## 503152208 01/27/2015 PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3198821

	SUBMISSION TYPE:		NEW ASSIGNMENT		
NATURE OF CONVEYANCE:		ASSIGNMENT	ASSIGNMENT		
CONVEYING PART	Υ ΟΑΤΑ				
		Name	Execution Date		
David SAVINGS			12/05/2014		
David WIMPENNY			12/18/2014		
RECEIVING PARTY	΄ DATA				
Name:	Rolls-F	Royce plc			
Street Address:	62 Buc	kingham Gate			
City:	Londor	n			
State/Country:	Great I	Britain			
Postal Code:	SW1E	6AT			
	EPS Total: 1				
Property Ty		Number			
	•	14408837			
Application Number:1440		14400037			
	E DATA				
CORRESPONDENC	E DATA	(703)836-2787			
CORRESPONDENC Fax Number: <i>Correspondence w</i>	vill be sent to	o the e-mail address first; if that	t is unsuccessful, it will be sent be sent via US Mail.		
CORRESPONDENC Fax Number: <i>Correspondence w using a fax number</i> Phone:	vill be sent to	o the e-mail address first; if that d; if that is unsuccessful, it will 703-836-6400	t is unsuccessful, it will be sent be sent via US Mail.		
CORRESPONDENC Fax Number: <i>Correspondence w using a fax number</i> Phone: Email:	ill be sent to r, if provided	o the e-mail address first; if that d; if that is unsuccessful, it will 703-836-6400 email@oliff.com	t is unsuccessful, it will be sent be sent via US Mail.		
CORRESPONDENC Fax Number: <i>Correspondence w using a fax number</i> Phone: Email: Correspondent Nar	ill be sent to r, if provided	o the e-mail address first; if that d; if that is unsuccessful, it will 703-836-6400 email@oliff.com JAMES A. OLIFF	t is unsuccessful, it will be sent be sent via US Mail.		
CORRESPONDENC Fax Number: <i>Correspondence w using a fax number</i> Phone: Email: Correspondent Nar Address Line 1:	ill be sent to r, if provided	o the e-mail address first; if that d; if that is unsuccessful, it will 703-836-6400 email@oliff.com JAMES A. OLIFF OLIFF PLC	t is unsuccessful, it will be sent be sent via US Mail.		
CORRESPONDENC Fax Number: <i>Correspondence w using a fax number</i> Phone: Email: Correspondent Nar Address Line 1: Address Line 2:	ill be sent to r, if provided	o the e-mail address first; if that d; if that is unsuccessful, it will 703-836-6400 email@oliff.com JAMES A. OLIFF OLIFF PLC P.O. BOX 320850	be sent via US Mail.		
CORRESPONDENC Fax Number: <i>Correspondence w using a fax number</i> Phone: Email: Correspondent Nar Address Line 1:	ill be sent to r, if provided	o the e-mail address first; if that d; if that is unsuccessful, it will 703-836-6400 email@oliff.com JAMES A. OLIFF OLIFF PLC	be sent via US Mail.		
CORRESPONDENC Fax Number: <i>Correspondence w using a fax number</i> Phone: Email: Correspondent Nar Address Line 1: Address Line 2:	vill be sent to r, if provided me:	o the e-mail address first; if that d; if that is unsuccessful, it will 703-836-6400 email@oliff.com JAMES A. OLIFF OLIFF PLC P.O. BOX 320850 ALEXANDRIA, VIRGINIA 22320-	be sent via US Mail.		
CORRESPONDENC Fax Number: <i>Correspondence w</i> <i>using a fax number</i> Phone: Email: Correspondent Nar Address Line 1: Address Line 2: Address Line 4:	rill be sent to r, if provided me: T NUMBER:	o the e-mail address first; if that d; if that is unsuccessful, it will 703-836-6400 email@oliff.com JAMES A. OLIFF OLIFF PLC P.O. BOX 320850 ALEXANDRIA, VIRGINIA 22320-	be sent via US Mail.		
CORRESPONDENC Fax Number: <i>Correspondence w</i> <i>using a fax number</i> Phone: Email: Correspondent Nar Address Line 1: Address Line 2: Address Line 4:	rill be sent to r, if provided me: T NUMBER:	o the e-mail address first; if that d; if that is unsuccessful, it will 703-836-6400 email@oliff.com JAMES A. OLIFF OLIFF PLC P.O. BOX 320850 ALEXANDRIA, VIRGINIA 22320- 164225	be sent via US Mail.		

source=1.27.15 164225 Assignment#page1.tif

source=1.27.15 164225 Assignment2#page1.tif

		ASSIGNMENT			
		(1) <u>David SAVINGS</u> (4) <u>David WIMPENNY</u>			
(1-8)	Insert Name(s) of Inventor(s)	(2) (5)			
		(3) (6)			
		In consideration of the sum of one dollar (\$1.00) and other good and valuable consideration paid to each of the undersigned, each undersigned agrees to assign, and hereby does assign, transfer and set over to			
(9)	Insert Name of Assignce	(9) Rolls-Royce plc			
(10)	Insert Address of Assignce	(10) 65 Buckingham Gate. London SWIE 6AT. Great Britain			
		(hereinafter designated as the Assignee) and Assignee's heirs, successors, assigns and legal representatives, the entire right, title and interest for the United States of America as defined in 35 U.S.C. §100, in the invention, and in all applications for patent including any and all provisional, non-provisional, divisional, continuation, international, confirmation, substitute and reissue application(s), and all Letters Patent, extensions, reissues and reexamination certificates that may be granted on the invention known as			
Ident	Insert Identification such as Tille, Case Number, or Foreign	(11) A Method and Apparatus for Making An Object			
	Application Number	(Attorney Docket No. 164225 )			
		for which the undersigned has (have) executed an application for patent in the United States of America on even date herewith or			
(12)	Insert Date of Signing of Application	(12) on			
(13)	Alternative Identification for filed applications	(13) U.S. application Serial Number 14/408,837			
		filed December 19, 2014			
and pat- applicat Assigne claims (	ions for the invention, and as ents as the Assignee may dee 2) Each undersigned agree- ion or continuation or divisit e in every way possible in 3) Each undersigned agree- or provisions of the Internatio 4) Each undersigned agrees	o execute all papers necessary in connection with any application and any continuing, divisional or reissue patent(s) issuing thereon, and also to execute separate assignments in connection with such applications necessary. In execute all papers necessary in connection with any interference which may be declared concerning any thereof, or any patent or reissue application based thereon, for the invention, and to cooperate with the all ning evidence and going forward with such interference. In execute all papers and documents and perform any act which may be necessary in connection with al Convention for Protection of Industrial Property or similar agreements. In particular distinguisher acts which may be necessary to obtain, maintain or confirmt by reissue or distance patent to the designee.			

5) Each undersigned authorizes and requests the Commissioner of the U.S. Patent and Trademark Office to issue any and all Letters Patents of the United States resulting from said application(s) to the said Assignee, 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 agreements in conflict herewith, and agrees that this assignment is binding on him and his heirs, successors, assigns and legal representatives.

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.

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

Date	Sth Decentere 2014	Inventor Signature David SAVINGS	<u>No</u>	(SEAL)
Date		Inventor Signature David		(SEAL)
		WIMPENNY		

This assignment should preferably be signed before: (a) a Notary Public if within the U.S.A. (b) a U.S. Consul if outside the U.S.A. If neither, then it should be signed before at least two witnesses who also sign here:

Date	5th December Zout	Witness(es) for for David SAVINGS	Granne Leter.
Dute	Sth December 2014	Witness(es) for for David SAVINGS	N. DoelAade.
Date		Witness(es) for for Dovid WIMPENNY	
Date		Witness(cs) for for David WIMPENNY	

		ASSIGNMENT
		(1) <u>David SAVINGS</u> (4) <u>David WIMPENNY</u>
Name	Insert	(2) (5)
	Name(s) of Inventor(s)	(3) (6)
		In consideration of the sum of one dollar (\$1.00) and other good and valuable consideration paid to each of the undersigned, each undersigned agrees to assign, and hereby does assign, transfer and set over to
(9)	Insert Name of Assignee	(9) Rolls-Royce plc
(10)	Insert Address of Assignee	(10) 65 Buckingham Gate, London SW1E 6AT, Great Britain
(11)	Insert Identification such as Title, Case	(hercinafter designated as the Assignee) and Assignee's beits, successors, assigns and legal representatives, the entire right, title and interest for the United States of America as defined in 35 U.S.C. §100, in the invention, and in all applications for patent including any and all provisional, non-provisional, divisional, continuation, international, confirmation, substitute and reissue application(s), and all Letters Patent, extensions, reissues and reexamination certificates that may be granted on the invention known as (11) <u>A Method and Apparatus for Making An Object</u>
	Number, or Foreign Application Number	(Attorney Docket No. 164225 )
		for which the undersigned has (have) executed an application for patent in the United States of America on even date herewith or
(12)	Insert Date of Signing of Application	(12) on
(13)	Alternative	(13) U.S. application Serial Number <u>14/408,837</u>
	Identification for filed applications	filed December 19, 2014

1) Each undersigned agrees to execute all papers necessary in connection with any application and any continuing, divisional or reissue applications for the invention, and any patent(s) issuing thereon, and also to execute separate assignments in connection with such applications and patents as the Assignee may deem necessary,

2) Each undersigned agrees to execute all papers necessary in connection with any interference which may be declared concerning any application or continuation or division thereof, or any patent or reissue application based thereon, for the invention, and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference.
 3) Each undersigned agrees to execute all papers and documents and perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.

4) Each undersigned agrees to perform all affirmative acts which may be necessary to obtain, maintain or confirm by reissue or reexamination a grant of a valid United States patent to the Assignce.

5) Each undersigned authorizes and requests the Commissioner of the U.S. Patent and Trademark Office to issue any and all Letters Patents of the United States resulting from said application(s) to the said Assignee, 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 agreements in conflict herewith, and agrees that this assignment is binding on him and his heirs, successors, assigns and legal representatives.

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.

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

Date		Inventor Signature David SAVINGS		(SEAL)
Date	18 " December 2014	Inventor Signature David WIMPENNY	D-1-	(SEAL)

This assignment should preferably be signed before: (a) a Notary Public if within the U.S.A. (b) a U.S. Consul if outside the U.S.A. If neither, then it should be signed before at least two witnesses who also sign here:

Date		Witness(es) for for David SAVINGS
Date		Witness(es) for for David SAVINGS
Date	18th December 2014	Witness(es) for for David WIMPENNY
Date	18" DECEMBER 2014	Witness(es) for for David WIMPENNY

## **RECORDED: 01/27/2015**