501932817 05/24/2012

PATENT ASSIGNMENT

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| NATURE OF CONVEYANCE: | EXECUTIVE ORDER 9424, CONFIRMATORY LICENSE |

CONVEYING PARTY DATA

| Name | Execution Date |
|-------------------|----------------|
| Purdue University | 01/31/2012 |

RECEIVING PARTY DATA

| Name: | National Science Foundation |
|-------------------|-----------------------------|
| Street Address: | 4201 Wilson Blvd |
| Internal Address: | Room 1265 |
| City: | Arlington |
| State/Country: | VIRGINIA |
| Postal Code: | 22230 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 13357517 |

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PATENT 501932817 REEL: 028274 FRAME: 0657

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|---|
| Invention Title: Bi-directional Check Valve |
| Inventor(s): Mark Batdorff, Michael Holland, John Lumkes, Merrill Kyle Joseph, Gabriel Jordan |
| Wilfong |
| U.S. Filing/issue Date: 1/24/2012 |
| Patent or Application Serial No.: 13/357, 517 |
| Grant/Contract Number(s): EEC0540834 |
| Foreign Applications filed/intended in (countries): |
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