PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

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

CONVEYING PARTY DATA

| Name | Execution Date |
|---------------------|----------------|
| Raymond P. JOHNSTON | 06/13/2011 |
| Martin E. BROEN | 06/10/2011 |
| Robert L. BROTT | 06/13/2011 |
| Jorge C. CEBALLOS | 06/10/2011 |
| Charles N. DEVORE | 06/13/2011 |
| Andrew R. FOX | 06/13/2011 |
| Karl J. L. GEISLER | 06/13/2011 |
| Kayla A. HAGENS | 06/13/2011 |
| Sean C. MCGREEVY | 06/13/2011 |
| Hamid R. MORTAZAVI | 06/13/2011 |

RECEIVING PARTY DATA

| Name: | 3M Innovative Properties Company |
|-----------------|----------------------------------|
| Street Address: | P.O. Box 33427 |
| City: | St. Paul |
| State/Country: | MINNESOTA |
| Postal Code: | 55133-3427 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 29388706 |

CORRESPONDENCE DATA

Fax Number: (651)736-3833

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

Phone: 651-733-1500

Email: hhfroelke1@mmm.com

Correspondent Name: 3M Innovative Properties Company

Address Line 1: P.O. Box 33427

PATENT

REEL: 026443 FRAME: 0875

\$40,00 2938870

501564876

| Address Line 4: St. Paul, MINNESOTA 55133-3427 | | |
|---|------------------|--|
| ATTORNEY DOCKET NUMBER: 67487US003 | | |
| NAME OF SUBMITTER: | Hylis H. Froelke | |
| Total Attachments: 15 source=Assignment_Signed_67487US003#page1.tif source=Assignment_Signed_67487US003#page2.tif source=Assignment_Signed_67487US003#page3.tif source=Assignment_Signed_67487US003#page4.tif source=Assignment_Signed_67487US003#page5.tif source=Assignment_Signed_67487US003#page6.tif | | |
| source=Assignment_Signed_67487US003#page7.tif source=Assignment_Signed_67487US003#page8.tif source=Assignment_Signed_67487US003#page9.tif source=Assignment_Signed_67487US003#page10.tif source=Assignment_Signed_67487US003#page11.tif source=Assignment_Signed_67487US003#page12.tif source=Assignment_Signed_67487US003#page13.tif source=Assignment_Signed_67487US003#page14.tif source=Assignment_Signed_67487US003#page15.tif | | |

PATENT REEL: 026443 FRAME: 0876

ASSIGNMENT OF APPLICATION

Whereas I/we, the below named inventor(s), with residence and citizenship as indicated below, have made an invention in

| | LIGHT BULB |
|-----|---|
| f | for which an application for a United States Patent is being filed contemporaneously herewith; |
| | for which an application for a United States Patent identified as U.S. Patent Application No. 29/388706, was filed on March 31, 2011; |
| □ v | which application is identified as PCT International Patent Application No. ; filed ; |

Now, therefore, for good and valuable consideration, receipt of which is acknowledged, I/we have agreed to assign and transfer and do hereby assign and transfer unto the 3M INNOVATIVE PROPERTIES COMPANY, a wholly-owned subsidiary of 3M COMPANY, and a corporation of Delaware, having its principal office at Saint Paul, Minnesota, its successors and assigns, the entire right, title, and interest in and to the said invention and application, and in and to any division or continuation (in whole or in part) of said application, and in and to any and all improvements in the said invention made by me or made jointly with others (provided any such improvement is made during, or within one year after the termination of, my employment with 3M COMPANY and any of its existing or future subsidiaries), and in and to any and all Letters Patent, reexaminations, reissues, or extensions thereof, of the United States of America and countries foreign thereto (including the right to apply for Letters Patent, Utility Models, or Inventors' Certificates in foreign countries in its own name and to claim any priority rights for such foreign applications to which such applications are entitled under international conventions, treaties, or otherwise), which have been or may be granted thereon or on any divisional, continuation (in whole or in part), renewal, reexamination, reissue, or other or further application based in whole or in part upon the said invention or improvements thereon, to be held and enjoyed as fully and exclusively as they would have been by me/us had this assignment and transfer not been made;

I/We do further agree for myself/ourselves and for my/our heirs, executors, and administrators, to execute and deliver without further consideration any further applications, assignments, and documents, and to perform such other acts as I/we lawfully may, that may be deemed necessary by said Company, its successors, assigns, and nominees, fully to secure its right, title, and interest as aforesaid and to obtain or maintain Letters Patent, Utility Models, or Inventors' Certificates in any and all countries; and

Assignment

Page 1 of 5 Case No.: 67487US003

I/We do hereby authorize and request the Commissioner of Patents to issue any and all Letters Patent which may be granted upon any of the said applications, to said 3M Innovative Properties Company, as the assignee of the entire right, title, and interest therein.

In witness whereof, I/we have signed my/our name(s) on the day and year set forth below.

| Given Name (first and middle [if any]): | Family Name or Sur | rname: |
|--|-----------------------------|--|
| Raymond P. | JOHNSTON | |
| Inventor's Signature: | Date: 13) | |
| Residence: Lake Elmo, Minnesota | Country: USA | Citizenship: United States of America |
| Hylis H. Fralke Witness | Susan M. Witness | Hendrickson |
| | | |
| Given Name (first and middle [if any]): Martin E. | Family Name or Sur BROEN | name: |
| Inventor's Signature: | Date: | |
| Residence: | Country: | Citizenship: |
| Milan, Italy | Italy | Argentina |
| Witness | Witness | |
| | | |
| Given Name (first and middle [if any]): Robert L. | Family Name or Sur BROTT | name: |
| Inventor's \$ignature: | Date: | |
| Law Fell | 6/13/11 | <u>'</u> |
| Residence: | Country: | Citizenship: |
| Woodbury, Minnesota | USA | United States of America |
| Hyls H. Fralke Witness | Susan M.S. Witness | Hendrickson |

| | T = 11 N1 | <u> </u> |
|---|----------------------------------|--------------------------|
| Given Name (first and middle [if any]): Jorge C. | Family Name or Surname: CEBALLOS | |
| | | |
| Inventor's Signature: | Date: | |
| | | |
| Residence: | Country: | Citizenship: |
| Pcia Buenos Aires, Argentina | Argentina | Argentina - |
| | | |
| | | |
| Witness | Witness | - |
| Withess | VVIIIICSS | |
| | | |
| Given Name (first and middle [if any]): | Family Name or Sur | name: |
| Charles N. | DEVORE | |
| Inventor's Signature: | Date: | |
| $P(1 \mid P(\lambda))$ | 6/13/1 | // |
| Residence: | Country: | Citizenship: |
| Hugo, Minnesota | USA | United States of America |
| | OOA | Chiled States of America |
| | 0 . | 11 0 1 |
| Hylis-Htracke | Susan M. | Hendrickson |
| Witness | Witness | |
| · · · · · · · · · · · · · · · · · · · | - | |
| | | |
| Given Name (first and middle [if any]): | Family Name or Sur | name: |
| Andrew R. | FOX | |
| Inventor's Signature: | Date: | |
| Ander & To | 6.13.2011 | |
| more R X | 013 2011 | |
| Residence: | Country: | Citizenship: |
| Oakdale, Minnesota | USA | United States of America |
| | | Third States of America |
| 11 | 0 | |
| Hyls H. Frulke | Susan M. | Menduckson |
| Witness | Witness | |

| Given Name (first and middle [if any]): | Family Name or Surname: |
|--|---|
| Karl J. L. | GEISLER |
| Inventor's Signature: | Date: , / |
| | 6/13/20/1 |
| Residence: St. Rau Minnesota | Country: Citizenship: USA United States of America |
| Witness | Hyls H Freelke Witness |
| | |
| Given Name (first and middle [if any]): Kayla A. | Family Name or Surname: HAGENS |
| Inventor's Signature: | Date: Country: Citizenship: USA United States of America |
| Residence: | Country: Citizenship: |
| Cottage Grove, Minnesota | USA United States of America |
| Hylis H. Froelke Witness | Susan M. Hanchickson Witness |
| | |
| Given Name (first and middle [if any]): Sean C. | Family Name or Surname: MCGREEVY |
| Inventor's Signature: W M M M M M M M M M M M M | Date: 6/13/2011 |
| Residence: St. Paul, Minnesota | Country: Citizenship: USA United States of America |
| 11 15 11 1 . 06. | o methodo. |

Witness

Witness

| Given Name (first and middle [if any]): Hamid R. | Family Name or SumoRTAZAVI | urname: |
|---|----------------------------|--------------------------|
| Inventor's Signature: | Date: | |
| Hamid Rex Mortagan | Jun 13, | 2011 |
| Residence: U | Country: | Citizenship: |
| Woodbury, Minnesota | USA | United States of America |
| Hylis H. Froelhe Witness | Sugar M. Witness | Hendrickson |

REEL: 026443 FRAME: 0881

ASSIGNMENT OF APPLICATION

Whereas I/we, the below named inventor(s), with residence and citizenship as indicated below, have made an invention in

| | [발발] : [40] [발발] : [41] [41] [42] [42] [43] [43] [43] [43] [43] [43] [43] [43 |
|------|--|
| | LIGHT BULB |
| | |
| | for which an application for a United States Patent is being filed contemporaneously herewith, |
| 2000 | for which an application for a United States Patent identified as U.S. Patent Application No. |
| الت | 29/388706, was filed on March 31, 2011: |
| | which application is identified as PCT International Patent Application No.; filed; |

Now, therefore, for good and valuable consideration, receipt of which is acknowledged. I/we have agreed to assign and transfer and do hereby assign and transfer unto the 3M INNOVATIVE PROPERTIES COMPANY, a wholly-owned subsidiary of 3M COMPANY, and a corporation of Delaware, having its principal office at Saint Paul, Minnesota, its successors and assigns, the entire right, title, and interest in and to the said invention and application, and in and to any division or continuation (in whole or in part) of said application, and in and to any and all improvements in the said invention made by me or made jointly with others (provided any such improvement is made during, or within one year after the termination of, my employment with 3M COMPANY and any of its existing or future subsidiaries), and in and to any and all Letters Patent, reexaminations, reissues, or extensions thereof, of the United States of America and countries foreign thereto (including the right to apply for Letters Patent, Utility Models, or Inventors' Certificates in foreign countries in its own name and to claim any priority rights for such foreign applications to which such applications are entitled under international conventions, treaties, or otherwise), which have been or may be granted thereon or on any divisional, continuation (in whole or in part), renewal, reexamination, reissue, or other or further application based in whole or in part upon the said invention or improvements thereon, to be held and enjoyed as fully and exclusively as they would have been by me/us had this assignment and transfer not been made:

I/We do further agree for myself/ourselves and for my/our heirs, executors, and administrators, to execute and deliver without further consideration any further applications, assignments, and documents, and to perform such other acts as I/we lawfully may, that may be deemed necessary by said Company, its successors, assigns, and nominees, fully to secure its right, title, and interest as aforesaid and to obtain or maintain Letters Patent, Utility Models, or Inventors' Certificates in any and all countries; and

Assignment

Pege 1 of 5 3M innovative Properties Company, P. O. Box 33427, St. Paul, MN 55133-3427

> PATENT REEL: 026443 FRAME: 0882

I/We do hereby authorize and request the Commissioner of Patents to issue any and all Letters Patent which may be granted upon any of the said applications, to said 3M Innovative Properties Company, as the assignee of the entire right, title, and interest therein.

In witness whereof, I/we have signed my/our name(s) on the day and year set forth below.

| Given Name (first and middle [if any]): Raymond P. | Family Name or Surname: JOHNSTON |
|---|--|
| Inventor's Signature: | Date: |
| Residence: Lake Elmo, Minnesota | Country: Citizenship: USA United States of America |
| | |
| Witness | Witness |
| | |
| Given Name (first and middle [if aryy): Martin E. | Family Name or Surname: BROEN |
| Inventor's Signature: | Date: 2011 / 66 /16 |
| Residence: Milan, Italy | Country: Citizenship: Italy Argentina |
| Allasto Bold | |
| Witness | Witness 16LESTAS, MARCELAS, |
| | |
| Given Name (first and middle [if any]): Robert L. | Family Name or Surhame: BROTT |
| Inventor's Signature: | Date: |
| Residence: | Country: Citizenship: |
| Woodbury, Minnesota | USA United States of America |
| | |
| Witness | Witness |
| | |

Assignmen

Page 2 of 5 3M Innovative Properties Company, P. O., Box 33427, St. Paul, MN 55133-342

> PATENT REEL: 026443 FRAME: 0883

| Given Name (first and middle [if any]): Jorge C. | Family Name of Surname: CEBALLOS | |
|---|---|--|
| Inventor's Signature: | Date: | |
| Residence: Pcia Buenos Aires, Argentina | Country: Argentina | Citizenship: Argentina |
| Witness | Witness | |
| Given Name (first and middle [if any]): Charles N. | Family Name or Surname: DEVORE | |
| Inventor's Signature: | Date: | |
| Residence: Hugo, Minnesota | Country: USA | Citizenship: United States of America |
| | очення континент обек в в до бек от обеков довек т акой пределения принятий відення довек в довек в довек в довек в | |
| Witness | Witness | |
| Given Name (first and middle [if any]): Andrew R. | Family Name o | r Sumame: |
| Inventor's Signature: | Date: | |
| Residence; Oakdale, Minnesota | Country: USA | Citizenship: United States of America |
| | | |
| Witness | Witness | |

| Given Name (first and middle [if any]): Karl J. | Family Name or Surname: GEISLER | |
|---|----------------------------------|--|
| Inventor's Signature: | Date: | |
| Residence: St. Paul, Minnesota | Country: USA | Citizenship: United States of America |
| Witness | Witness | |
| Given Name (first and middle [if any]): Kayla A. | Family Name of HAGENS | or Surname: |
| Inventor's Signature: | .Date: | |
| Residence: Cottage Grove, Minnesota | Country: USA | Citizenship: United States of America |
| | | |
| Witness | Witness | |
| | | |
| Given Name (first and middle [if any]): Sean C. | Family Name or Surname: MCGREEVY | |
| Inventor's Signature: | Date; | |
| Residence: St. Paul, Minnesota | Country: USA | Citizenship: United States of America |
| | | |
| Witness | Witness | |

Page 4 of 5 3M Innovative Properties Company, P. O., Box 33427, St. Paul, MN 55133-3427

> PATENT REEL: 026443 FRAME: 0885

| Given Name (first and middle [if any]). Hamid R. | | Family Name or Surname. MORTAZAVI | |
|--|-----------------|--|--|
| Inventor's Signature: | Date: | | |
| Residence: Woodbury, Minnesota | Country: USA | Citizenship: United States of America | |
| | | | |
| Witness | Witness | | |

Page 5 of 5 3M (nnovative Properties Company, P. O. Box 33427, St. Paul, MN 55133-3427

ASSIGNMENT OF APPLICATION

| Whereas I/we, the below named inventor(s), with residence and citizenship as indicated below, have made an invention in |
|--|
| LIGHT BULB |
| for which an application for a United States Patent is being filed contemporaneously herewith; |
| of for which an application for a United States Patent identified as U.S. Patent Application No. 29/388706, was filed on March 31, 2011; |
| Which application is identified as PCT International Patent Application No.: filed: |

Now, therefore, for good and valuable consideration, receipt of which is acknowledged, I/we have agreed to assign and transfer and do hereby assign and transfer unto the 3M INNOVATIVE PROPERTIES COMPANY, a wholly-owned subsidiary of 3M COMPANY, and a corporation of Delaware, having its principal office at Saint Paul, Minnesota, its successors and assigns, the entire right, title, and interest in and to the said invention and application, and in and to any division or continuation (in whole or in part) of said application, and in and to any and all improvements in the said invention made by me or made jointly with others (provided any such improvement is made during, or within one year after the termination of, my employment with 3M COMPANY and any of its existing or future subsidiaries), and in and to any and all Letters Patent. reexaminations, reissues, or extensions thereof, of the United States of America and countries foreign thereto (including the right to apply for Letters Patent, Utility Models, or Inventors' Certificates in foreign countries in its own name and to claim any priority rights for such foreign applications to which such applications are entitled under international conventions, treaties, or otherwise), which have been or may be granted thereon or on any divisional, continuation (in whole or in part), renewal, reexamination, reissue, or other or further application based in whole or in part upon the said invention or improvements thereon, to be held and enjoyed as fully and exclusively as they would have been by me/us had this assignment and transfer not been made;

I/We do further agree for myself/ourselves and for my/our heirs, executors, and administrators, to execute and deliver without further consideration any further applications, assignments, and documents, and to perform such other acts as I/we lawfully may, that may be deemed necessary by said Company, its successors, assigns, and nominees, fully to secure its right, title, and interest as aforesaid and to obtain or maintain Letters Patent, Utility Models, or Inventors' Certificates in any and all countries; and

Case No.: 67487US003

Assignment

Page 1 of 5 3M Innovative Properties Company, P. O. Box 33427, St. Paul, MN 55133-3427 I/We do hereby authorize and request the Commissioner of Patents to issue any and all Letters Patent which may be granted upon any of the said applications, to said 3M Innovative Properties Company, as the assignee of the entire right, title, and interest therein.

In witness whereof, I/we have signed my/our name(s) on the day and year set forth below.

| Given Name (first and middle [if any]): Raymond P. | Family Name or Surname: JOHNSTON | |
|--|----------------------------------|--|
| Inventor's Signature: | Date: | |
| Residence: Lake Elmo, Minnesota | Country: USA | Citizenship: United States of America |
| Witness | Witness | |
| Given Name (first and middle [if any]): Martin E. | Family Name or Sur BROEN | name: |
| Inventor's Signature: | Date: | |
| Residence: Milan, Italy | Country: Italy | Citizenship: Argentina |
| | | |
| Witness | Witness | |
| Given Name (first and middle [if any]): Robert L. | Family Name or Sur BROTT | name: |
| Inventor's Signature: | Date: | |
| Residence: Woodbury, Minnesota | Country: USA | Citizenship: United States of America |
| Witness | Witness | |

Assignment

Page 2 of 5 3M Innovative Properties Company, P. O. Box 33427, St. Paul, MN 55133-3427

| Civan Nama (first and middle (if asul)) | Lemily None of Con | 2000 |
|---|----------------------------------|--|
| Given Name (first and middle [if any]): Jorge C. | Family Name or Surname: CEBALLOS | |
| Inventor's Signature: | Date: | |
| Seed | الم ال | 10 2011 |
| Residence: Pcia Buenos Aires, Argentina | Country: Argentina | Citizenship: Argentina |
| Witness Schinz Redemakers | M. Cate Witness M. CAST | 4 |
| Given Name (first and middle [if any]): | Family Name or Su | rname: |
| Charles N. | DEVORE | |
| Inventor's Signature: | Date: | |
| Residence: Hugo, Minnesota | Country: USA | Citizenship: United States of America |
| Witness | Witness | <u>. </u> |
| Given Name (first and middle [if any]): | Family Name or Su | rname. |
| Andrew R. | FOX | |
| Inventor's Signature: | Date: | |
| Residence: | Country: | Citizenship: |
| Oakdale, Minnesota | USA | United States of America |
| Witness | Witness | |

| Given Name (first and middle [if any]): | Family Name or Surname: | |
|---|--|--|
| Karl J. | GEISLER | |
| Inventor's Signature: | Date: | |
| | | |
| | - | |
| Residence: | Country: | Citizenship: |
| St. Paul, Minnesota | USA | United States of America |
| | | |
| • | | |
| TAPE. | 1AFL: 2 | |
| Witness | Witness | |
| | страно добило траниции по | |
| | | |
| Given Name (first and middle [if any]): | Family Name or Sur | mame. |
| Kayla A. | HAGENS | |
| Inventor's Signature: | Date: | |
| Inventor's Signature: | Date. | |
| | | · |
| Residence: | Country: | Citizenship: |
| Cottage Grove, Minnesota | USA | United States of America |
| Cottage Crove, Willinesota | UUA | Office Otates of Afficia |
| · | | |
| | | |
| Witness | Witness | |
| 7711000 | | |
| , | The second of th | |
| | | |
| Given Name (first and middle [if any]): | Family Name or Surname: | |
| Sean C. | MCGREEVY | |
| , 004.1. 0. | MOSITELLI | |
| Inventor's Signature: | Date: | |
| | | |
| | | |
| | Date: Country: | Citizenship: |
| Inventor's Signature: | Date: | Citizenship: United States of America |
| Inventor's Signature: Residence: | Date: Country: | Citizenship: United States of America |
| Inventor's Signature: Residence: | Date: Country: | Citizenship: United States of America |
| Inventor's Signature: Residence: | Date: Country: | Citizenship: United States of America |

Page 4 of 5
3M Innovative Properties Company, P. O. Box 33427, St. Paul, MN 55133-3427

Assignment

| Given Name (first and middle [if any]): Hamid R. | Family Name or Surname: MORTAZAVI | |
|---|------------------------------------|--------------------------|
| Inventor's Signature: | Date: | |
| | | |
| Residence: | Country: | Citizenship: |
| Woodbury, Minnesota | USA | United States of America |
| | | |
| Witness | Witness | |
| 1 | | |

RECORDED: 06/14/2011

Page 5 of 5 3M Innovative Properties Company, P. O. Box 33427, St. Paul, MN 55133-3427

Case No.: 67487US003

PATENT REEL: 026443 FRAME: 0891