

02-16-2007



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To the Director of the U.S. Patent and Trademark Office

103373175

and documents, or the new address(es) below.

1. Name of conveying party(ies)

Patricia Hanlon-Pena (executed on 01/22/07)
Ramzi Hanania (executed on 01/24/07)
George N. Zantos (executed on 01/18/07)
Johannes Jacobus Schreuder (executed on 02/02/07)

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

3. Nature of conveyance/Execution Date(s):

Execution Date(s) see above

- ☒ Assignment ☐ Merger
☐ Security Agreement ☐ Change of Name
☐ Joint Research Agreement
☐ Government Interest Assignment
☐ Executive Order 9424, Confirmatory License
☐ Other _____

2. Name and address of receiving party(ies)

Name: Arrow International, Inc.

Internal Address: _____

Street Address: 2400 Bernville Road

City: Reading

State: Pennsylvania

Country: USA Zip: 19605

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

4. Application or patent number(s):

☐ This document is being filed together with a new application.

A. Patent Application No.(s)

60/756,651
11/633,320
PCT/US2006/046299

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

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

Name: Alan D. Miller

Internal Address: _____

Street Address: Amster, Rothstein & Ebenstein LLP

City: New York

State: New York Zip: 10016

Phone Number: 212 336 8000

Fax Number: 212 336 8001

Email Address: amiller@arelaw.com

6. Total number of applications and patents involved: 3

7. Total fee (37 CFR 1.21(h) & 3.41) \$ 120.00

- ☐ Authorized to be charged by credit card
☐ Authorized to be charged to deposit account
☒ Enclosed
☐ None required (government interest not affecting title)

8. Payment Information

a. Credit Card Last 4 Numbers _____
Expiration Date _____

b. Deposit Account Number 01-1785

Authorized User Name _____

9. Signature:

Signature

February 14, 2007

Date

02/16/2007 DBYRNE 00000003 60756651 Alan D. Miller

(Name of Person Signing)

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

12

Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to:
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O.Box 1450, Alexandria, V.A. 22313-1450

ASSIGNMENT OF INVENTION

In consideration of the payment by ASSIGNEE to ASSIGNORS of good and valuable consideration, the receipt of which is hereby acknowledged,

ASSIGNORS:

(1) Full Name of Inventor: Patricia Hanlon-Pena
Residence: 4310 Garden Hills Lane, Kingwood, Texas 77345
Citizenship: U.S.A.

(2) Full Name of Inventor: Ramzi Hanania
Residence: 102 Pierce Street, Malden, Massachusetts 02148
Citizenship: Palestine

(3) Full Name of Inventor: George N. Zantos
Residence: 32 Gleason Street, Medford, Massachusetts 02155
Citizenship: U.S.A.

(4) Full Name of Inventor: Johannes Jacobus Schreuder
Residence: Via Sanvito Silvestro 10, 21100, Varese, Italy
Citizenship: The Netherlands

hereby sell, assign, and transfer to ASSIGNEE:

Arrow International, Inc.
2400 Bernville Road
Reading, Pennsylvania 19605

and the successors, assigns, and legal representatives of the ASSIGNEE, the entire right, title, and interest for the United States and its territorial possessions, and in all foreign countries and regions, including all rights to claim priority, in and to the invention entitled:

**METHODS AND APPARATUS FOR SELECTING INTRA-AORTIC
BALLOON DEFLATION TIMING**

that was invented by ASSIGNORS, and which is found in U.S. Provisional Patent Application No. 60/756,651, filed on January 5, 2006, U.S. Patent Application No. 11,633,320, filed December 4, 2006, and PCT/US2006/046299, filed December 4, 2006, and any legal equivalent thereof in a foreign country or region, including the right to claim priority, including any and all improvements disclosed therein, and in and to all Letters Patent to be obtained for said invention by the above application, or any continuation, division, renewal, or substitute thereof, and, as to Letters Patent, any reissue or re-examination thereof.

ASSIGNORS hereby covenant that no assignment, sale, agreement, or encumbrance has been, or will be, made or entered into which would conflict with this Assignment.

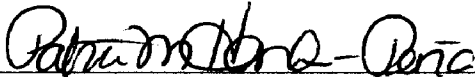
ASSIGNORS authorize ASSIGNEE to make applications for, and to receive, Letters Patent for said invention in any of said countries or regions, in ASSIGNEE's name, or in ASSIGNORS' names, at ASSIGNEE's election.

ASSIGNORS covenant and agree to execute or procure any further necessary assurance of the title to said invention, and any Letters Patent which may issue therefor, and to, at any time, upon the request and at the expense of ASSIGNEE, deliver any testimony in any interference, litigation, or proceeding related thereto, and to execute all papers that may be necessary or desirable to perfect the title to said invention, or any Letters Patent which may be granted therefor in ASSIGNEE, its successors, assigns, or other legal representatives, and to, at any time, upon the request and at the expense of ASSIGNEE, execute any continuation, continuation-in-part, divisional, renewal, or substitute thereof, and, as to Letters Patent, any reissue or re-examination thereof, or any other additional applications for Letters Patent for said invention or any part thereof, all of which applications and any Letters Patent issuing thereon are hereby assigned to ASSIGNEE, will make all rightful oaths or declarations, and do all lawful acts requisite for procuring the same

therein, without further compensation, but at the expense of ASSIGNEE, its successors, assigns, or other legal representatives.

ASSIGNORS authorize and request the Commissioner of Patents to issue any and all Letters Patent of the United States for said invention, resulting from the aforesaid application, to said Arrow International, Inc., as their ASSIGNEE.

WITNESS our hands and seals on:



Patricia Hanlon-Pena

22 Jan 2007

Date

Ramzi Hanania

Date


George N. Zantos

18 JAN 2007

Date

Johannes Jacobus Schreuder

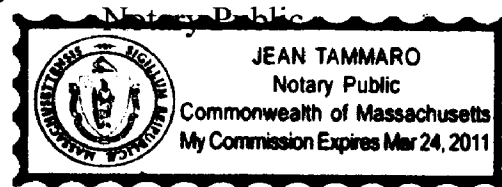
Date

ACKNOWLEDGMENT

State of Massachusetts }
SS:
County of Middlesex }

On the 22nd day of JANUARY, 2007, Patricia Hanlon-Pena personally appeared before me, known by me to be the same person described in, and who executed, the foregoing instrument, and acknowledged that she executed the same, of her own free will and for the purposes set forth.

Jean Tammaro



State of _____ }
SS:
County of _____ }

On the ____ day of _____, 2007, Ramzi Hanania personally appeared before me, known by me to be the same person described in, and who executed, the foregoing instrument, and acknowledged that he executed the same, of his own free will and for the purposes set forth.

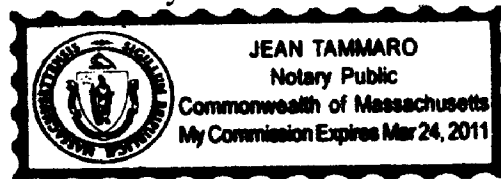
Notary Public

State of Massachusetts }
SS:
County of Middlesex }

On the 18th day of JANUARY, 2007, George N. Zantos personally appeared before me, known by me to be the same person described in, and who executed, the foregoing instrument, and acknowledged that he executed the same, of his own free will and for the purposes set forth.

Jean Tammaro

Notary Public



ASSIGNMENT OF INVENTION

In consideration of the payment by ASSIGNEE to ASSIGNORS of good and valuable consideration, the receipt of which is hereby acknowledged,

ASSIGNORS:

(1) Full Name of Inventor: Patricia Hanlon-Pena
Residence: 4310 Garden Hills Lane, Kingwood, Texas 77345
Citizenship: U.S.A.

(2) Full Name of Inventor: Ramzi Hanania
Residence: 102 Pierce Street, Malden, Massachusetts 02148
Citizenship: Palestine

(3) Full Name of Inventor: George N. Zantos
Residence: 32 Gleason Street, Medford, Massachusetts 02155
Citizenship: U.S.A.

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Residence: Via Sanvito Silvestro 10, 21100, Varese, Italy
Citizenship: The Netherlands

hereby sell, assign, and transfer to ASSIGNEE:

Arrow International, Inc.
2400 Bernville Road
Reading, Pennsylvania 19605

and the successors, assigns, and legal representatives of the ASSIGNEE, the entire right, title, and interest for the United States and its territorial possessions, and in all foreign countries and regions, including all rights to claim priority, in and to the invention entitled:

METHODS AND APPARATUS FOR SELECTING INTRA-AORTIC BALLOON DEFLATION TIMING

that was invented by ASSIGNORS, and which is found in U.S. Provisional Patent Application No. 60/756,651, filed on January 5, 2006, U.S. Patent Application No. 11,633,320, filed December 4, 2006, and PCT/US2006/046299, filed December 4, 2006, and any legal equivalent thereof in a foreign country or region, including the right to claim priority, including any and all improvements disclosed therein, and in and to all Letters Patent to be obtained for said invention by the above application, or any continuation, division, renewal, or substitute thereof, and, as to Letters Patent, any reissue or re-examination thereof.

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ASSIGNORS covenant and agree to execute or procure any further necessary assurance of the title to said invention, and any Letters Patent which may issue therefor, and to, at any time, upon the request and at the expense of ASSIGNEE, deliver any testimony in any interference, litigation, or proceeding related thereto, and to execute all papers that may be necessary or desirable to perfect the title to said invention, or any Letters Patent which may be granted therefor in ASSIGNEE, its successors, assigns, or other legal representatives, and to, at any time, upon the request and at the expense of ASSIGNEE, execute any continuation, continuation-in-part, divisional, renewal, or substitute thereof, and, as to Letters Patent, any reissue or re-examination thereof, or any other additional applications for Letters Patent for said invention or any part thereof, all of which applications and any Letters Patent issuing thereon are hereby assigned to ASSIGNEE, will make all rightful oaths or declarations, and do all lawful acts requisite for procuring the same

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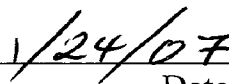
WITNESS our hands and seals on:

Patricia Hanlon-Pena

Date



Ramzi Hanania



Date

George N. Zantos

Date

Johannes Jacobus Schreuder

Date

ACKNOWLEDGMENT

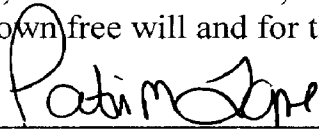
State of _____ }
SS:
County of _____ }

On the ____ day of _____, 2007, Patricia Hanlon-Pena personally appeared before me, known by me to be the same person described in, and who executed, the foregoing instrument, and acknowledged that she executed the same, of her own free will and for the purposes set forth.

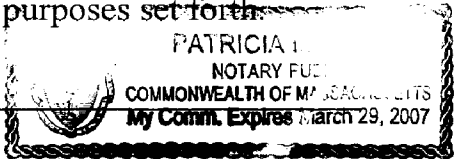
Notary Public

State of MA }
SS:
County of Essex }

On the 24 day of January, 2007, Ramzi Hanania personally appeared before me, known by me to be the same person described in, and who executed, the foregoing instrument, and acknowledged that he executed the same, of his own free will and for the purposes set forth.



Notary Public



State of _____ }
SS:
County of _____ }

On the ____ day of _____, 2007, George N. Zantos personally appeared before me, known by me to be the same person described in, and who executed, the foregoing instrument, and acknowledged that he executed the same, of his own free will and for the purposes set forth.

Notary Public

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Citizenship: Palestine

(3) Full Name of Inventor: George N. Zantos
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Citizenship: U.S.A.

(4) Full Name of Inventor: Johannes Jacobus Schreuder
Residence: ~~Via Sanvito Silvestro 10, 21100, Varese, Italy~~ Gendarmendreef 53
Citizenship: The Netherlands 1180, BRUSSELS
BELGIUM

hereby sell, assign, and transfer to ASSIGNEE:

Arrow International, Inc.
2400 Bernville Road
Reading, Pennsylvania 19605

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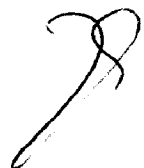
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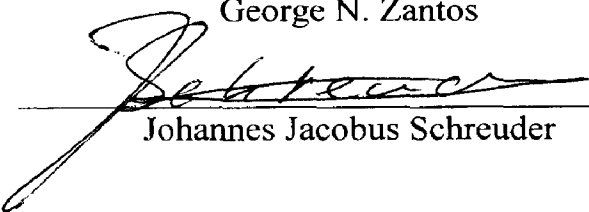
Date

Ramzi Hanania

Date

George N. Zantos

Date



Johannes Jacobus Schreuder

2/07/07

Date