28/2022
HIROYUKI NAKAHARAI	07/28/2022
KOICHI TANIMOTO	07/28/2022
MASAYA HATANAKA	07/28/2022
NOBUHIDE HARA	07/28/2022
TAKUO ODA	07/28/2022
RECEIVING PARTY DATA	
Name:	mitsubishi heavy industries, ltd.
Street Address:	2-3, MARUNOUCHI 3-CHOME, CHIYODA-KU
City:	TOKYO
State/Country:	JAPAN
Postal Code:	100-8332
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	17801214
CORRESPONDENCE DATA	
Fax Number:	(703)205-8050
<i>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.</i>	
Phone:	(703) 205-8000
Email:	mailroom@bskb.com, anh-vu.dao@bskb.com
Correspondent Name:	BIRCH, STEWART, KOLASCH & BIRCH, LLP.
Address Line 1:	8110 GATEHOUSE ROAD, SUITE 100E
Address Line 4:	FALLS CHURCH, VIRGINIA 22042
ATTORNEY DOCKET NUMBER:	4898-0531PUS1
NAME OF SUBMITTER:	ANH-VU DAO
SIGNATURE:	/anh-vu dao/

DATE SIGNED:	08/23/2022
---------------------	------------

Total Attachments: 12

- source=2022-08-19_Declaration_and_Assignment_4898-0531PUS1#page1.tif
- source=2022-08-19_Declaration_and_Assignment_4898-0531PUS1#page2.tif
- source=2022-08-19_Declaration_and_Assignment_4898-0531PUS1#page3.tif
- source=2022-08-19_Declaration_and_Assignment_4898-0531PUS1#page4.tif
- source=2022-08-19_Declaration_and_Assignment_4898-0531PUS1#page5.tif
- source=2022-08-19_Declaration_and_Assignment_4898-0531PUS1#page6.tif
- source=2022-08-19_Declaration_and_Assignment_4898-0531PUS1#page7.tif
- source=2022-08-19_Declaration_and_Assignment_4898-0531PUS1#page8.tif
- source=2022-08-19_Declaration_and_Assignment_4898-0531PUS1#page9.tif
- source=2022-08-19_Declaration_and_Assignment_4898-0531PUS1#page10.tif
- source=2022-08-19_Declaration_and_Assignment_4898-0531PUS1#page11.tif
- source=2022-08-19_Declaration_and_Assignment_4898-0531PUS1#page12.tif

Attorney Docket No. 4898-0531PUS1

BIRCH, STEWART, KOLASCH & BIRCH, LLP
P.O. Box 747 • Falls Church, Virginia 22040-0747
Telephone: (703) 205-8000 • Facsimile: (703) 205-8050 • Email: mailroom@bskb.com

**DECLARATION AND ASSIGNMENT
FOR PATENT AND DESIGN APPLICATIONS**

UNITED STATES PATENT RIGHTS, OR
UNITED STATES PLUS ALL FOREIGN PATENT RIGHTS

Title of Invention ⇨ HEAT EXCHANGER CORE AND HEAT EXCHANGER

As a below named inventor (hereinafter designated as the undersigned), I hereby declare that:
This declaration is directed to the application attached hereto.

Application not Attached ⇨ If the application is not attached hereto, the application is as identified by the attorney docket number as set forth above and/or the following:

Enter Appl. No. ⇨ United States Application Number or PCT International Appln. No. PCI/IP2021/006810

Enter Filing Date ⇨ filed on February 24, 2021

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 information which is material to patentability as defined in Title 37, Code of Federal Regulations § 1.56.
WHEREAS, the undersigned has invented certain new and useful improvements described in the application identified.

Insert Name of Assignee ⇨ WHEREAS, MITSUBISHI HEAVY INDUSTRIES, LTD.

Insert Address of Assignee ⇨ of 2-3, Marunouchi 3-Chome, Chiyoda-ku, Tokyo, 100-8332, Japan,
its heirs, successors, legal representatives and assigns (hereinafter designated as the Assignee) is desirous of acquiring the entire right, title and interest in and to said invention and in and to any Letters Patent(s) that may be granted therefor in the United States of America and

Check Box if Appropriate ⇨ in any foreign countries.

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, the undersigned has sold, assigned and transferred, and by these presents does (do) sell, assign and transfer unto said Assignee the full and exclusive right to the said invention in the United States of America, its territories, dependencies and possessions and the entire right, title and interest in and to any and all Letters Patent(s) which may be granted therefor in the United States of America, its territories, dependencies and possessions, and if the box above is designated, in any and all foreign countries; and to any and all divisions, reissues, continuations, conversions and extensions thereof for the full term or terms for which the same may be granted.

Attorney Docket No. 4898-0531PUS1

The undersigned agrees to execute all papers necessary in connection with this application and any continuing, divisional, conversion or reissue applications thereof and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.

The undersigned agrees to execute all papers necessary in connection with any interference which may be declared concerning this application or continuation, division, conversion or reissue thereof or Letters Patent(s) or reissue patent issued thereon and to cooperate with the Assignee in every way possible in obtaining and producing evidence and proceeding with such interference.

The undersigned agrees to execute all papers and documents and to perform any act which may be necessary in connection with claims or provisions of the International Convention for the Protection of Industrial Property or similar agreements.

The undersigned agrees to perform all affirmative acts which may be necessary to obtain a grant of (a) valid United States of America patent(s) or a grant of (a) valid United States of America and any foreign patent(s) to the Assignee and to vest all rights therein hereby conveyed to said Assignee as fully and entirely as the same would have been held by the undersigned if this Assignment and sale had not been made.

The undersigned hereby authorizes and requests the Patent and Trademark Office Officials in the United States of America and in any foreign countries to issue any and all Letters Patent(s) resulting from said application or any continuing, divisional conversion or reissue applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has the full right to convey the entire interest herein assigned, and that he has not executed, and will not execute, any agreement in conflict herewith.

The undersigned hereby grants the law firm of Birch, Stewart, Kolasch & Birch, LLP the power to insert any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office.

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.

The undersigned hereby acknowledges 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.

In witness whereof, executed by the undersigned on the date opposite the undersigned name.

LEGAL NAME OF INVENTOR

Inventor's Name → Inventor: Shunsaku IGUCHI Date: July 28, 2022

Inventor's Signature → Signature: Shunsaku Iguchi

An application data sheet (FTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form. Use a separate form for each inventor; or check the box below and complete the attached page(s) to list additional inventors.

Additional inventors are being named on the 1 supplemental sheet(s) attached hereto.

Attorney Docket No. 4898-0531PUS1

**SUPPLEMENTAL SHEET FOR
DECLARATION AND ASSIGNMENT**

ADDITIONAL INVENTOR(S)
Supplemental Sheet Page 1 of 1

LEGAL NAME OF JOINT INVENTOR, IF ANY

Inventor's Name ⇨ Inventor: Minemasa OMURA Date: July 28, 2022

Inventor's Signature ⇨ Signature: Minemasa Omura

LEGAL NAME OF JOINT INVENTOR, IF ANY

Inventor's Name ⇨ Inventor: Yoichi UEFUJI Date: July 28, 2022

Inventor's Signature ⇨ Signature: Yoichi Uefuji

LEGAL NAME OF JOINT INVENTOR, IF ANY

Inventor's Name ⇨ Inventor: Hiroyuki NAKAHARAI Date: _____

Inventor's Signature ⇨ Signature: _____

LEGAL NAME OF JOINT INVENTOR, IF ANY

Inventor's Name ⇨ Inventor: Koichi TANIMOTO Date: _____

Inventor's Signature ⇨ Signature: _____

LEGAL NAME OF JOINT INVENTOR, IF ANY

Inventor's Name ⇨ Inventor: Masaya HATANAKA Date: _____

Inventor's Signature ⇨ Signature: _____

LEGAL NAME OF JOINT INVENTOR, IF ANY

Inventor's Name ⇨ Inventor: Nobuhide HARA Date: _____

Inventor's Signature ⇨ Signature: _____

LEGAL NAME OF JOINT INVENTOR, IF ANY

Inventor's Name ⇨ Inventor: Takuo ODA Date: _____

Inventor's Signature ⇨ Signature: _____

ESKE-DECLASSIGN\ (09-12)

Attorney Docket No. 4898-0531PUS1

BIRCH, STEWART, KOLASCH & BIRCH, LLP

P.O. Box 747 • Falls Church, Virginia 22040-0747

Telephone: (703) 205-8000 • Facsimile: (703) 205-8050 • Email: mailroom@bskb.com

**DECLARATION AND ASSIGNMENT
FOR PATENT AND DESIGN APPLICATIONS**

UNITED STATES PATENT RIGHTS, OR
UNITED STATES PLUS ALL FOREIGN PATENT RIGHTS

Title of Invention ⇨ **HEAT EXCHANGER CORE AND HEAT EXCHANGER**

As a below named inventor (hereinafter designated as the undersigned), I hereby declare that:

This declaration is directed to the application attached hereto.

Application not Attached ⇨ If the application is not attached hereto, the application is as identified by the attorney docket number as set forth above and/or the following:

Enter Appln. No. ⇨ United States Application Number or PCT International Appln. No. PCT/JP2021/006810

Enter Filing Date ⇨ filed on February 24, 2021.

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 information which is material to patentability as defined in Title 37, Code of Federal Regulations § 1.56.

WHEREAS, the undersigned has invented certain new and useful improvements described in the application identified.

Insert Name of Assignee ⇨ WHEREAS, MITSUBISHI HEAVY INDUSTRIES, LTD.

Insert Address of Assignee ⇨ of 2-3, Marunouchi 3-Chome, Chiyoda-ku, Tokyo, 100-8332, Japan,

its heirs, successors, legal representatives and assigns (hereinafter designated as the Assignee) is desirous of acquiring the entire right, title and interest in and to said invention and in and to any Letters Patent(s) that may be granted therefor in the United States of America and

Check Box if Appropriate ⇨ **in any foreign countries.**

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, the undersigned has sold, assigned and transferred, and by these presents does (do) sell, assign and transfer unto said Assignee the full and exclusive right to the said invention in the United States of America, its territories, dependencies and possessions and the entire right, title and interest in and to any and all Letters Patent(s) which may be granted therefor in the United States of America, its territories, dependencies and possessions, and if the box above is designated, in any and all foreign countries; and to any and all divisions, reissues, continuations, conversions and extensions thereof for the full term or terms for which the same may be granted.

Attorney Docket No. 4898-0531PUS1

The undersigned agrees to execute all papers necessary in connection with this application and any continuing, divisional, conversion or reissue applications thereof and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.

The undersigned agrees to execute all papers necessary in connection with any interference which may be declared concerning this application or continuation, division, conversion or reissue thereof or Letters Patent(s) or reissue patent issued thereon and to cooperate with the Assignee in every way possible in obtaining and producing evidence and proceeding with such interference.

The undersigned agrees to execute all papers and documents and to perform any act which may be necessary in connection with claims or provisions of the International Convention for the Protection of Industrial Property or similar agreements.

The undersigned agrees to perform all affirmative acts which may be necessary to obtain a grant of (a) valid United States of America patent(s) or a grant of (a) valid United States of America and any foreign patent(s) to the Assignee and to vest all rights therein hereby conveyed to said Assignee as fully and entirely as the same would have been held by the undersigned if this Assignment and sale had not been made.

The undersigned hereby authorizes and requests the Patent and Trademark Office Officials in the United States of America and in any foreign countries to issue any and all Letters Patent(s) resulting from said application or any continuing, divisional conversion or reissue applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has the full right to convey the entire interest herein assigned, and that he has not executed, and will not execute, any agreement in conflict herewith.

The undersigned hereby grants the law firm of Birch, Stewart, Kolasch & Birch, LLP the power to insert any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office.

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.

The undersigned hereby acknowledges 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.

In witness whereof, executed by the undersigned on the date opposite the undersigned name.

LEGAL NAME OF INVENTOR

Inventor's Name ⇒ Inventor: Shunsaku EGUCHI Date: _____

Inventor's Signature ⇒ Signature: _____

An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form. Use a separate form for each inventor; or check the box below and complete the attached page(s) to list additional inventors.

Additional inventors are being named on the 1 supplemental sheet(s) attached hereto.

Attorney Docket No. 4898-0531PUS1

**SUPPLEMENTAL SHEET FOR
DECLARATION AND ASSIGNMENT**

ADDITIONAL INVENTOR(S)
Supplemental Sheet Page 1 of 1

LEGAL NAME OF JOINT INVENTOR, IF ANY

Inventor's Name ⇨ Inventor: Minemasa OMURA Date: _____

Inventor's Signature ⇨ Signature: _____

LEGAL NAME OF JOINT INVENTOR, IF ANY

Inventor's Name ⇨ Inventor: Yoichi UEFUJI Date: _____

Inventor's Signature ⇨ Signature: _____

LEGAL NAME OF JOINT INVENTOR, IF ANY

Inventor's Name ⇨ Inventor: Hiroyuki NAKAHARAI Date: July 28, 2022

Inventor's Signature ⇨ Signature: Hiroyuki Nakaharai

LEGAL NAME OF JOINT INVENTOR, IF ANY

Inventor's Name ⇨ Inventor: Koichi TANIMOTO Date: _____

Inventor's Signature ⇨ Signature: _____

LEGAL NAME OF JOINT INVENTOR, IF ANY

Inventor's Name ⇨ Inventor: Masaya HATANAKA Date: _____

Inventor's Signature ⇨ Signature: _____

LEGAL NAME OF JOINT INVENTOR, IF ANY

Inventor's Name ⇨ Inventor: Nobuhide HARA Date: _____

Inventor's Signature ⇨ Signature: _____

LEGAL NAME OF JOINT INVENTOR, IF ANY

Inventor's Name ⇨ Inventor: Takuo ODA Date: _____

Inventor's Signature ⇨ Signature: _____

ESKB-DECASSIGN\ (09-12)

Attorney Docket No. 4898-0531PUS1

BIRCH, STEWART, KOLASCH & BIRCH, LLP
P.O. Box 747 • Falls Church, Virginia 22040-0747
Telephone: (703) 205-8000 • Facsimile: (703) 205-8050 • Email: mailroom@bskb.com

**DECLARATION AND ASSIGNMENT
FOR PATENT AND DESIGN APPLICATIONS**

UNITED STATES PATENT RIGHTS, OR
UNITED STATES PLUS ALL FOREIGN PATENT RIGHTS

Title of Invention ⇨ HEAT EXCHANGER CORE AND HEAT EXCHANGER

As a below named inventor (hereinafter designated as the undersigned), I hereby declare that:

This declaration is directed to the application attached hereto.

Application not Attached ⇨ If the application is not attached hereto, the application is as identified by the attorney docket number as set forth above and/or the following:

Enter Appln. No. ⇨ United States Application Number or PCT International Appln. No. PCT/JP2021/006810

Enter Filing Date ⇨ filed on February 24, 2021.

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 information which is material to patentability as defined in Title 37, Code of Federal Regulations § 1.56.

WHEREAS, the undersigned has invented certain new and useful improvements described in the application identified.

Insert Name of Assignee ⇨ WHEREAS, MITSUBISHI HEAVY INDUSTRIES, LTD.

Insert Address of Assignee ⇨ of 2-3, Marunouchi 3-Chome, Chiyoda-ku, Tokyo, 100-8332, Japan,

its heirs, successors, legal representatives and assigns (hereinafter designated as the Assignee) is desirous of acquiring the entire right, title and interest in and to said invention and in and to any Letters Patent(s) that may be granted therefor in the United States of America and

Check Box if Appropriate ⇨ in any foreign countries.

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, the undersigned has sold, assigned and transferred, and by these presents does (do) sell, assign and transfer unto said Assignee the full and exclusive right to the said invention in the United States of America, its territories, dependencies and possessions and the entire right, title and interest in and to any and all Letters Patent(s) which may be granted therefor in the United States of America, its territories, dependencies and possessions, and if the box above is designated, in any and all foreign countries; and to any and all divisions, reissues, continuations, conversions and extensions thereof for the full term or terms for which the same may be granted.

The undersigned agrees to execute all papers necessary in connection with this application and any continuing, divisional, conversion or reissue applications thereof and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.

The undersigned agrees to execute all papers necessary in connection with any interference which may be declared concerning this application or continuation, division, conversion or reissue thereof or Letters Patent(s) or reissue patent issued thereon and to cooperate with the Assignee in every way possible in obtaining and producing evidence and proceeding with such interference.

The undersigned agrees to execute all papers and documents and to perform any act which may be necessary in connection with claims or provisions of the International Convention for the Protection of Industrial Property or similar agreements.

The undersigned agrees to perform all affirmative acts which may be necessary to obtain a grant of (a) valid United States of America patent(s) or a grant of (a) valid United States of America and any foreign patent(s) to the Assignee and to vest all rights therein hereby conveyed to said Assignee as fully and entirely as the same would have been held by the undersigned if this Assignment and sale had not been made.

The undersigned hereby authorizes and requests the Patent and Trademark Office Officials in the United States of America and in any foreign countries to issue any and all Letters Patent(s) resulting from said application or any continuing, divisional conversion or reissue applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has the full right to convey the entire interest herein assigned, and that he has not executed, and will not execute, any agreement in conflict herewith.

The undersigned hereby grants the law firm of Birch, Stewart, Kolasch & Birch, LLP the power to insert any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office.

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.

The undersigned hereby acknowledges 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.

In witness whereof, executed by the undersigned on the date opposite the undersigned name.

LEGAL NAME OF INVENTOR

Inventor's Name ⇒ Inventor: Shunsaku EGUCHI Date: _____

Inventor's Signature ⇒ Signature: _____

An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form. Use a separate form for each inventor; or check the box below and complete the attached page(s) to list additional inventors.

Additional inventors are being named on the 1 supplemental sheet(s) attached hereto.

Attorney Docket No. 4898-0531PUS1

**SUPPLEMENTAL SHEET FOR
DECLARATION AND ASSIGNMENT**

ADDITIONAL INVENTOR(S)
Supplemental Sheet Page 1 of 1

LEGAL NAME OF JOINT INVENTOR, IF ANY

Inventor's Name ⇨ Inventor: Minemasa OMURA Date: _____

Inventor's Signature ⇨ Signature: _____

LEGAL NAME OF JOINT INVENTOR, IF ANY

Inventor's Name ⇨ Inventor: Yoichi UEFUJI Date: _____

Inventor's Signature ⇨ Signature: _____

LEGAL NAME OF JOINT INVENTOR, IF ANY

Inventor's Name ⇨ Inventor: Hiroyuki NAKAHARAI Date: _____

Inventor's Signature ⇨ Signature: _____

LEGAL NAME OF JOINT INVENTOR, IF ANY

Inventor's Name ⇨ Inventor: Koichi TANIMOTO Date: July 28, 2022

Inventor's Signature ⇨ Signature: *Koichi Tanimoto*

LEGAL NAME OF JOINT INVENTOR, IF ANY

Inventor's Name ⇨ Inventor: Masaya HATANAKA Date: _____

Inventor's Signature ⇨ Signature: _____

LEGAL NAME OF JOINT INVENTOR, IF ANY

Inventor's Name ⇨ Inventor: Nobuhide HARA Date: July 28, 2022

Inventor's Signature ⇨ Signature: *Nobuhide Hara*

LEGAL NAME OF JOINT INVENTOR, IF ANY

Inventor's Name ⇨ Inventor: Takuo ODA Date: July 28, 2022

Inventor's Signature ⇨ Signature: *Takuo Oda*

ESKP-DECASSIGN\ (09-12)

BIRCH, STEWART, KOLASCH & BIRCH, LLP
P.O. Box 747 • Falls Church, Virginia 22040-0747
Telephone: (703) 205-8000 • Facsimile: (703) 205-8050 • Email: mailroom@bskb.com

**DECLARATION AND ASSIGNMENT
FOR PATENT AND DESIGN APPLICATIONS**

UNITED STATES PATENT RIGHTS, OR
UNITED STATES PLUS ALL FOREIGN PATENT RIGHTS

Title of Invention ⇨ HEAT EXCHANGER CORE AND HEAT EXCHANGER

As a below named inventor (hereinafter designated as the undersigned), I hereby declare that:

This declaration is directed to the application attached hereto.

Application not Attached ⇨ If the application is not attached hereto, the application is as identified by the attorney docket number as set forth above and/or the following:

Enter Appln. No. ⇨ United States Application Number or PCT International Appln. No. PCT/JP2021/006810

Enter Filing Date ⇨ filed on February 24, 2021.

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 information which is material to patentability as defined in Title 37, Code of Federal Regulations § 1.56.

WHEREAS, the undersigned has invented certain new and useful improvements described in the application identified.

Insert Name of Assignee ⇨ WHEREAS, MITSUBISHI HEAVY INDUSTRIES, LTD.

Insert Address of Assignee ⇨ of 2-3, Marunouchi 3-Chome, Chiyoda-ku, Tokyo, 100-8332, Japan,

its heirs, successors, legal representatives and assigns (hereinafter designated as the Assignee) is desirous of acquiring the entire right, title and interest in and to said invention and in and to any Letters Patent(s) that may be granted therefor in the United States of America and

Check Box if Appropriate ⇨ in any foreign countries.

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, the undersigned has sold, assigned and transferred, and by these presents does (do) sell, assign and transfer unto said Assignee the full and exclusive right to the said invention in the United States of America, its territories, dependencies and possessions and the entire right, title and interest in and to any and all Letters Patent(s) which may be granted therefor in the United States of America, its territories, dependencies and possessions, and if the box above is designated, in any and all foreign countries; and to any and all divisions, reissues, continuations, conversions and extensions thereof for the full term or terms for which the same may be granted.

The undersigned agrees to execute all papers necessary in connection with this application and any continuing, divisional, conversion or reissue applications thereof and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.

The undersigned agrees to execute all papers necessary in connection with any interference which may be declared concerning this application or continuation, division, conversion or reissue thereof or Letters Patent(s) or reissue patent issued thereon and to cooperate with the Assignee in every way possible in obtaining and producing evidence and proceeding with such interference.

The undersigned agrees to execute all papers and documents and to perform any act which may be necessary in connection with claims or provisions of the International Convention for the Protection of Industrial Property or similar agreements.

The undersigned agrees to perform all affirmative acts which may be necessary to obtain a grant of (a) valid United States of America patent(s) or a grant of (a) valid United States of America and any foreign patent(s) to the Assignee and to vest all rights therein hereby conveyed to said Assignee as fully and entirely as the same would have been held by the undersigned if this Assignment and sale had not been made.

The undersigned hereby authorizes and requests the Patent and Trademark Office Officials in the United States of America and in any foreign countries to issue any and all Letters Patent(s) resulting from said application or any continuing, divisional conversion or reissue applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has the full right to convey the entire interest herein assigned, and that he has not executed, and will not execute, any agreement in conflict herewith.

The undersigned hereby grants the law firm of Birch, Stewart, Kolasch & Birch, LLP the power to insert any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office.

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.

The undersigned hereby acknowledges 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.

In witness whereof, executed by the undersigned on the date opposite the undersigned name.

LEGAL NAME OF INVENTOR

Inventor's Name ⇒ Inventor: Shunsaku EGUCHI Date: _____

Inventor's Signature ⇒ Signature: _____

An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form. Use a separate form for each inventor; or check the box below and complete the attached page(s) to list additional inventors.

Additional inventors are being named on the 1 supplemental sheet(s) attached hereto.

Attorney Docket No. 4898-0531PUS1

**SUPPLEMENTAL SHEET FOR
DECLARATION AND ASSIGNMENT**

ADDITIONAL INVENTOR(S)
Supplemental Sheet Page 1 of 1

LEGAL NAME OF JOINT INVENTOR, IF ANY

Inventor's Name ⇨ Inventor: Minemasa OMURA Date: _____

Inventor's Signature ⇨ Signature: _____

LEGAL NAME OF JOINT INVENTOR, IF ANY

Inventor's Name ⇨ Inventor: Yoichi UEFUJI Date: _____

Inventor's Signature ⇨ Signature: _____

LEGAL NAME OF JOINT INVENTOR, IF ANY

Inventor's Name ⇨ Inventor: Hiroyuki NAKAHARAI Date: _____

Inventor's Signature ⇨ Signature: _____

LEGAL NAME OF JOINT INVENTOR, IF ANY

Inventor's Name ⇨ Inventor: Koichi TANIMOTO Date: _____

Inventor's Signature ⇨ Signature: _____

LEGAL NAME OF JOINT INVENTOR, IF ANY

Inventor's Name ⇨ Inventor: Masaya HATANAKA Date: July 28, 2022

Inventor's Signature ⇨ Signature: Masaya Hatanaka

LEGAL NAME OF JOINT INVENTOR, IF ANY

Inventor's Name ⇨ Inventor: Nobuhide HARA Date: _____

Inventor's Signature ⇨ Signature: _____

LEGAL NAME OF JOINT INVENTOR, IF ANY

Inventor's Name ⇨ Inventor: Takuo ODA Date: _____

Inventor's Signature ⇨ Signature: _____

BSKB-DECLASSIGN\ (02-12)