PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5705744

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

CONVEYING PARTY DATA

| Name | Execution Date |
|------------------|----------------|
| JAE HO LIM | 08/26/2019 |
| SUNG YONG KANG | 08/26/2019 |
| KYOUNG MIN KANG | 08/26/2019 |
| HEE-JUNG LEE | 08/27/2019 |
| MIN GYUNG KIM | 08/26/2019 |
| CHANG-YOUNG PARK | 08/26/2019 |
| JUN HO CHOI | 08/26/2019 |
| JAE HAN SONG | 08/26/2019 |
| YU JIN GO | 08/26/2019 |

RECEIVING PARTY DATA

| Name: | LG HAUSYS, LTD. | |
|-------------------|------------------------------|--|
| Street Address: | ONEIFC, 10, GUKJEGEUMYUNG-RO | |
| Internal Address: | YEONGDEUNGPO-GU | |
| City: | SEOUL | |
| State/Country: | KOREA, REPUBLIC OF | |
| Postal Code: | 07326 | |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 16491368 |

CORRESPONDENCE DATA

Fax Number: (908)654-7866

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: (908) 518-6320

Email: assignment@lernerdavid.com

LERNER, DAVID, LITTENBERG, KRUMHOLZ & MENTLIK, LLP Correspondent Name:

Address Line 1: 600 SOUTH AVENUE WEST

Address Line 4: WESTFIELD, NEW JERSEY 07090

ATTORNEY DOCKET NUMBER: LGHSYS 3.3F-005

> **PATENT** REEL: 050294 FRAME: 0232

505658939

| NAME OF SUBMITTER: KATHLEEN REYNOLDS | | |
|---|--|--|
| SIGNATURE: /Kathleen Reynolds/ | | |
| DATE SIGNED: 09/06/2019 | | |
| Total Attachments: 6 | | |
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| source=Declaration and Assignment#page2.tif | | |
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| source=Declaration and Assignment#page4.tif | | |
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PATENT REEL: 050294 FRAME: 0233

| DECLARATIO | ON AND ASSIGNMENT FOR | |
|--|--|---|
| UTILITY OR | DESIGN APPLICATIONS | Attorney Docket Number: |
| Title of Invention | THE | RMOPLASTIC POLYMER PARTICLE |
| As the below This declara is directed to | tion | nated as the undersigned), I/We hereby declare that: |
| [| The attached application, or United States application or PCT int | ernational application number PCT/KR2018/002845 |
| | filed on March 09, 2018 | |
| The above-identifie | d application was made or authorized to | o be made by me/us. |
| I/We believe that i a | am the original inventor or an original jo | int inventor of a claimed invention in the application. |
| We hereby acknow by fine or imprisonn | wledge that any willful false statement of nent of not more than five (5) years, or | nade in this declaration is punishable under 18 U.S.C. 1001 both. |
| WHEREAS, the un listed below) has in | dersigned as a sole inventor (if only or vented certain new and useful improve | ne name is listed below) or as a joint inventor (if plural names are ements in the application identified above. |
| OHER O, TO, GUKIE | G HAUSYS, LTD., (hereinafter referre geumyung-ro; Yeongdeungpo-gu; Sec I interest in the same. | d to as assignee), a corporation of Korea whose mailing address is oul; REPUBLIC OF KOREA 07326 is desirous of acquiring the |
| and interest for the application and all therefor in the Units and patents for said including all claims and the use of its sithe Commissioner or resulting therefor my/our legal represideliver all original, cassignments therefor to the undersigned proceedings in which oaths, and to do ge | united States of America and all other criginal, divisional, continuation, substited States of America and all other could invention claiming priority or benefit of for damages by reason of past infringuccessors, assigns and legal represent of Patents and Trademarks is hereby a more to said assignee herein, as assigneentatives, heirs and assigns do hereby fivisional, continuation, reissue and other to said assignee or its assigns, to corespecting said improvements, whene the any of said applications or patents really everything necessary to aid assigney or patents in all countries, the expensions or patents in all countries. | dollar, the receipt wherof is acknowledged, and other good and sign(s) and set(s) over to said assignee my/our entire right, title of countries in and to said invention and the aforesaid utility patent tute or reissue applications and patents applied for or granted notices, for said invention, including without limitation all applications of the aforesaid utility application pursuant to any law or treaty, and rement with the right to sue for and collect the same for its own use statives, and including the right to claim such priority or benefit and authorized and requested to issue all patents on said improvements are of the entire interest therein; and the undersigned for me/us and or agree and covenant without further remuneration, to execute and mer applications for Letters Patent on said improvements and all minumicate to said assignee or its representatives all facts known over requested, to testify in any interferences or other legal may become involved, to sign all lawful papers, make all rightful signee, its successors, assigns and nominees to obtain patent tenses incident to said applications to be borne and paid by said |
| According to 37 C.F.R contents of the applica material to patentability | . § 1.63(c), "[a] person may not execute an | oath or declaration unless the person has reviewed and understands the the duty to disclose to the Office all information known to the person to be |
| FULL NAME | OF INVENTOR(S) | |
| Inventor one; Signature: | LIM, Jae Ho | Date: Agust 26, 2018 |
| rivis | l inventors or a legal representative are be | ing named on 1 additional form(s) attached hereto. |
| | ETHE WARNINGS ON THE LAST PAGE | |

Page 1 of 2

| \$500 \$1,000 \$50,000, \$1,750 | | | The second secon | _ |
|---|--|--|--|-------------|
| DECLARATION AND ASSIGNMENT FOR UTILITY OR DESIGN APPLICATIONS | | ADDITIONAL INVENTOR(S) Supplemental Sheet | | |
| Inventor two: | KANG, Sung Yong | Date: | Agust 26, 2019 | |
| Inventor three: | : KANG, Kyoung Min | Date: | August 26, 2019 | |
| Inventor four: Signature: | LEE, Hee-Jung | Date: | | |
| Inventor five: Signature: | KIM, Min Gyung 刀 ロフし | Date: | August 26, 2019 | |
| Inventor six: | PARK, Chang-Young | Date: | 2 | |
| Inventor seven Signature: | i: CHOI, Jun Ho | Date:/ | August 26.2019 | |
| Inventor eight: Signature: | SONG, Jae Han Song J.W | Date: | August 26, 2019 | <u>-</u> |
| Inventor nine: | GO, Yu Jin 고유건 | Date:/ | August 26, 2019 | |
| Inventor ten: Signature: | | Date: | N | |
| According to 37 C.F.R. § 1 contents of the application, material to patentability as | WARNING: .63(c), "[a] person may not execute an oath or declara including the claims, and is aware of the duty to discidefined in §1.56." | tion unless the prose to the Office | erson has reviewed and understands the all information known to the person to be | |
| credit card authorization for this type of personal inform personal information from the application is available to to made in the application) or f the application is referen | ioned to avoid submitting personal information in docu- formation such as social security numbers, bank according to the security numbers, bank according to the security numbers, bank according to the security of the USPT of the documents before submitting them to the USPTO, the documents before submitting them to the USPTO, the public after publication of the application (unless a resonance of a patent. Furthermore, the record from a published application or an issued patent (sayment purposes are not retained in the application of | required by the L O, petitioners/ap Petitioner/applica non-publication re an abandoned a | oredit card numbers (other than a check or JSPTO to support a petition or an application. I plicants should consider redacting such ant is advised that the record of a patent equest in compliance with 37 CFR 1.213(a) is application may also be available to the publication may also be available to the publication. | |

| DECLARATIO UTILITY OR | N AND ASSIGNMENT FOR DESIGN APPLICATIONS | Attorney Docket Number: | |
|--|--|---|--|
| Title of invention | Itle of Invention THERMOPLASTIC POLYMER PARTICLE | | |
| As the below named inventor(s) (hereinafter designated as the undersigned), I/We hereby declare that: This declaration is directed to: The attached application, or X United States application or PCT international application number PCT/KR2018/002845 filed on March 09, 2018 | | | |
| | d application was made or authorized to the original inventor or an original ic | to be made by merus. Sint inventor of a claimed invention in the app | olication. |
| I/We hereby acknow | | made in this declaration is punishable under | |
| WHEREAS, the uno | dersigned as a sole inventor (if only ovented certain new and useful improv | ne name is listed below) or as a joint invent rements in the application identified above. | for (if plural names are |
| AND, WHEREAS LG HAUSYS, LTD., (hereinafter referred to as assignee), a corporation of Korea whose mailing address is OneiFC, 10, Gukjegeumyung-ro: Yeongdeungpo-gu; Seoul; REPUBLIC OF KOREA 07326 is desirous of acquiring the entire right, title and interest in the same. | | | |
| NOW, THEREFORE, in consideration of the sum of one dollar, the receipt wherof is acknowledged, and other good and valuable consideration, the undersigned hereby sell(s), assign(s) and set(s) over to said assignee my/our entire right, title and interest for the United States of America and all other countries in and to said invention and the aforesaid utility patent application and all original, divisional, continuation, substitute or reissue applications and patents applied for or granted therefor in the United States of America and all other countries, for said invention, including without limitation all applications and patents for said invention claiming priority or benefit of the aforesaid utility application pursuant to any law or treaty, and including all claims for damages by reason of past infringement with the right to sue for and collect the same for its own use and the use of its successors, assigns and legal representatives, and including the right to claim such priority or benefit and the Commissioner of Patents and Trademarks is hereby authorized and requested to issue all patents on said improvements or resulting therefrom to said assignee herein, as assignee of the entire interest therein; and the undersigned for me/us and my/our legal representatives, heirs and assigns do hereby agree and covenant without further remuneration, to execute and deliver all original, divisional, continuation, reissue and other applications for Letters Patent on said improvements and all assignments thereof to said assignee or its assigns, to communicate to said assignee or its representatives all facts known to the undersigned respecting said improvements, whenever requested, to testify in any interferences or other legal proceedings in which any of said applications or patents may become involved, to sign all lawful papers, make all rightful cashs, and to do generally everything necessary to aid assignee, its successors, assigns and nominees to obtain patent protection for said improvements in all countries, the e | | | |
| FULL NAME (| OF INVENTOR(S) | | }==================================== |
| Inventor one: | LIM, Jae Ho | Date: | |
| Signeture: | | | |
| X Additional | inventors or a legal representative are be | ing named on 1 additional form(s) a | Itached herato. |
| PLEASE SEE | THE WARNINGS ON THE LAST PAGE | OF THIS FORM. | en e |

Page 1 of 2

| | | N AND ASSIGNMENT FOR UTILITY PPLICATIONS | 10,000,000 | NONAL INVENTOR(S) upplemental Sheet |
|--|-----------------|---|------------|-------------------------------------|
| | Inventor two: | KANG, Sung Yong | Date: | |
| | Signature: | | | |
| | Inventor three: | KANG, Kyoung Min | Date: | |
| | Signature: | | | × |
| | | LEE, Hee-Jung | Dete: C | 8/2712019 |
| | Signature: | | | |
| | Inventor five: | KIM, Min Gyung | Date: | |
| | Signature: | | | |
| | Inventor six: | PARK, Chang-Young | Dete: | |
| | Signature: | | | |
| | | CHOI, Jun Ho | Date: | |
| | Signature: | | | |
| | Inventor eight: | SONG, Jae Han | Date: | |
| | Signature: | | | |
| | | GO, Yu Jin | • ; | |
| | Signature: | | | |
| | Inventor ten: | | Date: | |
| | Signature: | | | |
| WARNING: According to 37 C.F.R. § 1.63(c), "[a] person may not execute an oath or declaration unless the person has reviewed and understands the contents of the application, including the claims, and is aware of the duty to disclose to the Office all information known to the person to be material to patentiability as defined in §1.56." Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to | | | | |
| dentity theft. Personal information such as social security numbers, benk account numbers, or credit card numbers (offer than a check or dentity theft. Personal information such as social security numbers, benk account numbers, or credit card numbers (offer than a check or dentity theft. Personal information from Pro-2036 submitted for payment purposes) is never required by the USPTO to trapport a petition or an application, if this type of personal information is included in documents submitting them to the USPTO, petitionarisapplicants at visible documents before submitting them to the USPTO. Petitionarisapplicant is advised that the record or a patent application from the documents before submitting them to the USPTO. Petitionarisapplicant is advised that the record from an absolute and application may also be available to the public of 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 published available. | | | | |

Page 2 of 2

REEL: 050294 FRAME: 0237

| DECLARATIO | ON AND ASSIGNMENT FOR | Attama, Daalat Number | |
|--|---|---|--|
| UTILITY OR | DESIGN APPLICATIONS | Attorney Docket Number: | |
| Title of Invention | THEF | RMOPLASTIC POLYMER PARTICLE | |
| | | nated as the undersigned), I/We hereby declare that: | |
| This declarated to | | | |
| [| The attached application, or | | |
| [2 | United States application or PCT int | ternational application number PCT/KR2018/002845 | |
| | filed onMarch 09, 2018 | - | |
| The above-identifie | ed application was made or authorized to | o be made by me/us. | |
| I/We believe that I a | am the original inventor or an original jo | int inventor of a claimed invention in the application. | |
| | wledge that any willful false statement n ment of not more than five (5) years, or l | made in this declaration is punishable under 18 U.S.C. 1001 both. | |
| | | ne name is listed below) or as a joint inventor (if plural names are ements in the application identified above. | |
| OnelFC, 10, Gukje | AND, WHEREAS LG HAUSYS, LTD., (hereinafter referred to as assignee), a corporation of Korea whose mailing address is OneIFC, 10, Gukjegeumyung-ro; Yeongdeungpo-gu; Seoul; REPUBLIC OF KOREA 07326 is desirous of acquiring the entire right, title and interest in the same. | | |
| NOW, THEREFORE, in consideration of the sum of one dollar, the receipt wherof is acknowledged, and other good and valuable consideration, the undersigned hereby sell(s), assign(s) and set(s) over to said assignee my/our entire right, title and interest for the United States of America and all other countries in and to said invention and the aforesaid utility patent application and all original, divisional, continuation, substitute or reissue applications and patents applied for or granted therefor in the United States of America and all other countries, for said invention, including without limitation all applications and patents for said invention claiming priority or benefit of the aforesaid utility application pursuant to any law or treaty, and including all claims for damages by reason of past infringement with the right to sue for and collect the same for its own use and the use of its successors, assigns and legal representatives, and including the right to claim such priority or benefit and the Commissioner of Patents and Trademarks is hereby authorized and requested to issue all patents on said improvements or resulting therefrom to said assignee herein, as assignee of the entire interest therein; and the undersigned for me/us and my/our legal representatives, heirs and assigns do hereby agree and covenant without further remuneration, to execute and deliver all original, divisional, continuation, reissue and other applications for Letters Patent on said improvements and all assignments thereof to said assignee or its assigns, to communicate to said assignee or its representatives all facts known to the undersigned respecting said improvements, whenever requested, to testify in any interferences or other legal proceedings in which any of said applications or patents may become involved, to sign all lawful papers, make all rightful oaths, and to do generally everything necessary to aid assignee, its successors, assigns and nominees to obtain patent protection for said improvements in all countries, the e | | | |
| contents of the applic | R. § 1.63(c), "[a] person may not execute an cation, including the claims, and is aware of lity as defined in §1.56." | n oath or declaration unless the person has reviewed and understands the the duty to disclose to the Office all information known to the person to be | |
| FULL NAME | OF INVENTOR(S) | | |
| Inventor one | | Date: | |
| Signature: - | | | |
| X Addition | nal inventors or a legal representative are be | eing named on1 additional form(s) attached hereto. | |
| PLEASE SE | EE THE WARNINGS ON THE LAST PAGE | OF THIS FORM. | |

| DECLARATION AND ASSIGNMENT FOR UTILIT OR DESIGN APPLICATIONS | ADDITIONAL INVENTOR(S) Supplemental Sheet |
|--|--|
| Inventor two: KANG, Sung Yong | Date: |
| Signature: | |
| Inventor three: KANG, Kyoung Min | Date: |
| Signature: | |
| Inventor four: LEE, Hee-Jung | Date: |
| Signature: | |
| Inventor five: KIM, Min Gyung | |
| Signature: | |
| Inventor six: PARK, Chang-Young | Date: 2019, A. 26 |
| Signature: Ohenyyong Parl | —————————————————————————————————————— |
| Inventor seven: CHOI, Jun Ho | Date: |
| Signature: | |
| Inventor eight: SONG, Jae Han | Date: |
| Signature: | |
| Inventor nine: GO, Yu Jin | Date: |
| Signature: | |
| Inventor ten: | Datë: |
| Signature: | |
| WARNIN | G: |
| According to 37 C.F.R. § 1.63(c), "[a] person may not execute an oath or dec contents of the application, including the claims, and is aware of the duty to d | claration unless the person has reviewed and understands the |
| material to patentability as defined in §1.56." | |
| Petitioner/applicant is cautioned to avoid submitting personal information in didentity theft. Personal information such as social security numbers, bank a credit card authorization form PTO-2038 submitted for payment purposes) is not this type of personal information is included in documents submitted to the USPT application form the documents before submitting them to the USPT application is available to the public after publication of the application (unless made in the application) or issuance of a patent. Furthermore, the record if the application is referenced in a published application or an issued pater PTO-2038 submitted for payment purposes are not retained in the application. | account numbers, or credit card numbers (other than a check or ever required by the USPTO to support a petition or an application. If ISPTO, petitioners/applicants should consider redacting such TO. Petitioner/applicant is advised that the record of a patent as a non-publication request in compliance with 37 CFR 1.213(a) is from an abandoned application may also be available to the public nt (see 37 CFR 1.14). Checks and credit card authorization forms |
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