

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT3837565

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| SUBMISSION TYPE: | NEW ASSIGNMENT |
| NATURE OF CONVEYANCE: | ASSIGNMENT |
| CONVEYING PARTY DATA | |
| Name | Execution Date |
| PRATT & WHITNEY ROCKETDYNE, INC. | 06/12/2013 |
| RECEIVING PARTY DATA | |
| Name: | UNITED TECHNOLOGIES CORPORATION |
| Street Address: | 10 FARM SPRINGS ROAD |
| City: | FARMINGTON |
| State/Country: | CONNECTICUT |
| Postal Code: | 06032 |
| PROPERTY NUMBERS Total: 1 | |
| Property Type | Number |
| Application Number: | 14161219 |
| CORRESPONDENCE DATA | |
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| ATTORNEY DOCKET NUMBER: | 1213-15238AA |
| NAME OF SUBMITTER: | RICHARD D. GETZ |
| SIGNATURE: | /rdg/ |
| DATE SIGNED: | 04/20/2016 |
| Total Attachments: 7 | |
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PATENT ASSIGNMENT AGREEMENT

THIS PATENT ASSIGNMENT AGREEMENT, is made effective as of the 14th day of June, 2013 (the "Effective Date"), United Technologies Corporation, a Delaware corporation ("UTC"), and Pratt & Whitney Rocketdyne, Inc., a Delaware corporation ("Rocketdyne").

WHEREAS, in connection with the sale of Rocketdyne by UTC to RPW Acquisition LLC, a Delaware limited liability company (the "Buyer"), as contemplated by that certain Amended and Restated Stock and Asset Purchase Agreement dated June 12, 2013, between UTC and the Buyer (as assignee of GenCorp Inc., an Ohio corporation) (the "Purchase Agreement"), pursuant to Section 5.9 of the Purchase Agreement certain intellectual property owned by Rocketdyne is to be transferred to UTC prior to the consummation of the transaction contemplated thereby, specifically the patents and patent applications identified in Schedule A attached herein ("Assigned Patents"); and

WHEREAS, the parties accordingly wish to execute this recordable instrument, assigning all of Rocketdyne's right, title and interest in and to the Assigned Patents to UTC;

NOW, THEREFORE, for valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Rocketdyne and UTC agree as follows:

1. Rocketdyne sells, assigns, transfers, and sets over to UTC, and its lawful successors and assigns, Rocketdyne's entire right, title, and interest throughout the world in and to the Assigned Patents, together with all rights to the inventions described and claimed therein, and all divisions, continuations and continuations-in-part thereof, and all Letters Patent of the United States which may be granted thereon, and all reissues thereof, and all rights to claim priority therefrom, and all applications for Letters Patent which may hereafter be filed for this invention in any foreign country and all Letters Patent which may be granted on this invention in any foreign country, and all extensions, renewals, and reissues, thereof and Rocketdyne hereby authorizes and requests the Commissioner of Patents and Trademarks of the United States and any official of any foreign country whose duty it is to issue patents on applications as described above, to issue all Letters Patent for any invention disclosed and claimed in any Assigned Patent to UTC, its successors and assigns, in accordance with the terms of this Patent Assignment Agreement.
2. Rocketdyne further assigns to UTC all rights to sue and recover for any past, present or future actions, causes of action and rights to recover damages or payments (including lost profits) for infringement of any Assigned Patent, as well as the right to take over and continue any and all existing suits to any Assigned Patent.
3. Rocketdyne hereby agrees, without further consideration, to communicate with UTC any facts known to it respecting the inventions disclosed and claimed in the Assigned Patents, and to testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title in UTC to any Assigned Patent and the invention disclosed and claimed therein, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid Buyer to obtain and enforce proper patent protection.

throughout the world for the inventions disclosed and claimed in the Assigned Patents, it being understood that any expense incident to the execution of such papers shall be borne by UTC.

4. This Patent Assignment Agreement shall be construed and enforced pursuant to the laws of the State of New York and of the United States. The sole and official version of this Patent Assignment Agreement is in the English language.
5. This Patent Assignment Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

[Signature page follows.]

PATENT

REEL: 030774 FRAME: 0534

REEL: 038328 FRAME: 0431

IN WITNESS WHEREOF, each party hereto has caused this Patent Assignment Agreement to be executed by a duly authorized officer on the dates specified below.

United Technologies Corporation

Pratt & Whitney Rocketdyne, Inc.

By *Matthew F. Bromberg*
Name Matthew F. Bromberg
Title Vice President, Corporate Strategy & Development
Date _____

By _____
Name _____
Title _____
Date _____

[Signature Page to Patent Assignment Agreement]

IN WITNESS WHEREOF, each party hereto has caused this Patent Assignment Agreement to be executed by a duly authorized officer on the dates specified below.

United Technologies Corporation

Pratt & Whitney Rocketdync, Inc.

By _____
Name _____
Title _____

By Susan N. Brattebo
Name Susan N. Brattebo
Title V. P. & Counsel, PWR, Inc.

Date _____

Date June 12, 2013

[Signature Page to Patent Assignment Agreement]

SCHEDULE A

ASSIGNED PATENTS

Patents

| PATENT NO. | COUNTRY | FILING DATE | TITLE |
|------------|---------|-------------|--|
| 6895756 | US | 2/6/2003 | COMPACT SWIRL AUGMENTED AFTERBURNERS FOR GAS TURBINE ENGINES |
| 6907724 | US | 2/6/2003 | COMBINED CYCLE ENGINES INCORPORATING SWIRL AUGMENTED COMBUSTION FOR REDUCED VOLUME AND WEIGHT AND IMPROVED PERFORMANCE |
| 7007486 | US | 3/26/2003 | APPARATUS AND METHOD FOR SELECTING A FLOW MIXTURE |
| 7017329 | US | 10/10/2003 | METHOD AND APPARATUS FOR MIXING SUBSTANCES |
| 7127899 | US | 2/28/2004 | NON-SWIRL DRY LOW NOX (DLN) COMBUSTOR |
| 7137255 | US | 3/31/2005 | COMPACT SWIRL AUGMENTED AFTERBURNERS FOR GAS TURBINE ENGINES |
| 7140184 | US | 12/5/2003 | FUEL INJECTION METHOD AND APPARATUS FOR A COMBUSTOR |
| 7168236 | US | 3/31/2005 | COMPACT LIGHTWEIGHT RAMJET ENGINES INCORPORATING SWIRL AUGMENTED COMBUSTION WITH IMPROVED PERFORMANCE |
| 7402045 | US | 9/20/2008 | ELECTRICAL INTERCONNECTION HAVING MAGNETIC CONDUCTIVE ELEMENTS |
| 7469544 | US | 10/10/2003 | METHOD AND APPARATUS FOR INJECTING A FUEL INTO A COMBUSTOR ASSEMBLY |
| 7516607 | US | 12/19/2005 | METHOD AND APPARATUS FOR MIXING SUBSTANCES |
| 7762077 | US | 12/5/2006 | SINGLE-STAGE HYPERSONIC VEHICLE FEATURING ADVANCED SWIRL COMBUSTION |
| 7955054 | US | 9/21/2009 | INTERNALLY DAMPED BLADE |
| 7997058 | US | 3/2/2009 | APPARATUS FOR MIXING SUBSTANCES |
| 8011187 | US | 9/5/2008 | FUEL INJECTION METHOD AND APPARATUS FOR A COMBUSTOR |
| 8,402,744 | US | 3/22/08 | VALVE SYSTEM FOR A GAS TURBINE ENGINE |
| 8,356,467 | US | 6/13/06 | COMBUSTION WAVE IGNITION FOR COMBUSTORS |
| 8,286,419 | US | 4/2/08 | VALVE SYSTEM FOR A GAS TURBINE ENGINE |
| 8,240,128 | US | 3/22/08 | VALVE SYSTEM FOR A GAS TURBINE ENGINE |
| 8,066,479 | US | 4/5/10 | NON-INTEGRAL-PLATFORM-AND-DAMPER FOR AN AIRFOIL |
| 7,810,311 | US | 1/8/07 | COOLING EXCHANGER DUCTS |
| 6665312 | US | 12/19/2001 | FLUID-COOLED TURBINE BLADES |
| 6775987 | US | 9/12/2002 | LOW-EMISSION, STAGED-COMBUSTION POWER GENERATION |

PATENT

REEL: 030774 FRAME: 0530

REEL: 038328 FRAME: 0434

| PATENT NO. | COUNTRY | FILING DATE | TITLE |
|------------|---------|-------------|---|
| 6976679 | US | 11/7/2003 | INTER-FLUID SEAL ASSEMBLY AND METHOD THEREFOR |
| 6991235 | US | 11/7/2003 | GAS-BUFFERED SEAL ASSEMBLY AND METHOD THEREFOR |
| 7318007 | US | 12/31/2003 | REAL TIME GEARBOX HEALTH MANAGEMENT SYSTEM AND METHOD OF USING THE SAME |
| 7510995 | US | 4/1/2003 | APPLICATION OF A MIXED METAL OXIDE CATALYST TO A METALLIC SUBSTRATE |

Patent Applications

| APPLICATION NO. | COUNTRY | PUBLICATION NO. | TITLE |
|-----------------|---------|-----------------|---|
| 11/652,840 | US | 20100252245 | NANO-PARTICLE WAVE HEAT PIPE |
| 12/053,591 | US | 20090235642 | VALVE SYSTEM FOR A GAS TURBINE ENGINE |
| 12/053,595 | US | 20090235643 | VALVE SYSTEM FOR A GAS TURBINE ENGINE |
| 12/061,021 | US | 20090252597 | VALVE SYSTEM FOR A GAS TURBINE ENGINE |
| 13/001,646 | US | 20100174392 | HEAT EXCHANGER FIN INCLUDING LOUVERS |
| 13/022,285 | US | | METHOD AND SYSTEM FOR OPERATING A FLOW BATTERY SYSTEM BASED ON ENERGY COSTS |
| 13/023,101 | US | | FLOW BATTERY HAVING A LOW RESISTANCE MEMBRANE |
| 13/052,859 | US | | STRUCTURALLY EFFICIENT COOLED ENGINE HOUSING FOR ROTARY ENGINES |
| 13/084,156 | US | | FLOW BATTERY HAVING ELECTRODES WITH A PLURALITY OF DIFFERENT PORE SIZES AND/OR D... |
| 13/160,193 | US | | SYSTEM AND METHOD FOR OPERATING A FLOW BATTERY SYSTEM AT AN ELEVATED TEMPERATURE |
| 13/164,059 | US | | SYSTEM AND METHOD FOR SENSING AND MITIGATING HYDROGEN EVOLUTION WITHIN A FLOW BA... |
| 13/169,337 | US | | DISTRIBUTED EXHAUST SYSTEM |
| 13/169,401 | US | | INTEGRAL OIL SYSTEM |
| 13/172,411 | US | | HYBRID EXHAUST COMPONENT |
| 13/188,961 | US | | NANO-SIZE CRACKING CATALYST DISPERSED IN JET FUEL FOR ENDOTHERM ENHANCEMENT |
| 13/194,486 | US | | FLOW BATTERY CELLS ARRANGED BETWEEN AN INLET MANIFOLD AND AN OUTLET MANIFOLD |
| 13/222,614 | US | | EJECTOR-DRIVEN FUEL STABILIZATION SYSTEM |
| 13/224,533 | US | | METHOD FOR PROCESSING BIOMASS |

| APPLICATION NO. | COUNTRY | PUBLICATION NO. | TITLE |
|-----------------|---------|-----------------|--|
| 13/238,921 | US | | FLOW BATTERY STACK WITH AN INTEGRATED HEAT EXCHANGER |
| 13/331,407 | US | | FLOW BATTERY SYSTEM WITH STANDBY MODE |
| 13/362,322 | US | | ADDITIVE MANUFACTURING LASER CONFIGURATION |
| 13/362,396 | US | | MANAGING LARGE PART BUILD MASS |
| 13/362,425 | US | | IN SITU STRESS RELIEF |
| 13/362,470 | US | | REAL TIME CAP FLATTENING DURING HEAT TREAT |
| 61/826,296 | US | | CONTINUOUS DETONATION WAVE TURBINE ENGINE |