#### 12/07/2018 505226083

# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5272852

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

### **CONVEYING PARTY DATA**

Name	Execution Date
ADAM J. MEULER	10/12/2018
DANIEL J. SCHMIDT	10/11/2018
YUGEUN P. YANG	11/28/2018
PAUL D. GRAHAM	10/09/2018
DAVID A. NETTLESHIP	11/29/2018
PHILIP S. HILL	10/10/2018

## **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:	16066493

## **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

jmcourtney@mmm.com Email:

3M INNOVATIVE PROPERTIES COMPANY **Correspondent Name:** 

Address Line 1: P.O. BOX 33427

Address Line 4: SAINT PAUL, MINNESOTA 55133-3427

ATTORNEY DOCKET NUMBER:	76925US008	
NAME OF SUBMITTER: JOYCE M. COURTNEY		
SIGNATURE:	/Joyce M. Courtney/	
<b>DATE SIGNED:</b> 12/07/2018		
This document serves as an Oath/Declaration (37 CFR 1.63).		

**PATENT** REEL: 047711 FRAME: 0124

505226083

## **Total Attachments: 6**

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Case No:

76925US008

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:

		ABRASIVE	ARTICLE	
The	specification of wh	nich:	***************************************	
	is attached hereto	3 <sub>k</sub> .		
$\boxtimes$	was filed on	June 27, 2018		
	as United States	Application No.		16/066,493
		T International Application No.		PCT/US2016/069127
	filed on	December 29, 2016		
The	above-identified a	pplication was made or authorized to	be made by r	ne.
her fine	eby acknowledge or imprisonment o	that any willful false statement made f not more than 5 years, or both.	in this declar	ation is punishable under 18 U.S.C. 1001 by
and 3M ( assignment by mall Lithere own inter cont part part	do hereby assign a COMPANY, and a gns, the entire righ inuation (in whole he or made jointly vination of, my empetters Patent, reex ato (including the riname and to claim national conventio inuation (in whole been by me had a convention to the said invertion of th	and transfer unto the 3M INNOVATIVe 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 improvious propert with 3M COMPANY and any aminations, reissues, or extensions the ight to apply for Letters Patent, Utility in any priority rights for such foreign ans, treaties, or otherwise), which have or in part), renewal, reexamination, resultion or improvements thereon, to be this assignment and transfer not been	/E PROPERT principal office invention and and to any of its existing hereof, of the Models, or in applications to been or majorsule, or other held and enjoy made;	owledged, I have agreed to assign and transfer IES COMPANY, a wholly-owned subsidiary of at Saint Paul, Minnesota, its successors and application, and in and to any division or d 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 ventors' Certificates in foreign countries in its which such applications are entitled under y be granted thereon or on any divisional, are or further application based in whole or in oyed as fully and exclusively as they would burs, to execute and deliver without further
cons that and	sideration any furth may be deemed n	er applications, assignments, and do ecessary by said Company, its succe	icuments, and issors, assign	to perform such other acts as I lawfully may, s, and nominees, fully to secure its right, title, woodels, or Inventors' Certificates in any and all
gran	hereby authorize a ted upon any of th and interest therei	e said applications, to said 3M Innova	ents to issue a ative Propertie	any and all Letters Patent which may be as Company, as the assignee of the entire right,
Leg	jal Name of Invent	or:		
Ad	iam J. Meuler			none.
inv	entor's Signature:		Date:	
		Werlen		112/2018

DECLARATION AND ASSIGNMENT,	
FOR UTILITY OR DESIGN	
PATENT APPLICATION (37 CFR § 1.63	Ì

Case No:

76925US008

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:

		ABR	ASIVE ARTICLE	
he	specification of wi	nich:		
	is attached heret	<b>ɔ</b> ;		
Ø	was filed on as United States	June 27, 2018 Application No.		18/066,493
$\boxtimes$	is identified as Po	CT International Application N December 29, 2016	40.	PCT/US2016/069127
The	above-identified a	pplication was made or author	orized to be made by	me.
ine n according to a second of the control of the c	or imprisonment of dition, for good a do hereby assign COMPANY, and a gns, the entire right inuation (in whole he or made jointly ination of, my empeters Patent, rees to (including the name and to clair mational conventionation (in whole upon the said invested been by me had	of not more than 5 years, or build valuable consideration, reand transfer unto the 3M INN corporation of Delaware, have title, and interest in and to or in part) of said application with others (provided any succeivement with 3M COMPANY caminations, reissues, or extended to apply for Letters Patern any priority rights for such fors, treaties, or otherwise), wor in part), renewal, reexamination or improvements there this assignment and transfer	ceipt of which is acknown to ATIVE PROPERT ving its principal office the said invention and and in and to any and in and to any and in any of its existing and any of its existing the complex of the int, Utility Models, or inforeign applications to hich have been or manation, reissue, or other, to be held and enjunct been made;	owledged, I have agreed to assign and transfer IES COMPANY, a wholly-owned subsidiary of at Saint Paul, Minnesota, its successors and diapplication, and in and to any division or dial improvements in the said invention made deduring, or within one year after the gior future subsidiaries), and in and to any and United States of America and countries foreign eventors' Certificates in foreign countries in its which such applications are entitled under by the granted thereon or on any divisional, er or further application based in whole or in oyed as fully and exclusively as they would
cons hat and	sideration any furti may be deemed r	ner applications, assignments recessary by said Company,	s, and documents, and its successors, assign	ors, to execute and deliver without further if to perform such other acts as I lawfully may, is, and nominees, fully to secure its right, title, Models, or Inventors' Certificates in any and all
gran		ne said applications, to said 3		any and all Letters Patent which may be es Company, as the assignee of the entire right,
Le	gal Name of Inven	tor:		
Da	ıniel J. Schmi	it		
Jny	entor's Signature		Date	7 7
	Dain.	I Land	10/	/u/2018

Case No:

76925US008

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;

	ABRASI	VE ARTICLE
The specific	ation of which:	
is attac	hed hereto;	
was file	ed on June 27, 2018 ed States Application No.	16/066,493
	ified as PCT International Application No.	PCT/US2016/069127
	dentified application was made or authorized	
	inowledge that any willful false statement ma sonment of not more than 5 years, or both.	ade in this declaration is punishable under 18 U.S.C. 1001 by
continuation by me or ma termination all Letters P thereto (incli- bown name a international continuation part upon th	(in whole or in part) of said application, and ade jointly with others (provided any such import, my employment with 3M COMPANY and atent, reexaminations, reissues, or extension uding the right to apply for Letters Patent, Ut and to claim any priority rights for such foreig I conventions, treaties, or otherwise), which I (in whole or in part), renewal, reexamination	aid invention and application, and in and to any division or in and to any and all improvements in the said invention made provement is made during, or within one year after the any of its existing or future subsidiaries), and in and to any and as thereof, of the United States of America and countries foreign illity Models, or Inventors' Certificates in foreign countries in its in applications to which such applications are entitled under have been or may be granted thereon or on any divisional, in, reissue, or other or further application based in whole or in the behalf and enjoyed as fully and exclusively as they would been made;
consideratio that may be	n any further applications, assignments, and deemed necessary by said Company, its su as aforesaid and to obtain or maintain Lette	and administrators, to execute and deliver without further documents, and to perform such other acts as I lawfully may, accessors, assigns, and nominees, fully to secure its right, title, rs Patent, Utility Models, or Inventors' Certificates in any and all
granted upo		Patents to issue any and all Letters Patent which may be novative Properties Company, as the assignee of the entire right,
Legal Nam	e of Inventor;	
Yugeun		
Inventor's	Signature:	Date:
Yuge	un Petr Yang	November 28 2018

Case No:

76925US008

As a below named inventor, I believe I am an i	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:		

	ABRASIVE A	ARTICLE	
The	specification of which;		***************************************
	is attached hereto;		
$\boxtimes$	was filed on June 27, 2018		
	as United States Application No.	16/066,493	
$\boxtimes$	is identified as PCT International Application No.	PCT/US2016/069127	
	filed on December 29, 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 fransfer 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:	
Paul D. Graham	
Inventor's Signature:	Date
Paul J. Graham	09 067 2018

Case No:

76925US008

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:

	ABRASIVE ARTICLE	
The	specification of which:	
	is attached hereto;	
Ø	was filed on June 27, 2018 as United States Application No.	16/068,493
Ø	is identified as PCT International Application No. filed on December 29, 2015	PCT/US2016/069127

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, title, and interest as aforeseid 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: David A. Nettleship	
Inventor's Signature:	Date:
I Newbolip	29/11/18

**REEL: 047711 FRAME: 0130** 

Case No:

76925US008

Asab	elow	named	invento	r, i believe	i am a	n origina	inventor	or an	original	joint invento	rofa	claimed	invention	in the
applica	ation a	and for	which a	patent is s	ought c	in the inv	ention er	ititled:						

	ABRASIVE ARTICLE	
The	specification of which:	
	is attached hereto;	
Ø	was filed on June 27, 2018 as United States Application No.	16/068,493
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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:	
Philip S. Hill	
Inventor's Signature:	Dats:
PROBLE	10/12/2018

PATENT REEL: 047711 FRAME: 0131

**RECORDED: 12/07/2018**