505665327 09/11/2019

PATENT ASSIGNMENT COVER SHEET

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| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|---------------|----------------|
| Jihyun IM | 03/14/2018 |
| Dongjeong KIM | 03/14/2018 |
| Hyunbum KIM | 03/14/2018 |
| Jaehoon SHIN | 03/14/2018 |

RECEIVING PARTY DATA

| Name: | LG ELECTRONICS INC. |
|-----------------|-----------------------------------|
| Street Address: | 128, YEOUI-DAERO, YEONGDEUNGPO-GU |
| City: | SEOUL |
| State/Country: | KOREA, REPUBLIC OF |
| Postal Code: | 07336 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 15968281 |

CORRESPONDENCE DATA

Fax Number: (877)769-7945

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: +1 202-626-7708

Email: stadnick@fr.com, apsi@fr.com

Correspondent Name: MINSEUNG AHN

Address Line 1: FISH & RICHARDSON P.C.

Address Line 2: P.O.BOX 1022

Address Line 4: MINNEAPOLIS, MINNESOTA 55440-1022

| ATTORNEY DOCKET NUMBER: | 19819-0816001 |
|-------------------------|--------------------|
| NAME OF SUBMITTER: | SHANNON STADNICK |
| SIGNATURE: | /Shannon Stadnick/ |
| DATE SIGNED: | 09/11/2019 |

Total Attachments: 4

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PATENT REEL: 050335 FRAME: 0690 source=Executed Assignment#page3.tif
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PATENT REEL: 050335 FRAME: 0691 and application number above.

ASSIGNMENT

For valuable consideration, the receipt of which we acknowledge, and intending to be bound legally, we, <u>Jihvun IM</u>; <u>Dongjeong KIM</u>; <u>Hyunbum KIM</u>, and <u>Jaehoon SHIN</u>, each individually assign to <u>LG Electronics Inc.</u>, a corporation formed under the laws of <u>Republic of Korea</u>, and having a principal place of business at <u>128</u>, <u>Yeoui-daero</u>, <u>Yeongdeungpo-gu</u>, <u>Seoul 07336 Republic of Korea</u>, and its successors, transferees, and assignees (collectively the "Assignee"), all of our individual and joint right, title, and interest throughout the world in the subject matter (the "Subject Matter") of a patent application that names us as inventors, is titled "<u>REFRIGERATOR</u>," and was filed in the United States Patent and Trademark Office on <u>May 1</u>, 2018, as application <u>15/968,281</u> (the "Application"). We authorize the insertion of the filing date

This Assignment assigns (a) the Application and all other applications that may be made for, and all patents, utility models, design registrations, and other rights of exclusion and inventors' certificates for, any of the Subject Matter (collectively the "Applications and Granted Rights") in every country or region, (b) the right to claim priority based on and the benefit of the filing date of any of the Applications and Granted Rights under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other applicable treaties or conventions, and (c) the right to pursue, collect, and retain in the Assignee's name or otherwise, damages and any other remedies arising from any past, present, or future infringement of the Subject Matter, the Applications and Granted Rights, and any other rights assigned by this Assignment.

We authorize the Assignee to apply for and pursue protection for any or all of the Subject Matter, the Applications and Granted Rights, and any other rights assigned by this Assignment in all countries, regions, and territories of the world, in our names or in the Assignee's name.

We represent and warrant that we have the right and power to make this Assignment and that we have not made and will not make any other assignment that conflicts with this Assignment.

We will communicate to the Assignee (or at the request of the Assignee to other parties) all known facts in any form relating to the Subject Matter, will execute and provide all oaths and declarations, statements, testimony, assignments, powers of attorney, applications, and documents, and will perform all other lawful acts necessary or desirable to secure fully to the Assignee the rights, titles, and interests assigned by this Assignment.

| Jihyund M | Date: March 14, 2018 | | |
|--|----------------------|--|--|
| Dongjeong KIM | Date: March 14, 2018 | | |
| Jhme J Hyunbum KIM | Date: March 14, 2018 | | |
| Jachoon SHIN | Date: March 14, 2018 | | |
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| | | | |
| The Assignee hereby acknowledges and accepts the foregoing assignment. | | | |
| Assignee: LG ELECTRONICS INC. | | | |
| Signature: | Dafe: | | |
| Name: Chihyoung KIM | | | |

/ OPP-AZ-2017-0030-US-00/HA; 17REF040US0

Attorney Docket No.:

Title: Patent Manager

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Assignment Page 2 of 2

ASSIGNMENT

| For valuable consideration, the receipt of which we acknowledge, and intending to be bound | | | |
|---|--|--|--|
| legally, we, Jihvun IM; Dongjeong KIM; Hyunbum KIM, and Jaehoon SHIN, each individually | | | |
| assign to LG Electronics Inc., a corporation formed under the laws of Republic of Korea, and having | | | |
| a principal place of business at 128, Yeoui-daero, Yeongdeungpo-gu, Seoul 07336 Republic of Korea, | | | |
| and its successors, transferees, and assignees (collectively the "Assignee"), all of our individual and | | | |
| joint right, title, and interest throughout the world in the subject matter (the "Subject Matter") of a | | | |
| patent application that names us as inventors, is titled " <u>REFRIGERATOR</u> | | | |
| ," and | | | |
| was filed in the United States Patent and Trademark Office on, as | | | |
| application (the "Application"). We authorize the insertion of the filing date | | | |
| and application number above | | | |

This Assignment assigns (a) the Application and all other applications that may be made for, and all patents, utility models, design registrations, and other rights of exclusion and inventors' certificates for, any of the Subject Matter (collectively the "Applications and Granted Rights") in every country or region, (b) the right to claim priority based on and the benefit of the filing date of any of the Applications and Granted Rights under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other applicable treaties or conventions, and (c) the right to pursue, collect, and retain in the Assignee's name or otherwise, damages and any other remedies arising from any past, present, or future infringement of the Subject Matter, the Applications and Granted Rights, and any other rights assigned by this Assignment.

We authorize the Assignee to apply for and pursue protection for any or all of the Subject Matter, the Applications and Granted Rights, and any other rights assigned by this Assignment in all countries, regions, and territories of the world, in our names or in the Assignee's name.

We represent and warrant that we have the right and power to make this Assignment and that we have not made and will not make any other assignment that conflicts with this Assignment.

We will communicate to the Assignee (or at the request of the Assignee to other parties) all known facts in any form relating to the Subject Matter, will execute and provide all oaths and declarations, statements, testimony, assignments, powers of attorney, applications, and documents, and will perform all other lawful acts necessary or desirable to secure fully to the Assignee the rights, titles, and interests assigned by this Assignment.

| ** | ž. | |
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| | Date: | |
| Jihyun LIM | | |
| ee | Date: | |
| Dongjeong KIM | | |
| Hyunbum KIM | Date: | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |
| nyunoum ixivi | C | |
| Jaehoon SHIN | Date: | |
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| | <i>}</i> | |
| The Assignee hereby acknowled | lges and accepts the foregoing assignment. | |
| Assignee: LG ELECTRONICS I | | |
| Signature: 2 APR. | Date: <u>N</u> | March 14, 2018 |
| Name: Chihyoung KIM | * | |
| Title: Patent Manager | | <u></u> |
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/ OPP-AZ-2017-0030-US-00/HA; 17REF040US0

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Attorney Docket No.: