508176078 10/16/2023

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 EPAS ID: PAT8223261 Stylesheet Version v1.2

 SUBMISSION TYPE:
 NEW ASSIGNMENT

 NATURE OF CONVEYANCE:
 ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
MANABU IWAKAWA	10/02/2023
TAKANORI OKUMURA	10/02/2023
HIROSHI UMEDA	10/02/2023
ERI KURIHARA	10/02/2023
YUKI SOMA	10/02/2023

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:	17597296

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.

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

Address Line 2: SUITE 300

Address Line 4: TYSONS, VIRGINIA 22102

Tatal Attackments 7	
DATE SIGNED:	10/16/2023
SIGNATURE:	/Donald R. Studebaker/
NAME OF SUBMITTER:	DONALD R. STUDEBAKER
ATTORNEY DOCKET NUMBER:	005750-000054

Total Attachments: 7

PATENT REEL: 065241 FRAME: 0271

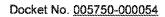


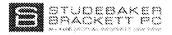
PATENT REEL: 065241 FRAME: 0272



ASSIGNMENT OF APPLICATION FOR UNITED STATES PATENT

FOR UNITED STATES PATENT			
Title of Invention	LIQUID CRYSTAL DISPLAY DEVICE AND PRO CRYSTAL DISPLAY DEVICE	DDUCTION METHOD FOR LIQUID	
As the below named inventor, I hereby declare that this assignment is effective as of July 4, 2019: This assignment is directed to: The attached application, or PCT/JP2019/026588 filed on July 4, 2019, and			
	U.S. patent application number 17/597,296 (REAS the undersigned, also referred to hereinafter and relating to the above identified application.		
JAPAN, here application,	REAS <u>Mitsubishi Electric Corporation</u> of <u>7-3. Marun</u> reinafter referred to as the assignee, is desirous of acquirincluding any and all divisions and continuations thereon may be granted therefor, including any and all renewal	ng the entire right, title and interest in and to said of, and in and to said invention and any and all	
NOW, that for and in consideration of One Dollar (\$1.00), and other good and valuable consideration paid by said assignee to me, the receipt of which is hereby acknowledged, I hereby assign, sell and transfer 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 for the United States of America and its territories and for all foreign countries, and any and all patents which may be granted therefor, in the United States of America and its territories and in all foreign countries, 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 I might or could have held and enjoyed the same, if this assignment had not been made.			
AND I hereby agree 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 I authorize and request the Commissioner of Patents and Trademarks in the United States and Patent Office officials of any and all foreign countries, to issue any and all Letters 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 any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office for recordation of this document.			
LEGAL NA	AME OF INVENTOR		
Inventor:	Manabu IWAKAWA	Date: October 2, 2023	
Signature:	Manabu IWAKAWA		





LEGAL NAME OF INVENTOR	
Inventor: Takanori OKUMURA	Date: October 2, 2023
Signature: Takanori OKUMURA	······································
LEGAL NAME OF INVENTOR	
Inventor: Hiroshi UMEDA	Date:
Signature:	
LEGAL NAME OF INVENTOR	
Inventor: Eri KURIHARA	Date:
Signature:	
LEGAL NAME OF INVENTOR	
Inventor: Yuki SOMA	Date:
Signature:	
Note: An application data sheet /PTO/SP/44 or equivalent), including	againg the online invention entity, must accompany

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.



ASSIGNMENT OF APPLICATION FOR UNITED STATES PATENT

FOR UNITED STATES PATENT			
Title of Invention	LIQUID CRYSTAL DISPLAY DEVICE AND PRO CRYSTAL DISPLAY DEVICE	DDUCTION METHOD FOR LIQUID	
As the below named inventor, I hereby declare that this assignment is effective as of July 4, 2019: This assignment is directed to: The attached application, or PCT/JP2019/026588 filed on July 4, 2019, and			
	U.S. patent application number 17/597,296 (REAS the undersigned, also referred to hereinafter and relating to the above identified application.		
JAPAN, here application,	REAS <u>Mitsubishi Electric Corporation</u> of <u>7-3. Marun</u> reinafter referred to as the assignee, is desirous of acquirincluding any and all divisions and continuations thereon may be granted therefor, including any and all renewal	ng the entire right, title and interest in and to said of, and in and to said invention and any and all	
NOW, that for and in consideration of One Dollar (\$1.00), and other good and valuable consideration paid by said assignee to me, the receipt of which is hereby acknowledged, I hereby assign, sell and transfer 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 for the United States of America and its territories and for all foreign countries, and any and all patents which may be granted therefor, in the United States of America and its territories and in all foreign countries, 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 I might or could have held and enjoyed the same, if this assignment had not been made.			
AND I hereby agree 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 I authorize and request the Commissioner of Patents and Trademarks in the United States and Patent Office officials of any and all foreign countries, to issue any and all Letters 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 any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office for recordation of this document.			
LEGAL NA	AME OF INVENTOR		
Inventor:	Manabu IWAKAWA	Date: October 2, 2023	
Signature:	Manabu IWAKAWA		

1



LEGAL NAME OF INVENTOR	
Inventor: Takanori OKUMURA	Date:
Signature:	
LEGAL NAME OF INVENTOR	
Inventor: Hiroshi UMEDA	Date: October 2, 2023
Signature: <u>Pliroshi UMEPA</u>	,
LEGAL NAME OF INVENTOR	
Inventor: Eri KURIHARA	Date: October 2, 2023
Signature: Eri EURIHARA	
LEGAL NAME OF INVENTOR	
Inventor: Yuki SOMA	Date:
Signature:	·
Note: An application data sheet (PTO/SB/14 or equivalent), including form or must have been previously filed. Use an additional P	

2

Doc code: Oath

Document Description: Oath or declaration filed

PTO/AIA/02 (06-15)

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SUBSTITUTE STATEMENT IN LIEU OF AN OATH OR DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (35 U.S.C. 115(d) AND 37 CFR 1.64)

Title of Invention	LIQUID CRYSTAL DISPLAY DEVICE AND PRODUCTION METHOD FOR LIQUID CRYSTAL DISPLAY DEVICE			
This statement is directed to: The attached application, OR United States application or PCT international application number PCT/JP2019/026588 filed on 2019-07-04 LEGAL NAME of inventor to whom this substitute statement applies: (E.g., Given Name (first and middle (if any)) and Family Name or Surname) Yuki SOMA Residence (except for a deceased or legally incapacitated inventor): City Kumamoto State Country Mailing Address (except for a deceased or legally incapacitated inventor): c/o Melco Display Technology Incorporated				
_{city} Kum	namoto	State	_{Zip} 861-1203	Country JP
I believe the above-named inventor or joint inventor to be the original inventor or an original joint inventor of a claimed invention in the application. The above-identified application was made or authorized to be made by me. I hereby acknowledge that any willful false statement made in this statement is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.				
Relationship to the inventor to whom this substitute statement applies: Legal Representative (for deceased or legally incapacitated inventor only), Assignee, Person to whom the inventor is under an obligation to assign, Person who otherwise shows a sufficient proprietary interest in the matter (petition under 37 CFR 1.46 is required), or Joint Inventor.				

[Page 1 of 2]

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SUBSTITUTE STATEMENT

Circumstances permitting execution of this su	bstitute statement:			
Inventor is deceased,				
Inventor is under legal incapacity,				
Inventor cannot be found or reached	Inventor cannot be found or reached after diligent effort, or			
Inventor has refused to execute the	oath or declaration under 37 CF	R 1.63.	•	
If there are joint inventors, please check the a	appropriate box below:			
An application data sheet under 37 of or is currently submitted.	An application data sheet under 37 CFR 1.76 (PTO/AIA/14 or equivalent) naming the entire inventive entity has been			
OR				
Statement Supplemental Sheet (PTC	An application data sheet under 37 CFR 1.76 (PTO/AIA/14 or equivalent) has not been submitted. Thus, a Substitute Statement Supplemental Sheet (PTO/AIA/11 or equivalent) naming the entire inventive entity and providing inventor information is attached. See 37 CFR 1.64(b).			
	WARNING:			
Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identify theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.				
PERSON EXECUTING THIS SUBSTITUTE ST	ATEMENT:			
Name: Shigeo Kishimoto Date (Optional): 10/2/2023				
Signature: 1977 E 1/2				
APPLICANT NAME AND TITLE OF PERSON	EXECUTING THIS SUBSTITU	TE STATEMENT:		
If the applicant is a juristic entity, list the applica	ant name and the title of the sig	ner:		
Mitsubishi Electric Co Applicant Name:	rporation			
Title of Person Executing This Substitute Statement: General Manager, Patent Administration Department				
The signer, whose title is supplied above, is authorized to act on behalf of the applicant. Residence of the signer (unless provided in an application data sheet, PTO/AIA/14 or equivalent):				
_{city} Tokyo	State	_{Country} JP		
Mailing Address of the signer (unless provided in an application data sheet, PTO/AIA/14 or equivalent)				
7-3, Marunouchi 2-chome, Chiyoda-ku				
_{city} Tokyo	State	100-8310	Country JP	
	State ach inventor who is deceased.	Zip legally incapacitated.	Country annot be found or reached	
Note: Use an additional PTO/AIA/02 form for each inventor who is deceased, legally incapacitated, cannot be found or reached after diligent effort, or has refused to execute the oath or declaration under 37 CFR 1.63.				

[Page 2 of 2]

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PATENT REEL: 065241 FRAME: 0279

RECORDED: 10/16/2023