505091160 09/12/2018

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5137919

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
ATSUSHI ONO	09/07/2018
NOBORU IWATA	09/11/2018
YUJI SAITO	08/09/2018
KENTARO TAMURA	08/01/2018

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:	16074823

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: hhfroelke1@mmm.com

Correspondent Name: 3M INNOVATIVE PROPERTIES COMPANY

Address Line 1: P.O. BOX 33427

Address Line 4: ST. PAUL, MINNESOTA 55133-3427

ATTORNEY DOCKET NUMBER:	77479US005
NAME OF SUBMITTER:	HYLIS H. FROELKE
SIGNATURE:	/Hylis H. Froelke/
DATE SIGNED:	09/12/2018

Total Attachments: 4

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PATENT 505091160 REEL: 046856 FRAME: 0229

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PATENT REEL: 046856 FRAME: 0230

Case No:

77479US005

E	ISPLA	Y DEVICE AND INFR	ARED LIGH	IT-CUTTING FILM
The specification of whi			***************************************	
is attached hereto;				
☐ was filed on as United States A	pplicatio	п No,		
is identified as PC filed on		tional Application No. UARY 2017		PCT/US2017/015615
The above-identified ap	plication	was made or authorized t	o be made by r	ne.
fine or imprisonment of in addition, for good and and do hereby assign at 3M COMPANY, and a cassigns, the entire right, continuation (in whole or by me or made jointly witermination of, my emploal Letters Patent, reexauthereto (including the right) own name and to claim international conventionation (in whole or part upon the said inventionate been by me had the do further agree for my consideration any further that may be deemed negand interest as aforesaid countries; and do hereby authorize and granted upon any of the itte, and interest therein.	not more I valuable or transfer orporation title, and r in part) ith others oyment we mination to app any prior s, treaties in part) tion or in is assign self and r applicate cessary to d reques said app	than 5 years, or both. e consideration, receipt of er unto the 3M INNOVATI in of Delaware, having its of said application, and in a (provided any such improvided any such improvided any such improvided any such improvided any such improvith 3M COMPANY and ar s, reissues, or extensions aly for Letters Patent, Utilit ity rights for such foreign a s, or otherwise), which have renewal, reexamination, and improvements thereon, to be imment and transfer not been for my heirs, executors, and do said Company, its succeptain or maintain Letters at the Commissioner of Pa	which is acknown VE PROPERTI principal office of invention and and to any and overment is made over the reof, of the lambda was a polications to be been or may reissue, or other and administrate ocuments, and essors, assigns Patent, Utility Materials to issue a second acknown to the lambda was a polication to	wledged, I have agreed to assign and transfer ES COMPANY, a wholly-owned subsidiary of at Saint Paul, Minnesota, its successors and application, and in and to any division or it all improvements in the said invention made le during, or within one year after the 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 to be granted thereon or on any divisional, or or further application based in whole or in one as fully and exclusively as they would be rs, to execute and deliver without further to perform such other acts as I lawfully may, and nominees, fully to secure its right, title, hodels, or inventors' Certificates in any and all any and all Letters Patent which may be a Company, as the assignee of the entire right,
Legal Name of Inventor Atsushi ONO	•:			nie de la constante de la cons
Inventor's Signature:			Date:	
小野家	之司			1917

PATENT REEL: 046856 FRAME: 0231

Case No:

77479US005

w named inventor, i beli n and for which a patent			joint inventor of	a claimed i	nvention in the
 DISPLAY	DEVICE AND INF	RARED LIGHT-C	CUTTING FIL	M	

DISPLAY DEVICE AND INFRARED LI	GHT-CUTTING FILM
The specification of which: ☐ is attached hereto;	
was filed on as United States Application No.	
is identified as PCT International Application No. filed on 30 JANUARY 2017	PCT/US2017/015615

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 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:	3.000.000 W 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Noboru IWATA	
Inventor's Signature:	Date:
natura Linato	2018. Sept. 11

Case No:

77479US005

I	DISPLAY	DEVICE AND INF	RARED LIGH	IT-CUTTING	G FILM	
The specification of wh						
is attached hereto	er r					
was filed on						
as United States A	pplication N	0.				
is identified as PC	T Internation	al Application No.		PCT/US201	7/015646	
filed on	30 JANUA			,	11010010	
The above-identified ap	plication was	s made or authorized	to be made by n	ne:		
I hereby acknowledge the fine or imprisonment of the addition, for good and and do hereby accounts	not more ins	n o years, or both				
3M COMPANY, and a c assigns, the entire right, continuation (in whole or by me or made jointly wittermination of, my employed all Letters Patent, reexait thereto (including the rigown name and to claim a international conventions continuation (in whole or part upon the said invent have been by me had this I do further agree for my consideration any further that may be deemed nec and interest as aforesaid	orporation of title, and interior part) of sith others (proyment with iminations, reht to apply foany priority ris, treaties, or in part), rention or improsis assignment applications ressary by satessary by satessary by sates	THE SM INNOVALING THE SM INNOV	IVE PROPERTI s principal office and invention and round and and enjourn and administrator documents, and the ressure assigns	ES COMPAN' at Saint Paul, application, as all improvem le during, or w or future subs Juited States ventors' Certifi which such app be granted the r or further app yed as fully as s, to execute	Y, a wholly-owner Minnesota, its sund in and to any ents in the said in thin one year afficies), and in of America and cates in foreign of plications are entered or on any plication based in and deliver without the other acts as a fully to a said and the cates as a fully to a said and the cates as a fully to a said and the cates as a fully to a said and the cates as a fully to a said and the cates as a fully to a said and the cates as a fully to a said and the cates as a fully and the cates and	ed subsidiary of accessors and division or nvention made ter the and to any and countries foreign countries in its titled under divisional, a whole or in they would but further lawfully may.
countries, and						
I do hereby authorize and granted upon any of the stitle, and interest therein.	d request the said applicat	Commissioner of Pa ons, to said 3M Inno	atents to issue ar vative Properties	ny and all Lette Company, as	ers Patent which s the assignee of	may be the entire right,
Legal Name of Inventor:			annimina de la companya de la compa			***************************************
Yuji SAITO						
Inventor's Signature:			Date:	······································	······································	
M		2 -2-7f	Aug	wt 9,	, 2018	· ·

PATENT REEL: 046856 FRAME: 0233

Case No:

77479US005

	DISPLAY DEV	VICE AND INFRAR	ED LIGHT-CUTTING FILM	······································
The specification o		***************************************		
is attached he	reto;			
was filed on as United Stat	es Application No.			
is identified as filed on	PCT International A	pplication No. 2017	PCT/US2017/01561	5
The above-identifie	d application was ma	ade or authorized to be r	made by me.	
3M COMPANY, and assigns, the entire recontinuation (in who by me or made joint ermination of, my enall Letters Patent, rehereto (including the own name and to clanternational conventional conventional upon the said in lave been by me had do further agree for onsideration any furnat may be deemed and interest as aforest ountries; and	a corporation of Delight, title, and interest le or in part) of said a y with others (provide apployment with 3M Comment with 3M Comment with 3M Comment and priority rights ions, treaties, or other or in part), renewal wention or improvement and this assignment and myself and for my he ther applications, assigned and to obtain or it and request the Comment and Indiana and Ind	laware, having its principal to and to the said inverse application, and in and the dany such improvement company of its principal to any such improvement company and any of its principal to a company and any of its principal to a company and any of its principal to a company and any of principal to any of principal to a company and any of the company	n is acknowledged, I have agree ROPERTIES COMPANY, a who pal office at Saint Paul, Minneso nation and application, and in and to any and all improvements in the sexisting or future subsidiaries) of, of the United States of Americales, or Inventors' Certificates in fations to which such applications on may be granted thereon or e, or other or further application I and enjoyed as fully and exclusively. I and to perform such other a to, assigns, and nominees, fully to Utility Models, or Inventors' Certificates in the control of	ly-owned subsidiary of its, its successors and to any division or e said invention made year after the and in and to any and a and countries foreign oreign countries in its are entitled under on any divisional, based in whole or in ively as they would er without further cts as I lawfully may, secure its right, title, tificates in any and all
le, and interest there	**************************************			
to hereby authorize anted upon any of the letter and interest them egal Name of Inversentary TAMUR	tor:			

PATENT REEL: 046856 FRAME: 0234

RECORDED: 09/12/2018