

FORM PTO-1619A

Expires 08/30/00  
OMB 0651-0027U.S. Department of Commerce  
Patent and Trademark Office  
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- ☒ **Assignment** ☐ **Security Agreement**
- ☐ **License** ☐ **Change of Name**
- ☐ **Merger** ☐ **Other**
- U.S. Government**  
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- ☒ **Departmental File** ☐ **Secret File**

**Conveying Party(ies)**

- ☐ **Mark if additional names of conveying parties attached**
- Execution Date  
Month Day Year  
01202000

Name (line 1) Charles L. Gray, Jr.

Name (line 2)

**Second Party**

Name (line 1) Karl H. Hellman

Execution Date  
Month Day Year  
01202000

Name (line 2)

**Receiving Party**

- ☐ **Mark if additional names of receiving parties attached**

Name (line 1) United States of America, as Represented By

Name (line 2) U.S. Environmental Protection Agency, The

Address (line 1) 1200 Pennsylvania Avenue, NW

Address (line 2)

Address (line 3) Washington

DC

20460

City

State/Country

Zip Code

☐ **If document to be recorded is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached. (Designation must be a separate document from Assignment.)**

**Domestic Representative Name and Address**

Enter for the first Receiving Party only.

Name

Address (line 1)

Address (line 2)

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Mail documents to be recorded with required cover sheet(s) information to: **PATENT**  
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Expires 08/30/99  
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U.S. Department of Commerce  
Patent and Trademark Office  
**PATENT**

**Correspondent Name and Address** Area Code and Telephone Number (202) 564-5457

Name Alan M. Ehrlich, Patent Counsel

Address (line 1) Office of General Counsel (2377A)

Address (line 2) US Environmental Protection Agency

Address (line 3) 1200 Pennsylvania Avenue NW

Address (line 4) Washington DC 20460

**Pages** Enter the total number of pages of the attached conveyance document including any attachments.

# 3

**Application Number(s) or Patent Number(s)**

☐ Mark if additional numbers attached

Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property).

Patent Application Number(s)

Patent Number(s)


5617823

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If this document is being filed together with a new Patent Application, enter the date the patent application was signed by the first named executing inventor.

Month Day Year

**Patent Cooperation Treaty (PCT)**

Enter PCT application number  
only if a U.S. Application Number  
has not been assigned.

PCT

PCT

PCT

PCT

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**Number of Properties**

Enter the total number of properties involved.

# 1

**Fee Amount**

Fee Amount for Properties Listed (37 CFR 3.41): \$

40

Method of Payment:  
Deposit Account

Enclosed ☐

Deposit Account ☒

(Enter for payment by deposit account or if additional fees can be charged to the account.)

Deposit Account Number:

# 05-1128

Authorization to charge additional fees:

Yes

☒

No

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**Statement and Signature**

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. Charges to deposit account are authorized, as indicated herein.

Alan M. Ehrlich

Name of Person Signing



Signature

5-31-2001

Date

### ASSIGNMENT

WHEREAS, WE, Charles L. Gray, Jr., residing at Pinckney, Michigan, United States, and Karl H. Hellman, residing at Ann Arbor, Michigan, United States, being employees of the United States of America (hereinafter referred to as the Government), U.S. Environmental Protection Agency, have invented (along with Gary W. Rogers and Ulrich Hilger), a new and useful improvement in a SPARK-IGNITED RECIPROCATING PISTON ENGINE HAVING A SUBDIVIDED COMBUSTION CHAMBER, EPA Case No. 582-95, (hereafter referred to as the Invention) for which we filed an application in Germany for Letters Patent of the Federal Republic of Germany, on April 29, 1964 Serial No. 44-15-073.3, and for which we subsequently filed an application in the United States Patent and Trademark Office for Letters Patent of the United States of America on April 27, 1995, Serial No. 08/432,423, and for which we subsequently filed an application in the United States Patent and Trademark Office for Letters Patent of the United States of America on March 18, 1996, Serial No. 08/617,422, and for which a patent was subsequently issued on April 8, 1997, Patent Number 5,617,823.

WHEREAS, the conditions under which the Invention was made, namely (i) that the Invention is directly related to the duties of our Government employment which we had at the time we made the Invention, and (ii) Government funds and facilities were used to make the Invention, are such as to entitle the Government, pursuant to the provisions of Executive Order 10096, January 28, 1950, as amended by Executive Order 10930, March 24, 1961, and applicable regulations, including 37 CFR Part 501, to the entire right, title and interest in and to the Invention, including foreign rights; and

WHEREAS, the Government, as represented by the Administrator of the U.S. Environmental Protection Agency, is desirous of acquiring the entire right, title and interest in said Invention, throughout the world, and all of our interests in said Applications Serial No. DE44-15-073.3, 08/432,423 and 08/617,422, U.S. Patent No. 5,617,823, and in any and all other Letters Patent that may issue thereon;

NOW THEREFORE, in consideration of these premises, including our employment by the said Government, we Charles L. Gray, Jr., and Karl H. Hellman, hereby sell, assign, and transfer unto The United States of America, as represented by the Administrator of the U.S. Environmental Protection Agency, our entire right, title, and interest throughout the world in and to said Applications DE44-15-073.3, 08/432,423 and 08/617,422, and in and to the Invention as described and/or claimed in said Application, and in and to U.S. Patent No. 5,617,823 and any other Letters Patent that may issue on said Applications or on any application that is a continuation, continuation-in-part, division, reissue, substitution, or extension thereof.

We, Charles L. Gray, Jr., and Karl H. Hellman, do hereby agree that the Government will, upon its request, be provided promptly with all pertinent facts and documents relating to said Application, said Invention and said Letters Patent and legal equivalents in foreign countries as may be known and accessible to us, that we will testify as to the same in any interference or litigation related thereto, and that we will promptly execute and deliver to the Government or its

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legal representative any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue and enforce said Application, said Invention and said Letters Patent and said equivalents thereof in any foreign country which may be necessary or desirable to carry out the purpose thereof, provided, that all proper expenses arising through extending such assistance will be paid by the Government if we are not employed by the Government at the time the assistance is extended.

We, Charles L. Gray, Jr., and Karl H. Hellman, do hereby warrant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment.

Executed this 20 day of January <sup>2000</sup>~~1999~~.

Signature: Charles L. Gray Jr.  
Inventor—Charles L. Gray, Jr.

County of Washtenaw

Before me personally appeared said Charles L. Gray, Jr. and acknowledged the foregoing instrument to be his free act and deed this 20th day of January ~~1999~~<sup>2000</sup>.

Gertrude A. Venlet  
(NOTARY PUBLIC)

Gertrude A. Venlet  
Notary Public, Washtenaw Co., MI  
My commission Expires June 14, 2001

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Executed this 20 day of January <sup>2000</sup>  
1999.

Signature: Karl H. Hellman  
Inventor-Karl H. Hellman

County of Washtenaw

Before me personally appeared said Karl H. Hellman and acknowledged the foregoing instrument to be his free act and deed this 20th day of January ~~1999~~ <sup>2000</sup>

Gertrude A. Venlet  
(NOTARY PUBLIC)

Gertrude A. Venlet  
Notary Public, Washtenaw CO, MI  
My commission Expires June 14, 2001

