501849027 03/12/2012

PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Marcus FRANK	02/16/2012
Brent BOYCE	03/09/2012
Hartmut KNOLL	02/10/2012
Alexander LORENZ	02/13/2012
Uwe KRILTZ	02/10/2012

RECEIVING PARTY DATA

Name:	Guardian Industries Corp.
Street Address:	2300 Harmon Road
City:	Auburn Hills
State/Country:	MICHIGAN
Postal Code:	48316-1714

Name:	Centre Luxembourgeois de Recherches pour le Verre et la Ceramique S.A. (C.R.V.C.)
Street Address:	Zone Industrielle Wolser
City:	Dudelange, Grand Duche de
State/Country:	LUXEMBOURG
Postal Code:	L-3452

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	13324267

CORRESPONDENCE DATA

 Fax Number:
 (703)816-4100

 Phone:
 7038164000

 Email:
 caj@nixonvan.com

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent

via US Mail.

PATENT

REEL: 027842 FRAME: 0005

Correspondent Name: Nixon & Vanderhye P.C. Address Line 1: 901 N. Glebe Road Address Line 4: Arlington, VIRGINIA 22203 ATTORNEY DOCKET NUMBER: JAR-3691-2414 NAME OF SUBMITTER: Joseph A. Rhoa Total Attachments: 10 source=3691-2414Assignment#page1.tif source=3691-2414Assignment#page2.tif source=3691-2414Assignment#page3.tif source=3691-2414Assignment#page4.tif source=3691-2414Assignment#page5.tif source=3691-2414Assignment#page6.tif source=3691-2414Assignment#page7.tif source=3691-2414Assignment#page8.tif source=3691-2414Assignment#page9.tif source=3691-2414Assignment#page10.tif

> PATENT REEL: 027842 FRAME: 0006

WHEREAS, Marcus FRANK of 490 Liberty Pointe Drive, Ann Arbor, Michigan 48103 and Brent BOYCE of 44532 Midway Drive, Novi, Michigan 48375, (hereinafter ASSIGNORS), have made an invention entitled INSULATING GLASS UNITS WITH LOW-E AND ANTIREFLECTIVE COATINGS, AND/OR METHODS OF MAKING THE SAME for which a so-entitled application for Letters Patent of the United States was filed on December 13, 2011 under Serial No. 13/324,267;

WHEREAS, Guardian Industries Corp. (hereinafter ASSIGNEE), a corporation of the State of Michigan, having an office and place of business at 2300 Harmon Road, Auburn Hills, Michigan, 48326-1714, is desirous of acquiring an interest therein;

NOW, THEREFORE, for valuable consideration the receipt and sufficiency of which are hereby acknowledged, the below listed of said ASSIGNORS by these presents, having sold, assigned and transferred, hereby sells, assigns, and transfers unto the said ASSIGNEE, its successors, assigns, and legal representatives, ASSIGNORS' entire right, title and interest in the United States of America and all foreign countries, in and to the invention as described in the aforesaid application, and to the said application and to all subsequent applications based thereon including any and all continuations, divisions, reissues, and substitutes of said application, and all resulting patents, together with the right of priority under the International convention for the Protection of Industrial Property, Inter-American Convention Relating to Patents, Designs and Industrial Models,

1940318

and any other international agreements to which the United States of America adheres. and the below listed ASSIGNOR(S) hereby authorize and request the Commissioner of Patents and Trademarks to issue said Letters Patent to ASSIGNEE, for its interest as ASSIGNEE, its successors, assigns, and legal representatives. It is understood and agreed that ASSIGNEE'S attorneys Nixon & Vanderhye P.C. have represented only ASSIGNEE and will continue to represent only ASSIGNEE with respect to this invention;

ASSIGNORS hereby agree to execute any papers by ASSIGNEE, its successors. assigns, and legal representatives, deemed essential to ASSIGNEE's full protection and title in and to the invention hereby transferred; and

ASSIGNORS hereby agree, upon request of ASSIGNEE, and without further remuneration, to execute any and all papers desired by ASSIGNEE, for the filing and granting of foreign applications and the perfecting of title thereto in ASSIGNEE.

AGREED and executed as noted below:

Tand May Witnessed by:

WHEREAS, Marcus FRANK of 490 Liberty Pointe Drive, Ann Arbor, Michigan 48103 and Brent BOYCE of 44532 Midway Drive, Novi, Michigan 48375, (hereinafter ASSIGNORS), have made an invention entitled INSULATING GLASS UNITS WITH LOW-E AND ANTIREFLECTIVE COATINGS, AND/OR METHODS OF MAKING THE SAME for which a so-entitled application for Letters Patent of the United States was filed on December 13, 2011 under Serial No. 13/324,267;

WHEREAS, Guardian Industries Corp. (hereinafter ASSIGNEE), a corporation of the State of Michigan, having an office and place of business at 2300 Harmon Road, Auburn Hills, Michigan, 48326-1714, is desirous of acquiring an interest therein;

NOW, THEREFORE, for valuable consideration the receipt and sufficiency of which are hereby acknowledged, the below listed of said ASSIGNORS by these presents, having sold, assigned and transferred, hereby sells, assigns, and transfers unto the said ASSIGNEE, its successors, assigns, and legal representatives, ASSIGNORS' entire right, title and interest in the United States of America and all foreign countries, in and to the invention as described in the aforesaid application, and to the said application and to all subsequent applications based thereon including any and all continuations, divisions, reissues, and substitutes of said application, and all resulting patents, together with the right of priority under the International convention for the Protection of Industrial Property, Inter-American Convention Relating to Patents, Designs and Industrial Models,

PATENT 1940318 REEL: 027842 FRAME: 0009 and any other international agreements to which the United States of America adheres, and the below listed ASSIGNOR(S) hereby authorize and request the Commissioner of Patents and Trademarks to issue said Letters Patent to ASSIGNEE, for its interest as ASSIGNEE, its successors, assigns, and legal representatives. It is understood and agreed that ASSIGNEE'S attorneys Nixon & Vanderhye P.C. have represented only ASSIGNEE and will continue to represent only ASSIGNEE with respect to this invention;

ASSIGNORS hereby agree to execute any papers by ASSIGNEE, its successors, assigns, and legal representatives, deemed essential to ASSIGNEE's full protection and title in and to the invention hereby transferred; and

ASSIGNORS hereby agree, upon request of ASSIGNEE, and without further remuneration, to execute any and all papers desired by ASSIGNEE, for the filing and granting of foreign applications and the perfecting of title thereto in ASSIGNEE.

AGREED and executed as noted below:

1 3/9/12

Date

_Witnessed by:

WHEREAS, Hartmut KNOLL of Am Leineufer 21, Bitterfeld-Wolfen, Germany D-06749; Alexander LORENZ of Windthorststrasse 13, Halle (Saale), Germany D-06114 and Uwe KRILTZ of Am Monchenberge 5, Jena, Germany D-07751, (hereinafter ASSIGNORS) have made an invention entitled INSULATING GLASS UNITS WITH LOW-E AND ANTIREFLECTIVE COATINGS, AND/OR METHODS OF MAKING THE SAME for which a so-entitled application for Letters Patent of the United States was filed on December 13, 2011, under Serial No. 13/324,267;

WHEREAS, Centre Luxembourgeois de Recherches pour le Verre et la Ceramique S.A. (C.R.V.C.), (hereinafter ASSIGNEE), having an office and place of business at Zone Industrielle Wolser, L-3452 Dudelange, Grand Duché de Luxembourg, is desirous of acquiring an interest therein;

NOW, THEREFORE, for valuable consideration the receipt and sufficiency of which are hereby acknowledged, the below listed of said ASSIGNORS by these presents, having sold, assigned and transferred, hereby sells, assigns, and transfers unto the said ASSIGNEE, its successors, assigns, and legal representatives, ASSIGNOR'S entire right, title and interest in the United States of America and all foreign countries, in and to the invention as described in the aforesaid application, and to the said application and to all subsequent applications based thereon including any and all continuations, divisions, reissues, and substitutes of said application, and all resulting patents, together with the

1940319

PATENT REEL: 027842 FRAME: 0011 right of priority under the International convention for the Protection of Industrial Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other international agreements to which the United States of America adheres, and the below listed ASSIGNORS hereby authorizes and requests the Commissioner of Patents and Trademarks to issue said Letters Patent to ASSIGNEE, for its interest as ASSIGNEE, its successors, assigns, and legal representatives. It is understood and agreed that ASSIGNEE'S attorneys Nixon & Vanderhye P.C. have represented only ASSIGNEE and will continue to represent only ASSIGNEE with respect to this invention;

ASSIGNORS hereby agree to execute any papers by ASSIGNEE, its successors, assigns, and legal representatives, deemed essential to ASSIGNEE's full protection and title in and to the invention hereby transferred; and

ASSIGNORS hereby agree, upon request of ASSIGNEE, and without further remuneration, to execute any and all papers desired by ASSIGNEE, for the filing and granting of foreign applications and the perfecting of title thereto in ASSIGNEE.

AGREED and executed as noted below:

10.02.2012 MM M
Date Hartmut KNOLL

10.02. 12 Witness by: Bernold (Berthold)

WHEREAS, Hartmut KNOLL of Am Leineufer 21, Bitterfeld-Wolfen, Germany D-06749; Alexander LORENZ of Windthorststrasse 13, Halle (Saale), Germany D-06114 and Uwe KRILTZ of Am Monchenberge 5, Jena, Germany D-07751, (hereinafter ASSIGNORS) have made an invention entitled INSULATING GLASS UNITS WITH LOW-E AND ANTIREFLECTIVE COATINGS, AND/OR METHODS OF MAKING THE SAME for which a so-entitled application for Letters Patent of the United States was filed on December 13, 2011, under Serial No. 13/324,267;

WHEREAS, Centre Luxembourgeois de Recherches pour le Verre et la Ceramique S.A. (C.R.V.C.), (hereinafter ASSIGNEE), having an office and place of business at Zone Industrielle Wolser, L-3452 Dudelange, Grand Duché de Luxembourg, is desirous of acquiring an interest therein;

NOW, THEREFORE, for valuable consideration the receipt and sufficiency of which are hereby acknowledged, the below listed of said ASSIGNORS by these presents, having sold, assigned and transferred, hereby sells, assigns, and transfers unto the said ASSIGNEE, its successors, assigns, and legal representatives, ASSIGNOR'S entire right, title and interest in the United States of America and all foreign countries, in and to the invention as described in the aforesaid application, and to the said application and to all subsequent applications based thereon including any and all continuations, divisions, reissues, and substitutes of said application, and all resulting patents, together with the

1940319

right of priority under the International convention for the Protection of Industrial Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other international agreements to which the United States of America adheres, and the below listed ASSIGNORS hereby authorizes and requests the Commissioner of Patents and Trademarks to issue said Letters Patent to ASSIGNEE, for its interest as ASSIGNEE, its successors, assigns, and legal representatives. It is understood and agreed that ASSIGNEE'S attorneys Nixon & Vanderhye P.C. have represented only ASSIGNEE and will continue to represent only ASSIGNEE with respect to this invention;

ASSIGNORS hereby agree to execute any papers by ASSIGNEE, its successors, assigns, and legal representatives, deemed essential to ASSIGNEE's full protection and title in and to the invention hereby transferred; and

ASSIGNORS hereby agree, upon request of ASSIGNEE, and without further remuneration, to execute any and all papers desired by ASSIGNEE, for the filing and granting of foreign applications and the perfecting of title thereto in ASSIGNEE.

AGREED and executed as noted below:

Date Date Alexander LORENZ

73.02.2012 Witness by: Joden the

WHEREAS, Hartmut KNOLL of Am Leineufer 21, Bitterfeld-Wolfen, Germany D-06749; Alexander LORENZ of Windthorststrasse 13, Halle (Saale), Germany D-06114 and Uwe KRILTZ of Am Monchenberge 5, Jena, Germany D-07751, (hereinafter ASSIGNORS) have made an invention entitled INSULATING GLASS UNITS WITH LOW-E AND ANTIREFLECTIVE COATINGS, AND/OR METHODS OF MAKING THE SAME for which a so-entitled application for Letters Patent of the United States was filed on December 13, 2011, under Serial No. 13/324,267;

WHEREAS, Centre Luxembourgeois de Recherches pour le Verre et la Ceramique S.A. (C.R.V.C.), (hereinafter ASSIGNEE), having an office and place of business at Zone Industrielle Wolser, L-3452 Dudelange, Grand Duché de Luxembourg, is desirous of acquiring an interest therein;

NOW, THEREFORE, for valuable consideration the receipt and sufficiency of which are hereby acknowledged, the below listed of said ASSIGNORS by these presents, having sold, assigned and transferred, hereby sells, assigns, and transfers unto the said ASSIGNEE, its successors, assigns, and legal representatives, ASSIGNOR'S entire right, title and interest in the United States of America and all foreign countries, in and to the invention as described in the aforesaid application, and to the said application and to all subsequent applications based thereon including any and all continuations, divisions, reissues, and substitutes of said application, and all resulting patents, together with the

1940319

PATENT REEL: 027842 FRAME: 0015 right of priority under the International convention for the Protection of Industrial Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other international agreements to which the United States of America adheres, and the below listed ASSIGNORS hereby authorizes and requests the Commissioner of Patents and Trademarks to issue said Letters Patent to ASSIGNEE, for its interest as ASSIGNEE, its successors, assigns, and legal representatives. It is understood and agreed that ASSIGNEE'S attorneys Nixon & Vanderhye P.C. have represented only ASSIGNEE and will continue to represent only ASSIGNEE with respect to this invention;

ASSIGNORS hereby agree to execute any papers by ASSIGNEE, its successors, assigns, and legal representatives, deemed essential to ASSIGNEE's full protection and title in and to the invention hereby transferred; and

ASSIGNORS hereby agree, upon request of ASSIGNEE, and without further remuneration, to execute any and all papers desired by ASSIGNEE, for the filing and granting of foreign applications and the perfecting of title thereto in ASSIGNEE.

AGREED and executed as noted below:

10.2.12

Witness by: Berkeld (Berthold)