

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
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EPAS ID: PAT4228084

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| <b>SUBMISSION TYPE:</b>                                                                                                                                                                         | NEW ASSIGNMENT                    |
| <b>NATURE OF CONVEYANCE:</b>                                                                                                                                                                    | ASSIGNMENT                        |
| <b>CONVEYING PARTY DATA</b>                                                                                                                                                                     |                                   |
| <b>Name</b>                                                                                                                                                                                     | <b>Execution Date</b>             |
| Philjae HWANG                                                                                                                                                                                   | 01/13/2017                        |
| Mantae HWANG                                                                                                                                                                                    | 01/13/2017                        |
| Jungbae HWANG                                                                                                                                                                                   | 01/13/2017                        |
| <b>RECEIVING PARTY DATA</b>                                                                                                                                                                     |                                   |
| <b>Name:</b>                                                                                                                                                                                    | LG ELECTRONICS INC.               |
| <b>Street Address:</b>                                                                                                                                                                          | 128, YEQUI-DAERO, YEONGDEUNGPO-GU |
| <b>City:</b>                                                                                                                                                                                    | SEOUL                             |
| <b>State/Country:</b>                                                                                                                                                                           | KOREA, REPUBLIC OF                |
| <b>Postal Code:</b>                                                                                                                                                                             | 07336                             |
| <b>PROPERTY NUMBERS Total: 1</b>                                                                                                                                                                |                                   |
| <b>Property Type</b>                                                                                                                                                                            | <b>Number</b>                     |
| Application Number:                                                                                                                                                                             | 15405589                          |
| <b>CORRESPONDENCE DATA</b>                                                                                                                                                                      |                                   |
| <b>Fax Number:</b>                                                                                                                                                                              | (877)769-7945                     |
| <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> |                                   |
| <b>Phone:</b>                                                                                                                                                                                   | +1-650-839-5118                   |
| <b>Email:</b>                                                                                                                                                                                   | apsi@fr.com                       |
| <b>Correspondent Name:</b>                                                                                                                                                                      | HONG J. HA                        |
| <b>Address Line 1:</b>                                                                                                                                                                          | FISH & RICHARDSON P.C.            |
| <b>Address Line 2:</b>                                                                                                                                                                          | P.O.BOX 1022                      |
| <b>Address Line 4:</b>                                                                                                                                                                          | MINNEAPOLIS, MINNESOTA 55440-1022 |
| <b>ATTORNEY DOCKET NUMBER:</b>                                                                                                                                                                  | 20519-0270001                     |
| <b>NAME OF SUBMITTER:</b>                                                                                                                                                                       | SHARON M. ALLEN                   |
| <b>SIGNATURE:</b>                                                                                                                                                                               | /Sharon M. Allen/                 |
| <b>DATE SIGNED:</b>                                                                                                                                                                             | 01/17/2017                        |
| <b>Total Attachments: 2</b>                                                                                                                                                                     |                                   |
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| source=20519-0270001 Assgn #page2.tif                                                                                                                                                           |                                   |

ASSIGNMENT

For valuable consideration, the receipt of which we acknowledge, and intending to be bound legally, we, Philjae HWANG, Mantae HWANG, and Jungbae HWANG, 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 "WATER CLEANING DEVICE AND CLEANER HAVING THE SAME," and was filed in the United States Patent and Trademark Office on January 13, 2017, as application 15/405,589 (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.

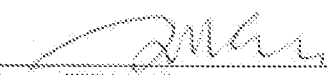
We will communicate to the Assignee (or at the request of the Assignee to other parties) all known facts in any form relating to the Subject Matter, will execute and provide all oaths and declarations, statements, testimony, assignments, powers of attorney, applications, and documents, and will perform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

Attorney Docket No.: 20519-0270001 / 16FLWV002US01/PO16-00161US

  
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Philjae HWANG

Date: 19.01.13

  
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Mantae HWANG

Date: 19.01.13

  
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Jungbae HWANG

Date: 19.01.13

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