01/18/2017 504183078

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4229756

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Paul FLETCHER	01/04/2017
Paul WILSON	01/11/2017

RECEIVING PARTY DATA

Name:	Rolls-Royce Plc		
Street Address: 62 Buckingham Gate			
City: London			
State/Country:	Great Britain		
Postal Code:	SW1E 6AT		

PROPERTY NUMBERS Total: 1

Property Type	Number	
Application Number:	15408180	

CORRESPONDENCE DATA

Fax Number: (703)836-2787

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: 703-836-6400 Email: email@oliff.com **Correspondent Name:** JAMES A. OLIFF Address Line 1: OLIFF PLC

Address Line 2: P.O. BOX 320850

Address Line 4: ALEXANDRIA, VIRGINIA 22320-4850

ATTORNEY DOCKET NUMBER:	174628
NAME OF SUBMITTER:	IFETAYO SIMMONS
SIGNATURE:	/ifetayo simmons/
DATE SIGNED:	01/18/2017

Total Attachments: 4

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> **PATENT** REEL: 041003 FRAME: 0465

504183078

ASSIGNMENT (BEING FILED FOR DUAL PURPOSE UNDER 37 CFR 1.63(e)) For Application with Filing Date on or after September 16, 2012

ASSIGNMENT

FLETCHER, Paul

Insert Legal Name(s) of

representatives.

(1.9)

(1-0)	Inventor(s)		WILSON, Paul
			ar (\$1.00) and other good and valuable consideration paid to each of the undersigned, the receipt and veledged, each undersigned agrees to assign, and hereby does assign, transfer and set over to
(9)	Insert Name of Assig	gnee	ROLLS-ROYCE plc
(10)	Insert Address of As	ssignee	62 Buckingham Gate, London, SW1E 6AT, Great Britain
	for the United States of Ameri provisional, non-provisional, o	ica as defi livisional	and Assignee's heirs, successors, assigns and legal representatives, the entire right, title and interest ined in 35 U.S.C. §100, in the invention, and in all applications for patent including any and all continuation, international, confirmation, substitute and reissue application(s), and all Letters ination certificates that may be granted on the invention known as
(11)	Insert Identification such as Title, Case	(11)	Bearing Arrangements
	Number, or Foreign		6041 LMT
	Application Number	(Attor	rney Docket No. 174628
(12)	Alternative	(12)	U.S. Application Number 15/408, 180
	Identification for filed applications	filed	January 17, 2017
	for the invention and as the Assignee may of 2) Each undersigned as be declared concerning every way possible in 3) Each undersigned as necessary in connection Industrial Property or 4) Each undersigned as confirm by reissue or 5) Each undersigned as	also to deem negrees to g any a obtaining ees to be with similar grees to reexamuthorize	execute all papers necessary in connection with any interference which may pplication or patents for the invention and to cooperate with the Assignee in ing evidence and going forward with such interference. execute all papers and documents and perform any act which may be claims or provisions of the International Convention for Protection of

as Assignee of the entire interest, and covenants that he has full right to convey the entire interest herein assigned, and that he has not executed, and will not execute, any agreement(s) in conflict herewith, and agrees that this assignment is binding on Assignor and Assignor's heirs, successors, assigns and legal

6) Each undersigned hereby grants the firm of **Oliff plc** the power to insert on this assignment any further identification that may be necessary or desirable in order to comply with the rules of the United States

Patent and Trademark Office for recordation of this document.

PATENT REEL: 041003 FRAME: 0466

(13) Declaration

As an above named inventor, I hereby declare that:

I believe I am the original inventor or an original joint inventor of a claimed invention (or claimed design) in the above-identified application for which this declaration is being submitted.

The application was made or authorized to be made by me.

I have reviewed and understand the contents of the above-identified application, including the claims, and am aware of the duty to disclose to the Office all information known to me to be material to patentability as defined in 37 CFR §1.56.

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 five (5) years, or both.

In witness whereof, executed by the undersigned on the date opposite the undersigned name.

\$88.54C.883C	DB.		
(l'rint :	www. WILSON, Paul		
Date	Let January 2017	Inventor Signature	(SEAL)
Consu		e signed before: (a) a Notary Public if within the U.S.A. (b) a L i it should be signed before at least two witnesses who also sign	
Date	45 JAHUARY 2017	Witness	
Date	4TH JANUARY 2017	Witness Hard	

ASSIGNMENT (BEING FILED FOR DUAL PURPOSE UNDER 37 CFR 1.63(e)) For Application with Filing Date on or after September 16, 2012

ASSIGNMENT

(1-8)	y		FLETCHER, Paul		
(1-0)			WILSON, Paul		
	In consideration of the sum of sufficiency of which are hereb	one dolla y acknov	ar (\$1.00) and other good and valuable consideration paid to each of the undersigned, the receipt a wledged, each undersigned agrees to assign, and hereby does assign, transfer and set over to	and	
(9)	Insert Name of Assignee		ROLLS-ROYCE plc		
(10)	Insert Address of Assignee		62 Buckingham Gate, London, SW1E 6AT, Great Britain		
	provisional, non-provisional,	ica as defi divisional	and Assignee's heirs, successors, assigns and legal representatives, the entire right, title and intendined in 35 U.S.C. §100, in the invention, and in all applications for patent including any and all continuation, international, confirmation, substitute and reissue application(s), and all Letters ination certificates that may be granted on the invention known as	est	
(11)	Insert Identification	(11)	Bearing Arrangements		
	such as Title, Case Number, or Foreign		6041 LMT		
	Application Number	(Attor	mey Docket No.		
(12)	Alternative	(12)	U.S. Application Number		
	Identification for				
	filed applications	filed			
	for the invention and a as the Assignee may d 2) Each undersigned ag be declared concerning every way possible in 3) Each undersigned ag necessary in connection Industrial Property or 4) Each undersigned ag confirm by reissue or a confirm by reissue or a standard and the invention of the entities as Assignee of the entities as Assignee, and that he hagrees that this assigning representatives. 6) Each undersigned he identification that may	eem ne grees to g any a obtaini grees to on with similar rees to reexami thorize es to iss are inter- ias not a ment is	execute all papers necessary in connection with any interference which may pplication or patents for the invention and to cooperate with the Assignee in ng evidence and going forward with such interference. execute all papers and documents and perform any act which may be claims or provisions of the International Convention for Protection of	ts	

PATENT REEL: 041003 FRAME: 0468

(13) Declaration

As an above named inventor, I hereby declare that:

I believe I am the original inventor or an original joint inventor of a claimed invention (or claimed design) in the above-identified application for which this declaration is being submitted.

The application was made or authorized to be made by me.

I have reviewed and understand the contents of the above-identified application, including the claims, and am aware of the duty to disclose to the Office all information known to me to be material to patentability as defined in 37 CFR $\S 1.56$.

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 five (5) years, or both.

In witness whereof, executed by the undersigned on the date opposite the undersigned name.

Inven	tor				
(Print	rname) FLETCHER, Paul				
Date	11 January 2017	Inventor Signature	Paul Fle	teher	_ (SEAL)
Cons	This assignment should preferably be ul if outside the U.S.A. If neither, ther	e signed before: (a n it should be signe) a Notary Public if with d before at least two wit	uin the U.S.A. (b) a tnesses who also si	U.S. gn here:
Date	11 January 2017	Witness	\$1	GEORGE	LOWE
Date	11 Sanuary 2017	Witness	AMALA	AHMED.	RAZAK

PATENT REEL: 041003 FRAME: 0469

RECORDED: 01/18/2017