

07-07-2003



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U.S. DEPARTMENT OF COMMERCE U.S. Patent and Trademark Office

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies): David T. Winslow Michael Runyan Scott T. Johnson

6-23-03

2. Name and address of receiving party(ies) Name: Raytheon Company Internal Address: Intellectual Property and Licensing

Additional name(s) of conveying party(ies) attached? Yes No

3. Nature of conveyance: Assignment Merger Security Agreement Change of Name Other

Street Address: 141 Spring Street City: Lexington State: MA Zip: 02421-7899

Execution Date: 06/19/03, 06/19/03, 6-20/03

Additional name(s) & address(es) attached? Yes No

4. Application number(s) or patent number(s): Attorney Docket No. PD-01W144 If this document is being filed together with a new application, the execution date of the application is:

A. Patent Application No.(s) 10601385

B. Patent No.(s)

10/2003

Additional numbers attached? Yes No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Raytheon Company Internal Address: Leonard A. Alkov

Street Address: P.O. Box 902 (E4/N119) El Segundo CA 90245-0902

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 3.41) \$ 40.00 Enclosed Authorized to be charged to deposit account

8. Deposit account number: 50-0616

(Attach duplicate copy of this page if paying by deposit account)

DO NOT USE THIS SPACE

9. 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.

Leonard A. Alkov, 30,021 Name of Person Signing

Signature

06/23/2003 Date

Total number of pages including cover sheet, attachments, and documents: 4

Mail documents to be recorded with required cover sheet information to: Commissioner of Patents & Trademarks, Box Assignments Washington, D.C. 20231

17613 U.S. P. OFF. 10/501385



06/23/03

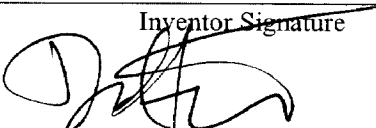
ASSIGNMENT

WHEREAS, I, as below named joint inventor of the city and state as stated below next to my name, have invented "Heat Exchanger" for which application for Letters Patent of the United States has been executed by me on this day; and

WHEREAS, RAYTHEON COMPANY, a Delaware Corporation, having its principal place of business in Lexington, Massachusetts, is desirous of acquiring the entire and exclusive right, title and interest in, to and under said invention, said application and any and all Letters Patent that may be granted therefor in the United States and throughout the world;

NOW, THEREFORE, in consideration of the obligations voluntarily assumed by me and set forth in an invention agreement between me and my employer, effective the date as stated below next to my name, and other good and valuable consideration, receipt of which is hereby acknowledged, I do hereby sell, assign and transfer to RAYTHEON COMPANY, its successors, assigns or other legal representatives, the entire and exclusive right, title and interest in and to said invention invented by me, to said application and any and all applications which are continuations, continuations-in- part, divisions or substitutes of said application and any and all Letters Patent that may be granted therefor in the United States and throughout the world on any of said applications and to any and all reexaminations, reissues, renewals or extensions of said Letters Patent in the United States and throughout the world for the full term or terms for which said Letters patent may be granted in the United States and throughout the world; authorize and request The Commissioner of Patents and Trademarks of the United States and all foreign countries to issue all such Letters Patent to said RAYTHEON COMPANY, its successors, assigns or other legal representatives; convenient that no assignment, sale, agreement, transfer or encumbrance has been, or will be, made or entered into which would conflict with this assignment, sale and transfer; and agree to communicate to RAYTHEON COMPANY, its successors, assigns or other legal representatives, upon request and at no cost or expense to me, any facts known by me respecting said invention, do all lawful acts, including the execution and delivery of all papers and proper oaths and giving of testimony that is deemed necessary or desirable by RAYTHEON COMPANY, its successors, assigns or other legal representatives with regard to said invention for protecting, obtaining, maintaining and enforcing any and all of said Letters Patent in the United States and throughout the world for said invention and for perfecting, affirming, recording and maintaining the title of RAYTHEON COMPANY, its successors, assigns or other legal representatives, and generally cooperate to the fullest extent in all matters pertaining to said invention, and any and all of said Letters Patent and the title thereto in RAYTHEON COMPANY, its successors, assigns or other legal representatives.

IN WITNESS WHEREOF, we have executed this instrument.

Full Name of Inventor David T. Winslow	Inventor Signature 	Date Signed 03-06-19
Residence (City and State) Culver City, California		Invention Agreement Date August 20, 1984

STATE OF California)
COUNTY OF Los Angeles)

SS:

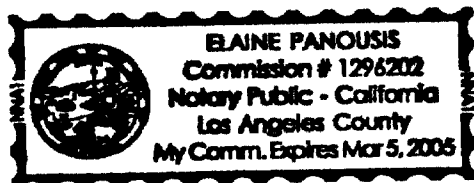
On 6-19-03 before me, Elaine Panousis, a Notary Public in and for said State,
personally appeared David T. Winslow

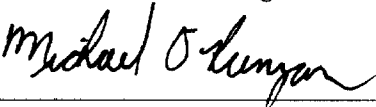
 personally known to me or proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the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

WITNESS my hand and official seal.

Notary Public

Elaine Panousis



Full Name of Inventor Michael Runyan	Inventor Signature 	Date Signed 6/20/2003
Residence (City and State) Torrance, California		Invention Agreement Date June 13, 1978

STATE OF California)
COUNTY OF Los Angeles)

SS:

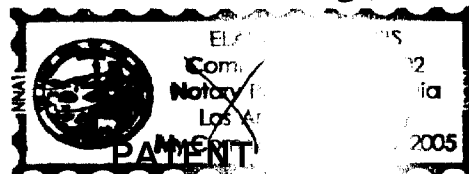
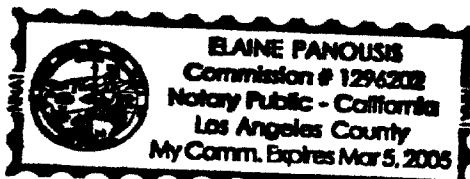
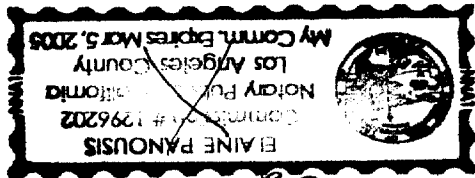
On 6-20-03 before me, Elaine Panousis, a Notary Public in and for said State,
personally appeared Michael Runyan


 personally known to me or 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.

WITNESS my hand and official seal.

Notary Public

Elaine Panousis



Full Name of Inventor Scott T. Johnson	Inventor Signature 	Date Signed 19-Jun-03
Residence (City and State) Torrance, California		Invention Agreement Date June 20, 1980

STATE OF California)

COUNTY OF Los Angeles)

SS:

On 6-19-03 before me, Elaine Panousis, a Notary Public in and for said State,

personally appeared Scott T. Johnson

 personally known to me or X 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.

WITNESS my hand and official seal.

Notary Public



