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Tab settings



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J.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):

Communications & Power Industries, Inc.

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

3. Nature of conveyance:

- ☐ Assignment ☐ Merger
☒ Security Agreement ☐ Change of Name
☐ Other

Execution Date: 01/23/2004

2. Name and address of receiving party(ies)

Name: UBS AG, Stamford Branch,

Internal Address: as Collateral Agent

Street Address: 677 Washington Blvd.

City: Stamford State: CT Zip: 06912

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

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is:

A. Patent Application No.(s)

SEE ATTACHED EXHIBIT A

B. Patent No.(s)

SEE ATTACHED EXHIBIT A

Additional numbers attached? ☒ Yes ☐ No

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

Name: Tonya Chapple

Internal Address:

CLC CSC

Street Address: 80 State St.

City: Albany State: NY Zip: 12207

6. Total number of applications and patents involved: 97

7. Total fee (37 CFR 3.41).....\$ 3880.00

☒ Enclosed

☐ Authorized to be charged to deposit account

8. Deposit account number:

DO NOT USE THIS SPACE

9. Signature.

Maureen P. Murphy

Name of Person Signing

Maureen P. Murphy

Signature

01/30/2004

Date

Total number of pages including cover sheet, attachments, and documents: 19

Mail documents to be recorded with required cover sheet information to:

Commissioner of Patents & Trademarks, Box Assignments
Washington, D.C. 20231

PATENT
REEL: 014981 FRAME: 0981

EXHIBIT A
to
Patents Recordation Form Cover Sheet
U.S. PATENTS

A. Patent Registrations

OWNER	REGISTRATION NUMBER	DESCRIPTION
Communications & Power Industries, Inc.	6,084,353	Coaxial Inductive Output Tube
Communications & Power Industries, Inc.	5,698,949	Hollow Beam Electron Tube Having TM _{0X0} Resonators, where X is Greater than 1
Communications & Power Industries, Inc.	5,532,462	An Improved Heating Process for a Chemical Reaction Vessel Employing Microwave Energy
Communications & Power Industries, Inc.	5,233,269	Vacuum Tube w/ an Electron Beam that is Current Velocity Modulated
Communications & Power Industries, Inc.	5,317,233	Vac. Tube Including Grid-Cathode Ass'y w/ Resonant Slow-Wave Structure
Communications & Power Industries, Inc.	4,866,343	Re-Entrant Double-Staggered Ladder Circuit
Communications & Power Industries, Inc.	6,456,009	Adaptive Heater Voltage Algorithm and Control System for Setting and Maintenance of the Heater Voltage of a Vacuum Electron Device
Communications & Power Industries, Inc.	6,211,657	Two State Power Converter with Interleaved Buck Regulators
Communications & Power Industries, Inc.	6,552,490	A Multiple Stage Depressed Collector (MSDC) Klystron-Based Amplifier for Ground-Based Satellite and Terrestrial Communications

OWNER	REGISTRATION NUMBER	DESCRIPTION
Communications & Power Industries, Inc.	5,355,093	Compact Microwave and Millimeter Wave Amplifier
Communications & Power Industries, Inc.	4,751,437	Wide Bandwidth Linear Motor System
Communications & Power Industries, Inc.	6,236,161	Crossed Field Device
Communications & Power Industries, Inc.	6,437,510	Crossed Field Amplifier with Multipactor Suppression
Communications & Power Industries, Inc.	5,572,092	High Frequency Vacuum Tube with Closely Spaced Cathode and Non-Emissive Grid
Communications & Power Industries, Inc.	4,620,170	Means for Cooling a Microwave Window
Communications & Power Industries, Inc.	4,717,067	Diffusion Bonded Structure and Method of Making
Communications & Power Industries, Inc.	5,767,625	High Frequency Vacuum Tube with Closely Spaced Cathode and Non-Emissive Grid
Communications & Power Industries, Inc.	4,480,210	Gridded Electron Tube
Communications & Power Industries, Inc.	6,192,105	Method and Device to Calibrate an Automatic Exposure Control Device in an X-Ray Imaging System
Communications & Power Industries, Inc.	4,053,810	Lossless Traveling wave booster tube
Communications & Power Industries, Inc.	4,053,850	Magnetron slot mode absorber
Communications & Power Industries, Inc.	4,082,979	Method and Apparatus for reducing noise in crossed-field amplifiers
Communications & Power Industries, Inc.	4,087,705	High power variable pulse width triggering circuits
Communications & Power Industries, Inc.	4,087,718	High gain crossed field amplifier

OWNER	REGISTRATION NUMBER	DESCRIPTION
Communications & Power Industries, Inc.	4,093,892	Ring-and-bar slow wave circuits employing ceramic supports at the bars
Communications & Power Industries, Inc.	4,096,406	Thermionic electron source with bonded control grid
Communications & Power Industries, Inc.	4,099,807	Airborne pulse magnetron and power supply system
Communications & Power Industries, Inc.	4,126,489	Method of making cathode heaters
Communications & Power Industries, Inc.	4,137,482	Periodic permanent magnet focused TWT
Communications & Power Industries, Inc.	4,158,791	Helix traveling wave tubes with resonant loss
Communications & Power Industries, Inc.	4,165,473	Microwave tube with Iridium cathode
Communications & Power Industries, Inc.	4,176,293	Thermionic cathode heater having reduced magnetic field
Communications & Power Industries, Inc.	4,187,444	Open-circuit magnet structure for cross-field tubes and the like
Communications & Power Industries, Inc.	4,195,745	Thermally sensitive pressure release assembly for sealed pressurized vessel
Communications & Power Industries, Inc.	4,200,820	High power electron beam gyro device
Communications & Power Industries, Inc.	4,219,758	Traveling wave tube with non-reciprocal attenuating adjunct
Communications & Power Industries, Inc.	4,227,116	Zero-bias gridded gun
Communications & Power Industries, Inc.	4,233,539	Electron tube with reduced secondary emission
Communications & Power Industries, Inc.	4,237,402	Slow-wave circuit for traveling-wave tubes
Communications & Power Industries, Inc.	4,263,528	Grid coating for thermionic electron emission suppression

OWNER	REGISTRATION NUMBER	DESCRIPTION
Communications & Power Industries, Inc.	4,277,718	Modular electron tube with carbon grid
Communications & Power Industries, Inc.	4,286,240	Circular Electric mode microwave window
Communications & Power Industries, Inc.	4,292,567	In-band resonant loss in TWT's
Communications & Power Industries, Inc.	4,296,354	Traveling wave tube with frequency variable sever length
Communications & Power Industries, Inc.	4,310,603	Dispenser Cathode
Communications & Power Industries, Inc.	4,356,430	Gyrotron cavity resonator with an improved value of Q
Communications & Power Industries, Inc.	4,358,704	Helix traveling wave tubes with reduced gain variation
Communications & Power Industries, Inc.	4,359,666	Cylindrical cathode with segmented electron emissive surface and method of manufacture
Communications & Power Industries, Inc.	4,388,555	Gyrotron with improved stability
Communications & Power Industries, Inc.	4,393,332	Gyrotron transverse energy equalizer
Communications & Power Industries, Inc.	4,398,121	Mode Suppression means for gyrotron cavites
Communications & Power Industries, Inc.	4,409,518	TWT Interaction circuit with broad ladder rungs
Communications & Power Industries, Inc.	4,409,519	TWT Slow-wave structure assembled from three ladder-like slabs
Communications & Power Industries, Inc.	4,429,269	Feed Forward AC voltage resulator employing step-up, step-down transformer and analog and digital control circuitry
Communications & Power Industries, Inc.	4,442,417	Uniform Field Solenoid Magnet with Openings

OWNER	REGISTRATION NUMBER	DESCRIPTION
Communications & Power Industries, Inc.	4,460,846	Collector-output for hollow beam electron tubes
Communications & Power Industries, Inc.	4485349	Stabilized microwave power amplifier system
Communications & Power Industries, Inc.	4,506,190	Linear beam tube with reflected electron trap
Communications & Power Industries, Inc.	4,513,223	Electron tube with transverse cyclotron interaction
Communications & Power Industries, Inc.	4,527,091	Density Modulated electron beam tubes with enhanced gain
Communications & Power Industries, Inc.	4,527,094	Altitude compensation for frequency agile magnetron
Communications & Power Industries, Inc.	4,531,103	Multidiameter cavity for reduced mode competition in gyrotron oscillator
Communications & Power Industries, Inc.	4,546,325	Fast-acting tuner for multiple channel klystrons
Communications & Power Industries, Inc.	4,558,256	Velocity tapering of comb-quad traveling-wave tubes
Communications & Power Industries, Inc.	4,578,620	Slow wave circuit for a traveling wave tube
Communications & Power Industries, Inc.	4,586,009	Double staggered ladder circuit
Communications & Power Industries, Inc.	4,588,965	Coaxial magnetron using the TE.sub.111 mode
Communications & Power Industries, Inc.	4,601,331	Multiple heat pipes for linear beam tubes having common coolant and vaporizing surface area enhancement
Communications & Power Industries, Inc.	4,608,520	Cathode driven crossed-field amplifier
Communications & Power Industries, Inc.	4,611,149	Beam tube with density plus velocity modulation
Communications & Power Industries, Inc.	4,621,219	Electron beam scrambler

OWNER	REGISTRATION NUMBER	DESCRIPTION
Communications & Power Industries, Inc.	4,777,406	High voltage power supply particularly adapted for a TWT
Communications & Power Industries, Inc.	4,781,640	Basket electrode shaping
Communications & Power Industries, Inc.	4,821,165	High voltage DC power supply
Communications & Power Industries, Inc.	4,851,788	Mode suppressors for whispering gallery gyrotron
Communications & Power Industries, Inc.	4,866,344	High voltage power supply for a microwave electron tube
Communications & Power Industries, Inc.	4,869,420	Method of diffusion boning and densifying material of a heater for an electron beam tube
Communications & Power Industries, Inc.	4,876,687	Short-period electron beam wiggler
Communications & Power Industries, Inc.	4,945,464	High voltage DC power dupply
Communications & Power Industries, Inc.	4,949,011	Klystron with reduced length
Communications & Power Industries, Inc.	5,023,768	High voltage high power DC power supply
Communications & Power Industries, Inc.	5,025,193	Beam collector with low electrical leakage
Communications & Power Industries, Inc.	5,065,109	Electropneumatic band selector
Communications & Power Industries, Inc.	5,097,231	Quasi-passive, non-radioactive receiver protector device
Communications & Power Industries, Inc.	5,166,965	High voltage DC source including magnetic flux pole and multiple stacked AC to DC converter stages with planar coils
Communications & Power Industries, Inc.	5,180,944	Gyrotron with a mode convertor which reduces EM wave leakage

OWNER	REGISTRATION NUMBER	DESCRIPTION
Communications & Power Industries, Inc.	5,266,414	Solid solution matrix cathode
Communications & Power Industries, Inc.	5,363,016	Cooled remnant TWT ladder circuit having axially raised cooling bars
Communications & Power Industries, Inc.	5,418,070	Tri-layer impregnated cathode
Communications & Power Industries, Inc.	5,444,327	Anisotropic pyrolytic graphite heater
Communications & Power Industries, Inc.	5,450,047	High power waveguide window and waveguide assembly
Communications & Power Industries, Inc.	5,589,736	Frequency multiplier including grid having plural segments

B. Patent Applications

OWNER	APPLICATION NUMBER	DESCRIPTION
Communications & Power Industries, Inc.	10/192772	Method And Apparatus For Focusing Of Off-Axis Electron Beam
Communications & Power Industries, Inc.	10160666	Microwave Applicator for Heating a Moving Fluid
Communications & Power Industries, Inc.	10222,255	Waveguide Foreign Object Damage Prevention Window
Communications & Power Industries, Inc.	10160666	Microwave applicator for heating a moving fluid
Communications & Power Industries, Inc.	10222255	Waveguide foreign object damage prevention window

PATENT SECURITY AGREEMENT

PATENT SECURITY AGREEMENT, dated as of January 23, 2004, by Communications & Power Industries, Inc. (the "Borrower") and each Guarantor listed on Schedule II hereto (collectively, the "Original Guarantors") and any other entity which becomes a party hereto pursuant to Section 3.06 of the Security Agreement referred to below (the "Additional Guarantors", and together with the Original Guarantors and the Borrower, the "Pledgors"), in favor of UBS AG, STAMFORD BRANCH, in its capacity as collateral agent (in such capacity, the "Collateral Agent") pursuant to the Credit Agreement.

WITNESSETH:

WHEREAS, the Pledgors are party to a Security Agreement among Pledgors and the Collateral Agent of even date herewith (the "Security Agreement") in favor of the Collateral Agent pursuant to which the Pledgors are required to execute and deliver this Patent Security Agreement;

NOW, THEREFORE, in consideration of the premises and to induce the Collateral Agent, for the benefit of the Secured Parties, to enter into Credit Agreement, the Pledgors hereby agree with the Collateral Agent as follows:

SECTION 1. Defined Terms. Unless otherwise defined herein, terms defined in the Security Agreement and used herein have the meaning given to them in the Security Agreement.

SECTION 2. Grant of Security Interest in Patent Collateral. Each Pledgor hereby pledges, collaterally assigns and grants to the Collateral Agent for the benefit of the Secured Parties, security interest in and to and pledge of all of its right, title and interest in, to and under all the following Security Agreement Collateral of such Pledgor:

- (a) Patents of Pledgor listed on Schedule I attached hereto; and
- (b) all Proceeds of any and all of such Patents.

SECTION 3. Security Agreement. The security interest granted pursuant to this Patent Security Agreement is granted in conjunction with the security interest granted to the Collateral Agent pursuant to the Security Agreement and Pledgors hereby acknowledge and affirm that the rights and remedies of the Collateral Agent with respect to the security interest in the Patents made and granted hereby are more fully set forth in the Security Agreement, the terms and provisions of which are incorporated by reference herein as if fully set forth herein. In the event that any provision of this Patent Security Agreement is deemed to conflict with the Security Agreement, the provisions of the Security Agreement shall control.

SECTION 4. Termination. Upon the full performance of the Secured Obligations, the Collateral Agent shall execute, acknowledge, and deliver to the Pledgors an instrument in writing in recordable form releasing the collateral pledge, grant, assignment, lien and security interest in the Patents and all Proceeds of the Patents under this Patent Security Agreement.

[signature page follows]

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

COMMUNICATIONS & POWER INDUSTRIES,
INC.

By: 

Name: Joel Littman

Title: Chief Financial Officer

Accepted and Agreed:

UBS AG, STAMFORD BRANCH, as Collateral Agent

By: _____

Name:

Title:

By: _____

Name:

Title:

Patent Security Agreement

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COMMUNICATIONS & POWER INDUSTRIES,
INC.

By: _____
Name:
Title:

Accepted and Agreed:
UBS AG, STAMFORD BRANCH, as Collateral Agent

By: _____
Name: **Wilfred V. Saint**
Title: **Associate Director
Banking Products
Services US**

By: _____
Name: **Joselin Fernandes**
Title: **Associate Director
Banking Products
Services, US**

**Schedule I
to Patent Security Agreement**

U.S. PATENTS

A. Patent Registrations

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Communications & Power Industries, Inc.	4,527,091	Density Modulated electron beam tubes with enhanced gain
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Communications & Power Industries, Inc.	4,866,344	High voltage power supply for a microwave electron tube
Communications & Power Industries, Inc.	4,869,420	Method of diffusion boning and densifying material of a heater for an electron beam tube
Communications & Power Industries, Inc.	4,876,687	Short-period electron beam wiggler
Communications & Power Industries, Inc.	4,945,464	High voltage DC power dupply
Communications & Power Industries, Inc.	4,949,011	Klystron with reduced length
Communications & Power Industries, Inc.	5,023,768	High voltage high power DC power supply
Communications & Power Industries, Inc.	5,025,193	Beam collector with low electrical leakage
Communications & Power Industries, Inc.	5,065,109	Electropneumatic band selector
Communications & Power Industries, Inc.	5,097,231	Quasi-passive, non-radioactive receiver protector device
Communications & Power Industries, Inc.	5,166,965	High voltage DC source including magnetic flux pole and multiple stacked AC to DC converter stages with planar coils
Communications & Power Industries, Inc.	5,180,944	Gyrotron with a mode convertor which reduces EM wave leakage
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Communications & Power Industries, Inc.	5,418,070	Tri-layer impregnated cathode
Communications & Power Industries, Inc.	5,444,327	Anisotropic pyrolytic graphite heater
Communications & Power Industries, Inc.	5,450,047	High power waveguide window and waveguide assembly
Communications & Power Industries, Inc.	5,589,736	Frequency multiplier including grid having plural segments

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