

**PATENT ASSIGNMENT**

Electronic Version v1.1  
 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
James H. Dupont	05/26/2010
Sean J. Whitmarsh	07/09/2010
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	RAYTHEON COMPANY
<b>Street Address:</b>	870 Winter Street
<b>City:</b>	Waltham
<b>State/Country:</b>	MASSACHUSETTS
<b>Postal Code:</b>	02451-1449
<b>Name:</b>	PACIFIC SCIENTIFIC ENERGETIC MATERIALS COMPANY
<b>Street Address:</b>	24908 Avenue Kearney
<b>City:</b>	Valencia
<b>State/Country:</b>	CALIFORNIA
<b>Postal Code:</b>	91355
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	12834289
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(480)385-5061
	<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>
<b>Phone:</b>	480.385.5060
<b>Email:</b>	scastillo@ifllaw.com
<b>Correspondent Name:</b>	Ingrassia Fisher & Lorenz, P.C.
<b>Address Line 1:</b>	7010 East Cochise Road
<b>Address Line 4:</b>	Scottsdale, ARIZONA 85253-1406
<b>ATTORNEY DOCKET NUMBER:</b>	085.0058 (09W207)

CH \$40.00 12834289

**501229425**

**PATENT**  
**REEL: 024666 FRAME: 0322**

NAME OF SUBMITTER:

Justin J. Leach

Total Attachments: 5

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United States Patent Application  
Attorney Docket No.: 085.0058 (09W207)  
First Named Inventor: James H. Dupont

**ASSIGNMENT**

**WHEREAS**, the undersigned inventor(s) (hereinafter individually and collectively referred to as "ASSIGNOR") has/have invented:

**SOLID PROPELLANT ROCKET MOTORS EMPLOYING TUNGSTEN ALLOY BURST  
DISCS AND METHODS FOR THE MANUFACTURE THEREOF**

(hereinafter, "the invention") for which application for Letters Patent of the United States:

has been executed on even date herewith;  
 was executed on \_\_\_\_\_;  
 was filed on July 12, 2010 and assigned U.S. Application Serial  
No. 12/834,289;

**AND WHEREAS**, Raytheon Company, 870 Winter Street, Waltham, MA 02451-1449 (hereinafter "ASSIGNEE"), and its successors, assigns, and legal representatives, is desirous of acquiring, and the ASSIGNOR is desirous of assigning and transferring the entire right, title, and interest therein;

**AND WHEREAS**, a "formal application," as referred to herein, shall mean any provisional, nonprovisional, continuation, continuation in part, continued prosecution, substitute, renewal, extension, divisional, reissue, reexamination, foreign, Patent Cooperation Treaty (PCT) or other patent application, inventor's certificate, utility model, or like document;

**NOW, THEREFORE**, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, ASSIGNOR does hereby irrevocably and unconditionally assign and transfer unto ASSIGNEE, its successors, assigns, and legal representatives, the entire right, title and interest in and to the aforesaid application, to the invention as described in the aforesaid application, and to any formal application which may be filed based in whole or in part on the aforesaid application, in the United States and all foreign countries, together with the right of priority under any international conventions, treaties and/or agreements to which the United States currently adheres and adheres to in the future and with all ancillary rights thereto, including the right to sue and recover for, and the right to profits or damages due or accrued, arising out of or in connection with, any and all past, present or future infringements of any such rights, and hereby authorizes and requests the Commissioner of Patents to issue said Letters Patent to ASSIGNEE, for the sole use and benefit of ASSIGNEE, its successors, assigns, and legal representatives;

**AND ASSIGNOR** authorizes ASSIGNEE, its successors, assigns, and legal representatives, or anyone it may properly designate, to apply for Letters Patent, in its own name if desired, in any and all foreign countries, and additionally to claim the filing date of aforesaid application and/or otherwise take advantage of the provisions of any international convention, treaty and/or agreement;

AND ASSIGNOR FURTHERMORE authorizes ASSIGNEE, its successors, assigns, and legal representatives, or anyone it may properly designate, to insert in this instrument the filing date and/or serial number of said application when ascertained;

AND ASSIGNOR HEREBY AGREES to transfer, upon request of ASSIGNEE, its successors, assigns, and legal representatives, and without further remuneration, a like interest in and to any related inventions and formal applications based thereon;

AND ASSIGNOR AGREEING, FURTHERMORE, upon request of ASSIGNEE, and without further remuneration, but at no expense to ASSIGNOR, that ASSIGNOR will provide all reasonable assistance to obtain, maintain, and assert the fullest measure of legal protection that ASSIGNEE desires to obtain or assert for the invention, any related inventions, any formal application based thereon, and any resulting patents, including executing any and all papers desired by ASSIGNEE for the filing and granting of formal applications, the perfecting of title in ASSIGNEE, and in enforcing any rights in the invention, any related inventions, and any formal application or patent based thereon.

This instrument is executed by, and shall be binding upon, ASSIGNOR, his heirs, executors and administrators, for the uses and purposes above set forth and referred to and shall inure to the benefit of ASSIGNEE, its successors, assigns and legal representatives, or anyone it may properly designate.

If any provision of this assignment is held by any court to be unenforceable, such provision shall be interpreted to accomplish the objectives of the original provision to the fullest extent allowed by law and the remainder of this assignment shall remain in full force and effect.

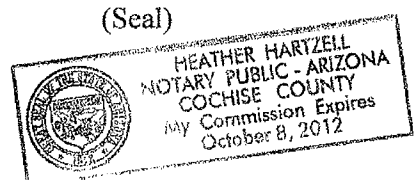
EXECUTED as of the date(s) written below by ASSIGNOR:

James H. Dupont  
James H. Dupont

Date: 5/26/2010

On this 26<sup>TH</sup> day of MAY, 2010, before me a notary public in and for the County of COCHISE in the State of ARIZONA, appeared JAMES H. DUPONT, who is personally known to me to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he/she signed, seals and delivered the same instrument as a free and voluntary act for the use and purposes therein set forth.

Heather Hartzell  
My Commission Expires 10/8/12  
Notary Public



**ASSIGNMENT**

**WHEREAS**, the undersigned inventor(s) (hereinafter individually and collectively referred to as "ASSIGNOR") has/have invented:

**SOLID PROPELLANT ROCKET MOTORS EMPLOYING TUNGSTEN ALLOW BURST DISCS AND METHODS FOR THE MANUFACTURE THEREOF**

(hereinafter, "the invention") for which application for Letters Patent of the United States:

has been executed on even date herewith;

was executed on \_\_\_\_\_;

was filed on July 12, 2010 and assigned U.S. Application Serial No. 12/834,289;

**AND WHEREAS**, Pacific Scientific Energetic Materials Company, 24908 Avenue Kearny, Valencia, CA 91355 (hereinafter "ASSIGNEE"), and its successors, assigns, and legal representatives, is desirous of acquiring, and the ASSIGNOR is desirous of assigning and transferring the entire right, title, and interest therein;

**AND WHEREAS**, a "formal application," as referred to herein, shall mean any provisional, nonprovisional, continuation, continuation in part, continued prosecution, substitute, renewal, extension, divisional, reissue, reexamination, foreign, Patent Cooperation Treaty (PCT) or other patent application, inventor's certificate, utility model, or like document;

**NOW, THEREFORE**, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, ASSIGNOR does hereby irrevocably and unconditionally assign and transfer unto ASSIGNEE, its successors, assigns, and legal representatives, the entire right, title and interest in and to the aforesaid application, to the invention as described in the aforesaid application, and to any formal application which may be filed based in whole or in part on the aforesaid application, in the United States and all foreign countries, together with the right of priority under any international conventions, treaties and/or agreements to which the United States currently adheres and adheres to in the future and with all ancillary rights thereto, including the right to sue and recover for, and the right to profits or damages due or accrued, arising out of or in connection with, any and all past, present or future infringements of any such rights, and hereby authorizes and requests the Commissioner of Patents to issue said Letters Patent to ASSIGNEE, for the sole use and benefit of ASSIGNEE, its successors, assigns, and legal representatives;

**AND ASSIGNOR** authorizes ASSIGNEE, its successors, assigns, and legal representatives, or anyone it may properly designate, to apply for Letters Patent, in its own name if desired, in any and all foreign countries, and additionally to claim the filing date of aforesaid application and/or otherwise take advantage of the provisions of any international convention, treaty and/or agreement;

**AND ASSIGNOR FURTHERMORE** authorizes ASSIGNEE, its successors, assigns, and legal representatives, or anyone it may properly designate, to insert in this instrument the filing date and/or serial number of said application when ascertained;


**AND ASSIGNOR HEREBY AGREES** to transfer, upon request of ASSIGNEE, its successors, assigns, and legal representatives, and without further remuneration, a like interest in and to any related inventions and formal applications based thereon;

**AND ASSIGNOR AGREEING, FURTHERMORE,** upon request of ASSIGNEE, and without further remuneration, but at no expense to ASSIGNOR, that ASSIGNOR will provide all reasonable assistance to obtain, maintain, and assert the fullest measure of legal protection that ASSIGNEE desires to obtain or assert for the invention, any related inventions, any formal application based thereon, and any resulting patents, including executing any and all papers desired by ASSIGNEE for the filing and granting of formal applications, the perfecting of title in ASSIGNEE, and in enforcing any rights in the invention, any related inventions, and any formal application or patent based thereon.

This instrument is executed by, and shall be binding upon, ASSIGNOR, his heirs, executors and administrators, for the uses and purposes above set forth and referred to and shall inure to the benefit of ASSIGNEE, its successors, assigns and legal representatives, or anyone it may properly designate.

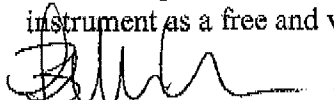
If any provision of this assignment is held by any court to be unenforceable, such provision shall be interpreted to accomplish the objectives of the original provision to the fullest extent allowed by law and the remainder of this assignment shall remain in full force and effect.

**EXECUTED** as of the date(s) written below by ASSIGNOR:

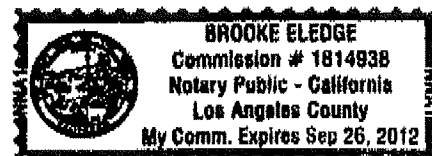
  
Sean J. Whitmarsh

Date: 7/9/10

On this 9 day of ~~##~~ JULY, 2010, before me a notary public in and for the County of LOS ANGELES in the State of CALIFORNIA, appeared SEAN J. WHITMARSH, who is personally known to me to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he/~~she~~ signed, seals and delivered the same instrument as a free and voluntary act for the use and purposes therein set forth.

  
My Commission Expires SEPT. 26, 2012  
Notary Public

(Seal)



**CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT**

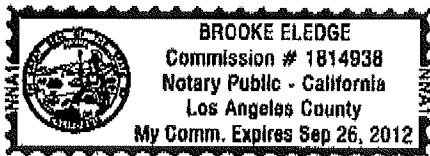
State of California

County of LOS ANGELES

On JULY 9, 2010 before me, BROOKE ELEDGE, NOTARY PUBLIC  
Date Here Insert Name and Title of the Officer

personally appeared SEAN J. WHITMARSH  
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/~~she/they~~ executed the same in his/~~her/their~~ authorized capacity(ies), and that by his/~~her/their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature: [Handwritten Signature]  
Signature of Notary Public

Place Notary Seal Above

**OPTIONAL**

*Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.*

**Description of Attached Document**

Title or Type of Document: UNITED STATES PATENT APPLICATION ASSIGNMENT

Document Date: JULY 9, 2010 Number of Pages: 2

Signer(s) Other Than Named Above: NONE

**Capacity(ies) Claimed by Signer(s)**

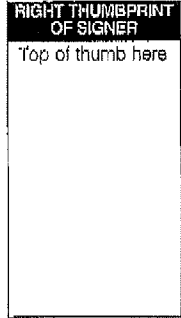
Signer's Name: SEAN J. WHITMARSH Signer's Name: \_\_\_\_\_

- Corporate Officer — Title(s): \_\_\_\_\_
- Individual
- Partner —  Limited  General
- Attorney in Fact
- Trustee
- Guardian or Conservator
- Other: \_\_\_\_\_



Signer Is Representing: \_\_\_\_\_

- Corporate Officer — Title(s): \_\_\_\_\_
- Individual
- Partner —  Limited  General
- Attorney in Fact
- Trustee
- Guardian or Conservator
- Other: \_\_\_\_\_



Signer Is Representing: \_\_\_\_\_