PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
JEFFREY A. WALSTON	02/07/2017
AARON D. SIPPEL	02/08/2017
JOHN A. WEAVER	01/03/2018
DAVID J. THOMAS	01/08/2018

RECEIVING PARTY DATA

Name:	ROLLS-ROYCE CORPORATION
Street Address:	450 S. MERIDIAN STREET
City:	INDIANAPOLIS
State/Country:	INDIANA
Postal Code:	46225

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14972568

CORRESPONDENCE DATA

Fax Number: (317)231-7433

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.

Email: aholt@btlaw.com

Correspondent Name: BARNES & THORNBURG LLP Address Line 1: 11 S. MERIDIAN STREET

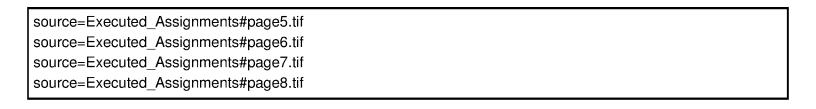
Address Line 4: INDIANAPOLIS, INDIANA 46204

ATTORNEY DOCKET NUMBER: 27163-244733/RCA11281	
NAME OF SUBMITTER:	SAMUEL C. GIESTING
SIGNATURE:	/SCG/
DATE SIGNED:	06/05/2018

Total Attachments: 8

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PATENT 504944662 REEL: 045988 FRAME: 0500



Attorney Docket No.: _	27163-244733
Client Reference No.: _	RCA11281

ASSIGNMENT

	For good and valuable consideration, the receipt of which is hereby acknowledged,
Name(s) of Inventor(s)	Jeffrey A. Walston
	maker(s) of an invention which is the subject of an application for Letters Patent of the United States ("Application") entitled
Title of Application	FULL HOOP BLADE TRACK WITH AXIALLY KEYED FEATURES
Serial No.: Filing Date:	14/972,568 12/17/2015
Name of Assignee	the undersigned (hereinafter "Assignors") hereby sell(s), assign(s), and set(s) over to Rolls-Royce Corporation
Address of Assignee Business	450 S. Meridian Street Indianapolis, Indiana 46225
Insert State of Incorporation (if applicable) or "Not Applicable"	a corporation of <u>Delaware</u>

(hereinafter designated as the Assignee) their entire right, title, and interest in, to, and under the Application, any and all patent applications filed in the United States and in all other countries claiming priority to the Application, all inventions disclosed therein, and any and all Letters Patent of the United States and of all other countries that may be granted for such inventions, all rights in such Letters Patent to be held and enjoyed by Assignee for its own use and enjoyment to the full end of the term or terms for which such Letters Patent may be granted, as fully and entirely as the same would have been held and enjoyed by Assignors had this assignment not been made.

The Assignors agree to execute any and all papers in connection with the Application, any and all patent applications filed in the United States and in all other countries claiming priority to the Application, and any Letters Patent issuing therefrom, and also to execute separate assignments as the Assignee may deem necessary or desirable.

The Assignors agree to execute any and all papers in connection with any litigation or any administrative proceeding concerning the Application, any and all patent applications filed in the United States and in all other countries claiming priority to the Application, or any Letters Patent issuing therefrom, and also to cooperate with the Assignee in every way possible in obtaining evidence and participating in any such litigation or proceeding.

The Assignors agree to execute any and all papers and to perform any and all acts which the Assignee may deem necessary or desirable in view of the provisions of the Patent Cooperation Treaty, the International Convention for Protection of Industrial Property, or similar agreements.

The Assignors hereby covenant that they have the full right to convey the interests herein assigned, and that the Assignors have not executed, and will not execute, any agreement in conflict herewith.

The Assignors hereby grant the attorney of record the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent & Trademark Office for recordation of this document.

Date / Inventor (Signature)

Jeffrey A. Walston

Inventor (Printed)

INDS02 1302193v1

Attorney Docket No.:	27163-244733
Client Reference No.:	RCA11281

ASSIGNMENT

	For good and valuable consideration, the receipt of which is hereby acknowledged,
Name(s) of Inventor(s)	Aaron D. Sippel
	maker(s) of an invention which is the subject of an application for Letters Patent of the United States ("Application") entitled
Title of Application	FULL HOOP BLADE TRACK WITH AXIALLY KEYED FEATURES
Serial No.: Filing Date:	14/972,568 12/17/2015
	the undersigned (hereinafter "Assignors") hereby sell(s), assign(s), and set(s) over to
Name of Assignee	Rolls-Royce Corporation
Address of Assignee	450 S. Meridian Street
Business	Indianapolis, Indiana 46225
Insert State of Incorporation (if applicable) or "Not Applicable"	a corporation of <u>Delaware</u>

(hereinafter designated as the Assignee) their entire right, title, and interest in, to, and under the Application, any and all patent applications filed in the United States and in all other countries claiming priority to the Application, all inventions disclosed therein, and any and all Letters Patent of the United States and of all other countries that may be granted for such inventions, all rights in such Letters Patent to be held and enjoyed by Assignee for its own use and enjoyment to the full end of the term or terms for which such Letters Patent may be granted, as fully and entirely as the same would have been held and enjoyed by Assignors had this assignment not been made.

The Assignors agree to execute any and all papers in connection with the Application, any and all patent applications filed in the United States and in all other countries claiming priority to the Application, and any Letters Patent issuing therefrom, and also to execute separate assignments as the Assignee may deem necessary or desirable.

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	QN; CN = Aaron Sippel email =
Date	Inventor (Signature)
	Aaron D. Sippel
	Inventor (Printed)

INDS02 1302193v1

Digitally signed by: Aaron Sippel

ASSIGNMENT TO BUSINESS CONCERN

Attorney Docket No.:	27163-244733
Client Reference No.:	RCA11281

ASSIGNMENT

For good and valuable consideration, the magnint of which is however advanced and

	For good and valuable consideration, the receipt of which is neverly acknowledged,
Name(s) of Inventor(s)	John A. Weaver
	maker(s) of an invention which is the subject of an application for Letters Patent of the United States ("Application") entitled
Title of Application	FULL HOOP BLADE TRACK WITH AXIALLY KEYED FEATURES
Serial No.: Filing Date:	14/972,568 12/17/2015
	the undersigned (hereinafter "Assignors") hereby sell(s), assign(s), and set(s) over to
Name of Assignee	Rolls-Royce Corporation
Address of Assignee	450 S. Meridian Street
Business	Indianapolis, Indiana 46225
Insert State of Incorporation (if applicable) or "Not Applicable"	a corporation of <u>Delaware</u>

(hereinafter designated as the Assignee) their entire right, title, and interest in, to, and under the Application, any and all patent applications filed in the United States and in all other countries claiming priority to the Application, all inventions disclosed therein, and any and all Letters Patent of the United States and of all other countries that may be granted for such inventions, all rights in such Letters Patent to be held and enjoyed by Assignee for its own use and enjoyment to the full end of the term or terms for which such Letters Patent may be granted, as fully and entirely as the same would have been held and enjoyed by Assignors had this assignment not been made.

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The Assignors hereby grant the attorney of record the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent & Trademark Office for recordation of this document.

1/3/2018	John A. Weaver
Date	Inventor (Signature)
	John A. Weaver
	Inventor (Printed)

INDS02 1302193v1

ASSIGNMENT TO BUSINESS CONCERN

Attorney Docket No.:	27163-244733
Client Reference No.:	RCA11281

ASSIGNMENT

	For good and valuable consideration, the receipt of which is hereby acknowledged,	
Name(s) of Inventor(s)	David J. Thomas	
	maker(s) of an invention which is the subject of an application for Letters Patent of the United States ("Application") entitled	
Title of Application	FULL HOOP BLADE TRACK WITH AXIALLY KEYED FEATURES	
Serial No.: Filing Date:	14/972,568 12/17/2015	
	the undersigned (hereinafter "Assignors") hereby sell(s), assign(s), and set(s) over to	
Name of Assignee	Rolls-Royce Corporation	
Address of Assignee	450 S. Meridian Street	
Business	Indianapolis, Indiana 46225	
Insert State of Incorporation (if applicable) or "Not Applicable"	a corporation of <u>Delaware</u>	

(hereinafter designated as the Assignee) their entire right, title, and interest in, to, and under the Application, any and all patent applications filed in the United States and in all other countries claiming priority to the Application, all inventions disclosed therein, and any and all Letters Patent of the United States and of all other countries that may be granted for such inventions, all rights in such Letters Patent to be held and enjoyed by Assignee for its own use and enjoyment to the full end of the term or terms for which such Letters Patent may be granted, as fully and entirely as the same would have been held and enjoyed by Assignors had this assignment not been made.

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1/8/2018	Vavid J. Thomas
Date	Inventor (Signature)
	David J. Thomas
	Inventor (Printed)

INDS02 1302193v1

RECORDED: 06/05/2018