

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT5128124

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	FIRST LIEN SECURITY INTEREST
CONVEYING PARTY DATA	
Name	Execution Date
LTI FLEXIBLE PRODUCTS, INC.	09/06/2018
LIFETIME INDUSTRIES, INC.	09/06/2018
AAVID THERMALLOY, LLC	09/06/2018
NUVENTIX, INC.	09/06/2018
AAVID THERMAL CORP. (F/K/A THERMAL CORP.)	09/06/2018
CSI MEDICAL, INC.	09/06/2018
RECEIVING PARTY DATA	
Name:	ROYAL BANK OF CANADA
Street Address:	200 BAY STREET, 12TH FL, SOUTH TOWER
City:	TORONTO
State/Country:	CANADA
Postal Code:	M5J 2W7
PROPERTY NUMBERS Total: 133	
Property Type	Number
Patent Number:	D786450
Patent Number:	9796321
Patent Number:	9725026
Patent Number:	D773342
Patent Number:	D760135
Patent Number:	D747667
Patent Number:	D746745
Patent Number:	D741232
Patent Number:	D741231
Patent Number:	9068355
Patent Number:	D648657
Patent Number:	D651146
Patent Number:	D669820
Application Number:	15791288
Patent Number:	9951874

PATENT

Property Type	Number
Patent Number:	9533629
Patent Number:	9505357
Patent Number:	9038322
Patent Number:	8870190
Patent Number:	D697640
Patent Number:	8408625
Patent Number:	8382124
Patent Number:	8366168
Patent Number:	7614677
Patent Number:	7614676
Patent Number:	9409532
Patent Number:	6966590
Patent Number:	9033390
Application Number:	15786989
Application Number:	15786926
Application Number:	15444743
Patent Number:	9568257
Patent Number:	9523367
Patent Number:	9423191
Patent Number:	9401317
Patent Number:	9042100
Patent Number:	8616267
Patent Number:	8286693
Patent Number:	7059391
Patent Number:	6688380
Patent Number:	6661658
Application Number:	15149557
Application Number:	15083474
Application Number:	14850002
Application Number:	14697971
Patent Number:	6302192
Patent Number:	7028760
Patent Number:	7066240
Patent Number:	7100679
Patent Number:	7100680
Patent Number:	8272851
Patent Number:	6896039
Patent Number:	9452463

Property Type	Number
Patent Number:	9184109
Patent Number:	9016903
Patent Number:	8845138
Patent Number:	8777456
Patent Number:	8772987
Patent Number:	8770765
Patent Number:	8646701
Patent Number:	8430644
Patent Number:	8299691
Patent Number:	8290724
Patent Number:	8136576
Patent Number:	8066410
Patent Number:	7932535
Patent Number:	7819556
Patent Number:	7784972
Patent Number:	7768779
Patent Number:	7760499
Patent Number:	7607470
Patent Number:	7606029
Application Number:	14490804
Patent Number:	6131650
Patent Number:	6191946
Patent Number:	6388882
Patent Number:	6430024
Patent Number:	6437437
Patent Number:	6446706
Patent Number:	6525420
Patent Number:	6536510
Patent Number:	6566743
Patent Number:	6578626
Patent Number:	6579747
Patent Number:	6615912
Patent Number:	6631077
Patent Number:	6657121
Patent Number:	6717813
Patent Number:	6719039
Patent Number:	6771498
Patent Number:	6793009

Property Type	Number
Patent Number:	6800077
Patent Number:	6804117
Patent Number:	6828675
Patent Number:	6858929
Patent Number:	6905499
Patent Number:	6945317
Patent Number:	6972365
Patent Number:	7005738
Patent Number:	7013956
Patent Number:	7044199
Patent Number:	7080681
Patent Number:	7096928
Patent Number:	7111394
Patent Number:	7149087
Patent Number:	7306028
Patent Number:	7312995
Patent Number:	7431071
Patent Number:	7690419
Patent Number:	7823629
Patent Number:	7914529
Patent Number:	8100894
Patent Number:	8230907
Patent Number:	8286694
Patent Number:	8397796
Patent Number:	8627879
Patent Number:	9273910
Patent Number:	9417015
Patent Number:	9746248
Patent Number:	9810483
Application Number:	13702659
Application Number:	13772606
Application Number:	13789751
Application Number:	14031685
Application Number:	14119814
Application Number:	14928650
Application Number:	15531301
Application Number:	15688240
Patent Number:	9417017

Property Type	Number
Patent Number:	6706940
Patent Number:	6797855
Patent Number:	6998511
Patent Number:	7119247

CORRESPONDENCE DATA

Fax Number: (800)914-4240

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: 800-713-0755

Email: Michael.Violet@wolterskluwer.com, ECarrera@cahill.com

Correspondent Name: CT CORPORATION

Address Line 1: 4400 EASTON COMMONS WAY

Address Line 2: SUITE 125

Address Line 4: COLUMBUS, OHIO 43219

NAME OF SUBMITTER:	ELAINE CARRERA
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SIGNATURE:	/Elaine Carrera/
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DATE SIGNED:	09/06/2018
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Total Attachments: 10

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**RECORDATION FORM COVER SHEET
PATENTS ONLY**

To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

1. Name of conveying party(ies)

LTI Flexible Products, Inc.
Lifetime Industries, Inc.
Aavid Thermalloy, LLC
Nuventix, Inc.
Aavid Thermal Corp. (f/k/a Thermal Corp.)
CSI Medical, Inc.

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

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

Execution Date(s) September 6, 2018

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

2. Name and address of receiving party(ies)

Name: Royal Bank of Canada

Internal Address: _____

Street Address: 200 Bay Street, 12th FL, South Tower

City: Toronto

State: Ontario

Country: Canada Zip: M5J 2W7

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)

See Schedule I

B. Patent No.(s)

See Schedule I

Additional numbers attached? ☒ Yes ☐ No

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

Name: Elaine Carrera, Legal Assistant

Internal Address: _____

Street Address: c/o Cahill Gordon & Reindel LLP

80 Pine Street

City: New York

State: NY Zip: 10005

Phone Number: (212) 701-3365

Docket Number: _____

Email Address: ecarrera@cahill.com

6. Total number of applications and patents involved: 133

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

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

8. Payment Information

Deposit Account Number _____

Authorized User Name _____

9. Signature:

Elaine Carrera
Signature

September 6, 2018

Date

Elaine Carrera
Name of Person Signing

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

10

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

FIRST LIEN PATENT SECURITY AGREEMENT

THIS FIRST LIEN PATENT SECURITY AGREEMENT, dated as of September 6, 2018, is made by each entity listed as Grantor on the signature pages hereto (each a “**Grantor**”), collectively, the “**Grantors**”), in favor of Royal Bank of Canada, in its capacity as collateral agent for the Secured Parties under the Security Agreement referred to below (the “**First Lien Agent**”).

WHEREAS, pursuant to that certain First Lien Pledge and Security Agreement of even date herewith (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, the “**Security Agreement**”, capitalized terms used herein and not otherwise defined herein have the meanings specified in the Security Agreement), among the Grantors, the First Lien Agent and certain other parties thereto, in order to secure payments of certain Secured Obligations (as defined in the First Lien Credit Agreement), each Grantor has assigned, pledged and granted to the First Lien Agent a continuing security interest in and to all of its Patents and Patent applications, including, without limitation, the Patents and Patent applications listed on Schedule I hereto, in each case solely, to the extent the same constitute Collateral (the “**Patents**”). Until the Termination Date (as defined in the First Lien Credit Agreement), the First Lien Agent shall retain its security interest in the Patents granted herein and in the Security Agreement and any lien granted on any property granted hereunder shall automatically be released in accordance with Section 7.12 of the Security Agreement.

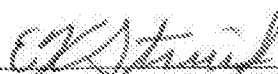
NOW, THEREFORE, for the consideration set forth herein and in the Security Agreement, the parties hereby agree that the Grantors, as collateral security for the full, prompt and complete payment and performance when due (whether at stated maturity, by acceleration or otherwise) of the Secured Obligations, hereby grant the First Lien Agent a lien on and security interest in, all of its right, title and interest in, to and under the Patents.

FOR THE AVOIDANCE OF DOUBT, notwithstanding any other provision of this agreement, the Grantors do not grant any lien on or security interest in any of the Excluded Assets (as defined in the Security Agreement). Additionally, unless otherwise defined herein, terms defined in the Security Agreement and used herein have the meaning given to them in the Security Agreement.


[Signature Pages Follow]

IN WITNESS WHEREOF, each Grantor has caused this First Lien Patent Security Agreement to be executed and delivered by its duly authorized officer as of the date first set forth above.


LTI FLEXIBLE PRODUCTS, INC., as Grantor

By: 
Name: Eric Struik
Title: Senior Vice President, Chief Financial Officer
and Secretary


LIFETIME INDUSTRIES, INC., as Grantor

By: 
Name: Eric Struik
Title: Senior Vice President, Chief Financial Officer
and Secretary

AAVID THERMALLOY, LLC, as Grantor

By: 
Name: Eric Struik
Title: Vice President, Chief Financial Officer and
Treasurer


NUVENTIX, INC., as Grantor

By: 
Name: Eric Struik
Title: Secretary

AAVID THERMAL CORP. (f/k/a Thermal Corp.), as
Grantor

By: 
Name: Eric Struik
Title: Vice President, Chief Financial Officer,
Treasurer and Secretary

CSI MEDICAL, INC., as Grantor

By: 
Name: Eric Struik
Title: Senior Vice President, Chief Financial Officer
and Secretary

[SIGNATURE PAGE TO FIRST LIEN PATENT SECURITY AGREEMENT]

ACCEPTED AND ACKNOWLEDGED BY:

ROYAL BANK OF CANADA,
as First Lien Agent

By: 

Name: Yvonne Brazier

Title: Manager, Agency Services

[SIGNATURE PAGE TO FIRST LIEN INTELLECTUAL PROPERTY SECURITY AGREEMENT]

PATENT
REEL: 047026 FRAME: 0674

Schedule I
Patents

U.S. Patents and Applications

Title	App. #/ Reg. #	Current Owner
Dual bulbous seal	D786450	LTI Flexible Products, Inc.
Combination splash seal and wear bar	9796321	LTI Flexible Products, Inc.
Cuttably replaceable slide-out seal	9725026	LTI Flexible Products, Inc.
Dual bulbous seal	D773342	LTI Flexible Products, Inc.
Slide out seal	D760135	LTI Flexible Products, Inc.
Hinged bulb seal	D747667	LTI Flexible Products, Inc.
Seal	D746745	LTI Flexible Products, Inc.
Hinged bulb seal	D741232	LTI Flexible Products, Inc.
Locking seal	D741231	LTI Flexible Products, Inc.
Floor covering transition	9068355	LTI Flexible Products, Inc.
Slide out seal	D648657	LTI Flexible Products, Inc.
Slide out seal	D651146	LTI Flexible Products, Inc.
Slide out seal	D669820	LTI Flexible Products, Inc.
Combination splash seal and wear bar	15/791288	Lifetime Industries, Inc.
Slide out seal with box tunnel	9951874	Lifetime Industries, Inc.
Combination splash seal and wear bar	9533629	Lifetime Industries, Inc.
Combination splash seal and wear bar	9505357	Lifetime Industries, Inc.
Adjustable resilient seal with bendable bulb portions	9038322	Lifetime Industries, Inc.
Tonneau cover seal	8870190	Lifetime Industries, Inc.
Overlapping seal	D697640	Lifetime Industries, Inc.
Corner seal	8408625	Lifetime Industries, Inc.

Title	App. #/ Reg. #	Current Owner
Corner seal device	8382124	Lifetime Industries, Inc.
Overlapping complementary bulb seal	8366168	Lifetime Industries, Inc.
Seal assembly for mobile living quarters	7614677	Lifetime Industries, Inc.
Resilient seal for mobile living quarters	7614676	Lifetime Industries, Inc.
Edge seal with sidewall seal	9409532	Lifetime Industries, Inc.
Two-part seal for a slide-out room	6966590	Lifetime Industries, Inc.
Edge seal with sidewall seal	9033390	Lifetime Industries, Inc.
Thermosiphon with multiport tube and flow arrangement	15/786989	Aavid Thermalloy, LLC
Thermosiphon with multiport tube and flow arrangement	15/786926	Aavid Thermalloy, LLC
Thermosiphon with integrated components	15/444743	Aavid Thermalloy, LLC
Thermal transfer device with spiral fluid pathways	9568257	Aavid Thermalloy, LLC
Cantilever fan	9523367	Aavid Thermalloy, LLC
Fastener assembly and method for heat sink mounting	9423191	Aavid Thermalloy, LLC
Heat sink mount and assembly	9401317	Aavid Thermalloy, LLC
System and method for cooling heat generating components	9042100	Aavid Thermalloy, LLC
Heat sink	8616267	Aavid Thermalloy, LLC
Heat sink base plate with heat pipe	8286693	Aavid Thermalloy, LLC
Multiple evaporator heat pipe assisted heat sink	7059391	Aavid Thermalloy, LLC
Corrugated fin heat exchanger and method of manufacture	6688380	Aavid Thermalloy, LLC
Fluid-cooled heat sink for electronic components	6661658	Aavid Thermalloy, LLC
Cantilever fan	15/149557	Aavid Thermalloy, LLC
Heat sink assembly with frame clip for fully assembled attachment to heat generating component	15/083474	Aavid Thermalloy, LLC
Thermosiphon with bent tube section	14/850002	Aavid Thermalloy, LLC
Planar coil and support for actuator of fluid mover	14/697971	Aavid Thermalloy, LLC
Integrated circuit heat pipe heat spreader with through mounting holes	6302192	Aavid Thermalloy, LLC
Integrated circuit heat pipe heat spreader with through mounting holes	7028760	Aavid Thermalloy, LLC
Integrated circuit heat pipe heat spreader with through mounting holes	7066240	Aavid Thermalloy, LLC
Integrated circuit heat pipe heat spreader with through mounting holes	7100679	Aavid Thermalloy, LLC
Integrated circuit heat pipe heat spreader with through mounting holes	7100680	Aavid Thermalloy, LLC
Fluidic energy transfer devices	8272851	Aavid Thermalloy, LLC

Title	App. #/ Reg. #	Current Owner
Integrated circuit heat pipe heat spreader with through mounting holes	6896039	Aavid Thermalloy, LLC
Synthetic jet ejector and design thereof to facilitate mass production	9452463	Nuventix, Inc.
Synthetic jet actuator equipped with entrainment features	9184109	Nuventix, Inc.
Thermal management of LED-based illumination devices with synthetic jet ejectors	9016903	Nuventix, Inc.
Light fixture with multiple LEDs and synthetic jet thermal management system	8845138	Nuventix, Inc.
Thermal management of LED-based illumination devices with synthetic jet ejectors	8777456	Nuventix, Inc.
Synthetic jet ejector and design thereof to facilitate mass production	8772987	Nuventix, Inc.
Thermal management of very small form factor projectors with synthetic jets	8770765	Nuventix, Inc.
Moldable housing design for synthetic jet ejector	8646701	Nuventix, Inc.
Synthetic jet ejector for the thermal management of PCI cards	8430644	Nuventix, Inc.
Advanced synjet cooler design for LED light modules	8299691	Nuventix, Inc.
Method and apparatus for controlling diaphragm displacement in synthetic jet actuators	8290724	Nuventix, Inc.
Vibration isolation system for synthetic jet devices	8136576	Nuventix, Inc.
Light fixture with multiple LEDs and synthetic jet thermal management system	8066410	Nuventix, Inc.
Synthetic jet cooling system for LED module	7932535	Nuventix, Inc.
Thermal management system for LED array	7819556	Nuventix, Inc.
Thermal management system for LED array	7784972	Nuventix, Inc.
Synthetic jet ejector with viewing window and temporal aliasing	7768779	Nuventix, Inc.
Thermal management system for card cages	7760499	Nuventix, Inc.
Synthetic jet heat pipe thermal management system	7607470	Nuventix, Inc.
Thermal management system for distributed heat sources	7606029	Nuventix, Inc.
Synthetic jet ejectors with improved manufacturability	14/490804	Nuventix, Inc.
Fluid cooled single phase heat sink	6131650	Thermal Corp.
Heat spreader with excess solder basin	6191946	Thermal Corp.

Title	App. #/ Reg. #	Current Owner
Integrated thermal architecture for thermal management of high power electronics	6388882	Thermal Corp.
Capacitor with heat pipe cooling	6430024	Thermal Corp.
Semiconductor package with internal heat spreader	6437437	Thermal Corp.
Flexible heat pipe	6446706	Thermal Corp.
Semiconductor package with lid heat spreader	6525420	Thermal Corp.
Thermal bus for cabinets housing high power electronics equipment	6536510	Thermal Corp.
Electronics package with specific areas having low coefficient of thermal expansion	6566743	Thermal Corp.
Liquid cooled heat exchanger with enhanced flow	6578626	Thermal Corp.
Method of making electronics package with specific areas having low coefficient of thermal expansion	6579747	Thermal Corp.
Porous vapor valve for improved loop thermosiphon performance	6615912	Thermal Corp.
Heat spreader with oscillating flow	6631077	Thermal Corp.
Thermal management system and method for electronics system	6657121	Thermal Corp.
Heat dissipation unit with direct contact heat pipe	6717813	Thermal Corp.
Liquid cooled heat exchanger with enhanced flow	6719039	Thermal Corp.
Cooling system for hinged portable computing device	6771498	Thermal Corp.
CTE-matched heat pipe	6793009	Thermal Corp.
Heat pipe for cautery surgical instrument	6800077	Thermal Corp.
Thermal bus for electronics systems	6804117	Thermal Corp.
Modular cooling system and thermal bus for high power electronics cabinets	6828675	Thermal Corp.
Semiconductor package with lid heat spreader	6858929	Thermal Corp.
Heat pipe for cautery surgical Instrument	6905499	Thermal Corp.
Sintered grooved wick with particle web	6945317	Thermal Corp.
Thermal management system and method for electronics system	6972365	Thermal Corp.
Semiconductor package with lid heat spreader	7005738	Thermal Corp.
Heat pipe evaporator with porous valve	7013956	Thermal Corp.
Porous media cold plate	7044199	Thermal Corp.
Heat pipe component deployed from a compact volume	7080681	Thermal Corp.
Flexible loop thermosyphon	7096928	Thermal Corp.

Title	App. #/ Reg. #	Current Owner
Hybrid loop heat pipe	7111394	Thermal Corp.
Liquid cooled heat sink with cold plate retention mechanism	7149087	Thermal Corp.
Modular heat sink	7306028	Thermal Corp.
Cooling system for computer electronics	7312995	Thermal Corp.
Fluid circuit heat transfer device for plural heat sources	7431071	Thermal Corp.
Porous media cold plate	7690419	Thermal Corp.
Capillary assisted loop thermosiphon apparatus	7823629	Thermal Corp.
Cooling element for electrosurgery	7914529	Thermal Corp.
Heat pipe for cautery surgical instrument	8100894	Thermal Corp.
Heat pipe with axial and lateral flexibility	8230907	Thermal Corp.
Chemically compatible, lightweight heat pipe	8286694	Thermal Corp.
Porous media cold plate	8397796	Thermal Corp.
Capillary assisted loop thermosiphon apparatus	8627879	Thermal Corp.
Fluid circuit heat transfer device for plural heat sources	9273910	Thermal Corp.
Heat exchanger backing plate and method of assembling same	9417015	Thermal Corp.
Heat pipe having a wick with a hybrid profile	9746248	Thermal Corp.
Variable-conductance heat transfer device	9810483	Thermal Corp.
Heat exchange apparatus	13/702659	Thermal Corp.
Electronics cabinet and rack cooling system and method	13/772606	Thermal Corp.
Cooling frame with integrated heat pipes	13/789751	Thermal Corp.
Reinforced heat-transfer device, heat transfer system, and method of reinforcing a heat-transfer device	14/031685	Thermal Corp.
Capillary device for use in heat pipe and method of manufacturing such capillary device	14/119814	Thermal Corp.
Vehicle thermal management system	14/928650	Thermal Corp.
Method and apparatus for avoiding frost or ice build-up on exhaust vents and air intakes of condensing appliances	15/531301	Thermal Corp.
Heat pipe having a awick with a hybrid profile	15/688240	Thermal Corp.
Heat transfer apparatus and method	9417017	Thermal Corp. and Regents of The University of Minnesota
Transparent film dressing and a method for applying and making the same	6706940	CSI Medical, Inc.
Transparent film dressing and a method for applying and making the same	6797855	CSI Medical, Inc.
Dressing and a method for applying the same	6998511	CSI Medical, Inc.

Title	App. #/ Reg. #	Current Owner
Dressing and a method for making and applying a dressing	7119247	CSI Medical, Inc.