504214929 02/06/2017

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4261606

SUBMISSION TYPE:		NEW ASSIGNMENT			
NATURE OF CONVEYAN	CE:	ASSIGNMENT			
CONVEYING PARTY DA	TA				
	Execution Date				
DANIEL L. TOBERMAN			01/31/2017		
DAVID L. FRITSCHE		02/01/2017			
MICHAEL R. MILLER		02/01/2017			
ROBERT M. WOLF			02/06/2017		
RECEIVING PARTY DAT	ГА				
Name:	THE BC	EING COMPANY			
Street Address:	100 N. RIVERSIDE				
City:	CHICAGO				
State/Country:	ILLINOI	S			
Postal Code:	60606-1596				
PROPERTY NUMBERS	Total: 1				
Property Type					
Property Type		Number			
Property Type Application Number:		Number 15425579			
	ATA	15425579			
Application Number: CORRESPONDENCE DA Fax Number:	ATA	314)584-4062			
Application Number: CORRESPONDENCE DA Fax Number: Correspondence will be	ATA	15425579 314)584-4062 the e-mail address first; if that is unsucces			
Application Number: CORRESPONDENCE DA Fax Number: Correspondence will be	ATA sent to rovided	314)584-4062			
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Application Number: CORRESPONDENCE DA Fax Number: Correspondence will be using a fax number, if p Phone: Email: Correspondent Name:	ATA e sent to rovided	314)584-4062 <i>the e-mail address first; if that is unsucces</i> <i>; if that is unsuccessful, it will be sent via U</i> 314-584-4080			
Application Number: CORRESPONDENCE DA Fax Number: <i>Correspondence will be</i> <i>using a fax number, if p</i> Phone: Email: Correspondent Name: Address Line 1:	ATA sent to rovided	314)584-4062 <i>the e-mail address first; if that is unsucces</i> <i>; if that is unsuccessful, it will be sent via U</i> 314-584-4080 docket@splglaw.com FHE SMALL PATENT LAW GROUP LLC 225 S. MERAMEC, SUITE 725			
Application Number: CORRESPONDENCE DA Fax Number: Correspondence will be using a fax number, if p Phone: Email: Correspondent Name:	ATA sent to rovided	314)584-4062 <i>the e-mail address first; if that is unsucces</i> <i>; if that is unsuccessful, it will be sent via U</i> 314-584-4080 docket@splglaw.com FHE SMALL PATENT LAW GROUP LLC			
Application Number: CORRESPONDENCE DA Fax Number: <i>Correspondence will be</i> <i>using a fax number, if p</i> Phone: Email: Correspondent Name: Address Line 1:	ATA sent to rovided	314)584-4062 <i>the e-mail address first; if that is unsucces</i> <i>; if that is unsuccessful, it will be sent via U</i> 314-584-4080 docket@splglaw.com FHE SMALL PATENT LAW GROUP LLC 225 S. MERAMEC, SUITE 725			
Application Number: CORRESPONDENCE DA Fax Number: Correspondence will be using a fax number, if p Phone: Email: Correspondent Name: Address Line 1: Address Line 4:	ATA sent to rovided	314)584-4062 the e-mail address first; if that is unsucces ; if that is unsuccessful, it will be sent via U 314-584-4080 docket@splglaw.com THE SMALL PATENT LAW GROUP LLC 225 S. MERAMEC, SUITE 725 ST. LOUIS, MISSOURI 63105			
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Application Number: CORRESPONDENCE DA Fax Number: Correspondence will be using a fax number, if p Phone: Email: Correspondent Name: Address Line 1: Address Line 4: ATTORNEY DOCKET NUM NAME OF SUBMITTER: SIGNATURE:	ATA sent to rovided	314)584-4062 the e-mail address first; if that is unsucces ; if that is unsuccessful, it will be sent via U 314-584-4080 docket@splglaw.com THE SMALL PATENT LAW GROUP LLC 225 S. MERAMEC, SUITE 725 ST. LOUIS, MISSOURI 63105 15-2043-US-NP (800-185US) JAY J. HOETTE /Jay J. Hoette/			
Application Number: CORRESPONDENCE DA Fax Number: Correspondence will be using a fax number, if p Phone: Email: Correspondent Name: Address Line 1: Address Line 4: ATTORNEY DOCKET NUE NAME OF SUBMITTER: SIGNATURE: DATE SIGNED: Total Attachments: 4 source=2017-02-06_Assign	ATA e sent to rovided	314)584-4062 the e-mail address first; if that is unsucces ; if that is unsuccessful, it will be sent via U 314-584-4080 docket@splglaw.com THE SMALL PATENT LAW GROUP LLC 225 S. MERAMEC, SUITE 725 ST. LOUIS, MISSOURI 63105 15-2043-US-NP (800-185US) JAY J. HOETTE /Jay J. HOETTE /Jay J. Hoette/ 02/06/2017 5-2043-US-NP#page1.tif			
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PATENT REEL: 041184 FRAME: 0848

15-2043-US-NP (800-0185US1)

ASSIGNMENT

WHEREAS, Daniel L. Toberman, residing at St. Charles, Missouri, David L. Fritsche, residing at Foristell, Missouri, Michael R. Miller, residing at Lake St. Louis, Missouri, and Robert M. Wolf, residing at Freeburg, Illinois (hereinafter "Assignor"), has invented certain new and useful inventions and improvements (hereinafter "Invention") described in the United States patent application entitled METHOD AND DEVICE FOR REMOVING MATERIAL FROM A SUBSTRATE for which Assignor is making or has made application for LETTERS PATENT OF THE UNITED STATES, which application has been duly executed by Assignor concurrently herewith;

WHEREAS, The Boeing Company, a corporation organized and existing under the laws of the State of Delaware, USA, having a place of business at 100 N. Riverside, Chicago, Illinois 60606-1596, with a mailing address of 5301 Bolsa Avenue, Huntington Beach, California, 92647, USA (hereinafter called "the Assignee"), is desirous of acquiring the entire right, title and interest in and to the Invention within the United States of America and its territorial possessions and all foreign countries, and in and to any United States or foreign LETTERS PATENT that may be granted therefor;

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, Assignor has assigned, sold and transferred, and does assign, sell and transfer to the Assignee, its successors and assigns, its entire right, title and interest in and to the Invention within the United States of America and its territorial possessions and all foreign countries, and in and to any LETTERS PATENT of the United States and foreign countries, including utility models, inventor's certificates and like government grants that may be granted for any and all portions thereof, and in and to the patent application identified above and applications for patent filed for the Invention in all foreign countries and all provisional, divisional, reissue, continuation, continuation-in-part applications and extensions of any of the applications for patent or LETTERS PATENT identified herein, including all applications claiming the priority of said applications for patent or LETTERS PATENT identified herein, and the right to apply for LETTERS PATENT in foreign countries with full benefit of such priorities as may now or hereafter be granted to Assignor by local laws or by treaty, including any international convention, for the protection of industrial property, together with the right to extend the protection of the United States LETTERS PATENT to the various territorial possessions now owned or which may be hereafter acquired by the United States of America. Assignee will hold all rights for its own use and benefit and for the use and benefit of its successors or assigns to the full end of the term for which the LETTERS PATENT may be granted, as fully and entirely as the same would have been held and enjoyed by Assignor if this assignment and sale had not been made. Assignor requests and authorizes the Commissioner of the U.S. Patent and Trademark Office, and foreign counterpart officials of foreign patent offices, to issue respective LETTERS PATENT in the United States and foreign countries when granted, in accordance with this assignment.

Assignor further covenants and agrees with the Assignee that Assignor has a full and unencumbered title to the Assignor's interest in the Invention, which title Assignor warrants to the Assignee. Assignor further agrees that Assignor will, without demanding any further consideration therefor, at the request and expense of the Assignee, do all lawful and just acts, including the execution and acknowledgment of instruments, that may be or become necessary for obtaining, sustaining, extending, reissuing or reexamining United States and foreign LETTERS PATENT or the like for the Invention, and for maintaining and perfecting the Assignee's right to the Invention and LETTERS PATENT particularly in cases of interference conflict, opposition and litigation.

Assignor authorizes and directs any of the attorneys responsible for prosecuting the subject application on behalf of the ASSIGNEE to insert the application number and filing date of the subject application in the final paragraph of this assignment.

IN **MESTIMONY WHEREOF**, I have signed this Assignment on the date specified below.

Amil J. John	már 1.31.17
Daniel L. Toberman	Date

Daniel L. Toberman

David L.	Fritsche	Da

Michael R. Miller

Date

Robert M. Wolfe

Date

ASSIGNMENT

WHEREAS, Daniel L. Toberman, residing at St. Charles, Missouri, David L. Fritsche, residing at Foristell, Missouri, Michael R. Miller, residing at Lake St. Louis, Missouri, and Robert M. Wolf, residing at Freeburg, Illinois (hereinafter "Assignor"), has invented certain new and useful inventions and improvements (hereinafter "Invention") described in the United States patent application entitled METHOD AND DEVICE FOR REMOVING MATERIAL FROM A SUBSTRATE for which Assignor is making or has made application for LETTERS PATENT OF THE UNITED STATES, which application has been duly executed by Assignor concurrently herewith;

WHEREAS, The Boeing Company, a corporation organized and existing under the laws of the State of Delaware, USA, having a place of business at 100 N. Riverside, Chicago, Illinois 60606-1596, with a mailing address of 5301 Bolsa Avenue, Huntington Beach, California, 92647, USA (hereinafter called "the Assignee"), is desirous of acquiring the entire right, title and interest in and to the Invention within the United States of America and its territorial possessions and all foreign countries, and in and to any United States or foreign LETTERS PATENT that may be granted therefor;

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, Assignor has assigned, sold and transferred, and does assign, sell and transfer to the Assignee, its successors and assigns, its entire right, title and interest in and to the Invention within the United States of America and its territorial possessions and all foreign countries, and in and to any LETTERS PATENT of the United States and foreign countries, including utility models, inventor's certificates and like government grants that may be granted for any and all portions thereof, and in and to the patent application identified above and applications for patent filed for the Invention in all foreign countries and all provisional, divisional, reissue, continuation, continuation-in-part applications and extensions of any of the applications for patent or LETTERS PATENT identified herein, including all applications claiming the priority of said applications for patent or LETTERS PATENT identified herein, and the right to apply for LETTERS PATENT in foreign countries with full benefit of such priorities as may now or hereafter be granted to Assignor by local laws or by treaty, including any international convention, for the protection of industrial property, together with the right to extend the protection of the United States LETTERS PATENT to the various territorial possessions now owned or which may be hereafter acquired by the United States of America. Assignee will hold all rights for its own use and benefit and for the use and benefit of its successors or assigns to the full end of the term for which the LETTERS PATENT may be granted, as fully and entirely as the same would have been held and enjoyed by Assignor if this assignment and sale had not been made. Assignor requests and authorizes the Commissioner of the U.S. Patent and Trademark Office, and foreign counterpart officials of foreign patent offices, to issue respective LETTERS PATENT in the United States and foreign countries when granted, in accordance with this assignment.

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IN TESTIMONY WHEREOF, I have signed this Assignment on the date specified below.

Daniel L. Toberman

Date

David L. Fritsche

Date

Michael R. Miller

Date

Robert M. Wolfe

Date

PATENT REEL: 041184 FRAME: 0850

ASSIGNMENT

WHEREAS, Daniel L. Toberman, residing at Chicago, Illinois, David L. Fritsche, residing at Chicago, Illinois, Michael R. Miller, residing at Chicago, Illinois and Robert M. Wolf, residing at Freeburg, Illinois (hereinafter "Assignor"), has invented certain new and useful inventions and improvements (hereinafter "Invention") described in the United States patent application entitled METHOD AND DEVICE FOR REMOVING MATERIAL FROM A SUBSTRATE for which Assignor is making or has made application for LETTERS PATENT OF THE UNITED STATES, which application has been duly executed by Assignor concurrently herewith;

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NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, Assignor has assigned, sold and transferred, and does assign, sell and transfer to the Assignee, its successors and assigns, its entire right, title and interest in and to the Invention within the United States of America and its territorial possessions and all foreign countries, and in and to any LETTERS PATENT of the United States and foreign countries, including utility models, inventor's certificates and like government grants that may be granted for any and all portions thereof, and in and to the patent application identified above and applications for patent filed for the Invention in all foreign countries and all provisional, divisional, reissue, continuation, continuation-in-part applications and extensions of any of the applications for patent or LETTERS PATENT identified herein, including all applications claiming the priority of said applications for patent or LETTERS PATENT identified herein, and the right to apply for LETTERS PATENT in foreign countries with full benefit of such priorities as may now or hereafter be granted to Assignor by local laws or by treaty, including any international convention, for the protection of industrial property, together with the right to extend the protection of the United States LETTERS PATENT to the various territorial possessions now owned or which may be hereafter acquired by the United States of America. Assignee will hold all rights for its own use and benefit and for the use and benefit of its successors or assigns to the full end of the term for which the LETTERS PATENT may be granted, as fully and entirely as the same would have been held and enjoyed by Assignor if this assignment and sale had not been made. Assignor requests and authorizes the Commissioner of the U.S. Patent and Trademark Office, and foreign counterpart officials of foreign patent offices, to issue respective LETTERS PATENT in the United States and foreign countries when granted, in accordance with this assignment.

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IN TESTIMONY WHEREOF, I have signed this Assignment on the date specified below.

Daniel L. Toberman	Date	David L. Fritsche	Date
Michael R.Milly	02/01/2011		
Michael R. Miller	Date	Robert M. Wolfe	Date

PATENT REEL: 041184 FRAME: 0851

ASSIGNMENT

WHEREAS, Daniel L. Toberman, residing at St. Charles, Missouri, David L. Fritsche, residing at Foristell, Missouri, Michael R. Miller, residing at Lake St. Louis, Missouri, and Robert M. Wolf, residing at Freeburg, Illinois (hereinafter "Assignor"), has invented certain new and useful inventions and improvements (hereinafter "Invention") described in the United States patent application entitled METHOD AND DEVICE FOR REMOVING MATERIAL FROM A SUBSTRATE for which Assignor is making or has made application for LETTERS PATENT OF THE UNITED STATES, which application has been duly executed by Assignor concurrently herewith;

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IN TESTIMONY WHEREOF, I have signed this Assignment on the date specified below.

Daniel L. Toberman

Date

David Date . Fritsche 2-6-2017 Date

Michael R. Miller

Date

Robert M. Wolfe



RECORDED: 02/06/2017