## 505209766 11/28/2018

# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5256534

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
PHILIP S. HILL	09/26/2018
POLLY H.R. KEEN	09/27/2018
JAMES R. SMITH	10/02/2018
THOMAS A. BEARD	10/01/2018

#### **RECEIVING PARTY DATA**

Name:	3M INNOVATIVE PROPERTIES COMPANY
Street Address:	P.O. BOX 33427
City:	SAINT PAUL
State/Country:	MINNESOTA
Postal Code:	55133-3427

#### **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	15773232

### **CORRESPONDENCE DATA**

**Fax Number:** (651)736-3833

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:** 651-733-1500

**Email:** jmcourtney@mmm.com

Correspondent Name: 3M INNOVATIVE PROPERTIES COMPANY

Address Line 1: P.O. BOX 33427

Address Line 4: SAINT PAUL, MINNESOTA 55133-3427

ATTORNEY DOCKET NUMBER:	77033US005
NAME OF SUBMITTER:	JOYCE M. COURTNEY
SIGNATURE:	/Joyce M. Courtney/
DATE SIGNED:	11/28/2018
	This document serves as an Oath/Declaration (37 CFR 1.63).

**Total Attachments: 4** 

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PATENT REEL: 047612 FRAME: 0639

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> PATENT REEL: 047612 FRAME: 0640

Case No:

77033US005

As a below named inventor, I believe I am an original inventor or an original joint inventor of a claimed invention in the application and for which a patent is sought on the invention entitled:

		COATED ABRA	SIVE ARTI	CLE
The	specification of wh	ich:		
	is attached hereto	· }		
X	was filed on	May 3, 2018	}	
Kunik	as United States A		·······························	15/773,232
TV	is identified as PC	T International Application No.		PCT/US2016/060455
biand	filed on	November 4, 2016		1. 4.3.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.
The	above-identified ap	pplication was made or authorized to	be made by	me.
		hat any willful false statement made not more than 5 years, or both.	in this declar	ation is punishable under 18 U.S.C. 1001 by
3M assistant control of the control	COMPANY, and a compan	corporation of Delaware, having its part, title, and interest in and to the said or in part) of said application, and in with others (provided any such improvement with 3M COMPANY and an aminations, reissues, or extensions to ght to apply for Letters Patent, Utility any priority rights for such foreign ans, treaties, or otherwise), which have in part), renewal, reexamination, rotion or improvements thereon, to be this assignment and transfer not bee	principal office invention and to any armovement is may of its existing the polications to been or may be led and and an made;	TES COMPANY, a wholly-owned subsidiary of at Saint Paul, Minnesota, its successors and application, and in and to any division or ad all improvements in the said invention made de during, or within one year after the g or future subsidiaries), and in and to any and United States of America and countries foreign twentors' Certificates in foreign countries in its which such applications are entitled under by be granted thereon or on any divisional, er or further application based in whole or in joyed as fully and exclusively as they would
con: that and	sideration any furth may be deemed no	er applications, assignments, and de acessary by said Company, its succ	ocuments, an essors, assigr	ors, to execute and deliver without further d to perform such other acts as I lawfully may, as, and nominees, fully to secure its right, title, Models, or Inventors' Certificates in any and all
grar		e said applications, to said 3M Innov		any and all Letters Patent which may be les Company, as the assignee of the entire right
Le	gal Name of Invent	or:		
p)	rilip S. Hill			unun
ĺη\	rentor's Signature:	v	Date:	
		and	, 27 .02	26/09/ <i>118</i>

PATENT REEL: 047612 FRAME: 0641

PKeen

Case No.

77033US005

	COATED ABRA	ASIVE ARTICLE
The specification of v	vhich:	
is attached here	rto;	
was filed on as United State	May 3, 2018 s Application No.	15/773,232
is identified as F	PCT International Application No. November 4, 2016	PCT/US2016/060455
The above-identified	application was made or authorized to	be made by me.
In addition, for good and do hereby assign 3M COMPANY, and assigns, the entire rig continuation (in whole by me or made jointly termination of, my en all Letters Patent, recthereto (including the own name and to clainternational convent continuation (in whole part upon the said invented in the said inv	of not more than 5 years, or both, and valuable consideration, receipt of and transfer unto the 3M INNOVATI a corporation of Delaware, having its sht, title, and interest in and to the said or in part) of said application, and in with others (provided any such impropolation with 3M COMPANY and are examinations, reissues, or extensions right to apply for Letters Patent, Utilitim any priority rights for such foreign alons, treaties, or otherwise), which have or in part), renewal, reexamination.	which is acknowledged. I have agreed to assign and transfer VE PROPERTIES COMPANY, a wholly-owned subsidiary of principal office at Saint Paul, Minnesota, its successors and invention and application, and in and to any division or and to any and all improvements in the said invention made overnent is made during, or within one year after the any of its existing or future subsidiaries), and in and to any and thereof, of the United States of America and countries foreign y Models, or Inventors' Certificates in foreign countries in its applications to which such applications are entitled under we been or may be granted thereon or on any divisional, reissue, or other or further application based in whole or in the held and enjoyed as fully and exclusively as they would in made;
consideration any fur that may be deemed and interest as afores countries; and I do hereby authorize	ther applications, assignments, and dinecessary by said Company, its succitation and to obtain or maintain Letters and request the Commissioner of Pathe said applications, to said 3M Innoversal	nd administrators, to execute and deliver without further ocuments, and to perform such other acts as I lawfully may, assors, assigns, and nominees, fully to secure its right, title, Patent, Utility Models, or Inventors' Certificates in any and all tents to issue any and all Letters Patent which may be rative Properties Company, as the assignee of the entire right
Legal Name of Inve		
Polly H.R. Keen		7,000
Inventor's Signature	<u> </u>	Date:

PATENT REEL: 047612 FRAME: 0642

27/3/16

Case No:

77033US005

As a below named inventor, I believe I am an original inventor or an original joint inventor of a claimed invention in the application and for which a patent is sought on the invention entitled:

	<del></del>	COATED ABRASIV	EARTICLE	
The	specification of wh	nich:		
	is attached hereto	$\mathbf{i}_{i_1}$		
	was filed on as United States	May 3, 2018	15/773,232	*****
		T international Application No.	PCT/US2016/060455	
	filed on	November 4, 2016		

The above-identified application was made or authorized to be made by me.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than 5 years, or both.

In addition, for good and valuable consideration, receipt of which is acknowledged, I 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 had this assignment and transfer not been made;

I do further agree for myself and for my 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 lawfully may, that may be deemed necessary by said Company, its successors, assigns, and nominees, fully to secure its right, titte, and interest as aforesaid and to obtain or maintain Letters Patent, Utility Models, or Inventors' Certificates in any and all countries; and

I 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.

Legal Name of Inventor:	
James R. Smith	
Inventor's Signature:	Date:
	02/10/2018

PATENT REEL: 047612 FRAME: 0643

Case No:

77033US005

As a below named inventor,	I believe I am an	original inventor	or an original	joint inventor of	a claimed invention i	n the
application and for which a p	atent is adught or	i the invention er	ntitled:			

		COATED ABRASIVE ARTI	CLE
The	specification of w	high;	
	is attached heret	o;	
[23]	was filed on as United States	May 3, 2018 Application No.	15/773,232
Ø	is identified as P filed on	CT International Application No. November 4, 2816	PCT/US2016/060455

I hereby acknowledge that any willful faise statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than 5 years, or both.

In addition, for good and valuable consideration, receipt of which is acknowledged. I 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 had this assignment and transfer not been made;

I do further agree for myself and for my 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 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

I 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.

Legal Name of Inventor:	
Thomas A. Beard	
Inventor's Signature:	Date:
	10/01/2018
	(MW/00/XXXX)

**PATENT** REEL: 047612 FRAME: 0644

**RECORDED: 11/28/2018**