502870743 06/27/2014

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT2917340

| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|-------------------|----------------|
| ION SYSTEMS, INC. | 03/15/2011 |

RECEIVING PARTY DATA

| Name: | ILLINOIS TOOL WORKS INC. | |
|-----------------|--------------------------|--|
| Street Address: | 3600 WEST LAKE AVENUE | |
| City: | GLENVIEW | |
| State/Country: | ILLINOIS | |
| Postal Code: | 60025 | |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 13635215 |

CORRESPONDENCE DATA

Fax Number: (860)599-8537

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent

using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 8605998507

Email: PALAZZOLO@THEPATENTSOURCE.COM

Correspondent Name: ANTHONY PALAZZOLO
Address Line 1: 285 PENDLETON HILL ROAD

Address Line 4: NORTH STONINGTON, CONNECTICUT 06359

| ATTORNEY DOCKET NUMBER: | 60066 |
|-------------------------------------|------------------------|
| NAME OF SUBMITTER: | ANTHONY M PALAZZOLO JR |
| SIGNATURE: /ANTHONY M PALAZZOLO JR/ | |
| DATE SIGNED: | 06/27/2014 |

Total Attachments: 3

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PATENT 502870743 REEL: 033196 FRAME: 0582

PATENT ASSIGNMENT

WHEREAS, Ion Systems, Inc., a California corporation having an address of 1750 North Loop Road, Suite 100, Alameda, California 94602, hereinafter generally referred to as "ASSIGNOR" is the owner of certain new and useful inventions for which patents were granted and patent applications are pending as set forth on Schedule A attached hereto, the inventions, patent applications and patents hereafter collectively referred to as "the patent properties of Schedule A."

WHEREAS, Illinois Tool Works Inc., a Delaware corporation, having an address of 3600 West Lake Avenue, Glenview, Illinois 60025, hereinafter generally referred to as "ASSIGNEE" is desirous of acquiring the entire right, title and interest in and to the patent properties of Schedule A throughout the United States and the world.

FOR GOOD and VALUABLE CONSIDERATION, the full receipt and sufficiency of which are hereby acknowledged, ASSIGNOR, intending to be legally bound, do hereby:

AUTHORIZE said ASSIGNEE, or its representatives to insert the application numbers of the applications that are currently unknown when these are known;

SELL, ASSIGN, TRANSFER and CONVEY to ASSIGNEE the whole and entire right, title and interest for the United States and its possessions and territories and all foreign countries in and to the patent properties of Schedule A, and, in and to any and all patent applications related thereto including, but not limited to, all provisionals, non-provisionals, divisionals, continuations, continuations-in-part, substitutes, reexaminations, reissues and all other applications for patent which have been or shall be filed in the United States and all foreign countries on the patent properties of Schedule A; all original, reissued and reexamined patents and extensions thereof which have been or shall be issued in the United States and all foreign countries on the patent properties of Schedule A to the full end of the term or terms for which the patent(s) may be granted, as fully and entirely as the same would have been held by the undersigned ASSIGNOR had this Assignment not been made; and specifically including all rights of priority created by the patent properties of Schedule A under any treaty, convention or law relating thereto;

AUTHORIZE and REQUEST the issuing authority to issue any and all United States and foreign patents granted on the patent properties of Schedule A to ASSIGNEE;

WARRANT and REPRESENT that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been or will be made to others by ASSIGNOR, and that the full right to convey the same as herein expressed is possessed by ASSIGNOR;

AGREE and UNDERTAKE, when requested and at the expense of ASSIGNEE, to carry out in good faith the intent and purpose of this Assignment, ASSIGNOR will execute all non-provisionals, divisionals, continuations, continuations-in-part, substitutes, reexaminations, reissues, and all other patent applications on the patent properties of Schedule A; execute all lawful oaths, declarations, assignments, powers of attorney and other papers; communicate to ASSIGNEE all facts known to ASSIGNOR relating to the patent properties of Schedule A and

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PATENT REEL: 033196 FRAME: 0583 the history thereof; and generally do everything possible which ASSIGNEE shall consider desirable for vesting title to the patent properties of Schedule A in ASSIGNEE, and for securing, maintaining and enforcing proper patent protection for the patent properties of Schedule A; all without further compensation to ASSIGNOR;

AGREES to hold in trust, keep confidential, not make use of, and not disclose or reveal to any third party said inventions and patent applications in Schedule A that are not yet published, without ASSIGNEE'S prior written consent.

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TO BE BINDING on the heirs, assigns, representatives and successors of ASSIGNOR and extending to the successors, assigns, and nominees of ASSIGNEE.

| March 15, 2011 | Sweet WTorsi |
|--------------------------|-----------------------|
| Date | Signature |
| | Ernest W. Torain |
| | Typed or Printed Name |
| | Assistant Secretary |
| | Title |
| | |
| | |
| STATE OF <u>Illinois</u> | |
| COUNTY OF Cook | : SS. : |

Before me, a notary public in and for the State and County aforesaid, on this 15th day of March, 2011, personally appeared Ernest W. Torain, who acknowledged to me that he/she is the Assistant Secretary of Illinois Tool Works Inc. on behalf of its subsidiary Ion Systems, Inc., who executed this Assignment on behalf of the corporation and acknowledged to me that he/she executed the same for the purposes therein stated.

Notary Public Christie M. Hefferson My Commission Expires: 02-24-2012

"OFFICIAL SEAL" CHRISTINE M. HEFFERNAN } My Commission Expires 02-24-2012

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SCHEDULE A

U.S. and PCT Patent Applications

| Application No. | Title | Filing Date |
|-------------------|--|----------------|
| 61/340,603 | Optimized Electrostatic Pinning and/or | March 19, 2010 |
| | Charging | |
| PCT/US2010/001327 | Optimized Electrostatic Pinning and/or | May 5, 2010 |
| | Charging | |