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103620763

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1. Name of conveying party(ies)

Thermacore, Inc. and Thermal Corp

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

2. Name and address of receiving party(ies)

Name: Sovereign Bank

Internal Address: Mail Code 10-6438-CM9

Street Address: 601 Penn Street

City: Reading

State: Pennsylvania

Country: U.S.A Zip: 19601

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

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

Execution Date(s) December 30, 2010

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

4. Application or patent number(s):

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

A. Patent Application No.(s)

103616563

B Patent No.(s)

Additional numbers attached? ☐ Yes ☐ No

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

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State: PA Zip: 19610

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Fax Number: (610) 372-4865

Email Address: mgombar@masanobradley.com

6. Total number of applications and patents involved: 129

7. Total fee (37 CFR 1.21(h) & 3 41) $ 5,160.00

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

8. Payment Information

Previously paid through initial application on January 31, 2011.

Deposit Account Number

Authorized User Name

9. Signature:

Signature

3/28/11
Date

Michael J. Gombar, Jr.
Name of Person Signing

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

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Mail Stop Assignment Recordation Services, Director of the USPTO, P.O.Box 1450, Alexandria, V.A. 22313-1450

Intellectual Property

1. Domain Names:

   (a) www.thermacore.com
   (b) www.thermacore-europe.com
   (c) www1.thermacore.com
   (d) www3.thermacore.com

[redacted]

   (a) @thermacore.com
   (b) @thermacore.net
   (c) @thermacore-europe.com
   (d) @electronicscooling.com
   (e) @chipcooling.com
   (f) @telecomcooling.com
   (g) @servercooling.com
   (h) @heatpipes.com
   (i) @coolingsolutions.com

2. Trademarks:

Trademark	Country	App. Date	App. No.	Reg. Date	Reg. No.
MISCELLANEOUS DESIGN Renewed 7/15/07	United States	12/11/2000	76/178,712	7/9/2002	2,590,953
MISCELLANEOUS DESIGN	United Kingdom	5/4/2001	2,269,253		
MISCELLANEOUS DESIGN	Mexico	7/2/2001	493708	11/30/2002	725860
MISCELLANEOUS DESIGN (WAVY LINES & DESIGN)	Canada	7/9/2001	1,106,128	5/26/2003	TMA582,385
MISCELLANEOUS DESIGN	Japan	6/6/2001	2001-51274	5/16/2003	4672760
MISCELLANEOUS DESIGN	South Korea	6/26/2001	2001-27759	2/21/2003	541845
THERMACORE	Taiwan	11/16/1998	86025217	11/16/1998	825668
MISCELLANEOUS DESIGN	China	6/11/2001	2001099324	1/21/2003	1922374
DEVICE – 6/12/07 – Sent for renewal	Brazil	7/5/2001	824.081.935		
MISCELLANEOUS DESIGN	European Community	7/13/2001	002299501	9/17/2002	002299501
THERMA-HINGE	United States	7/23/2001	78/075,194	4/15/2003	2,708,039

THERMASINK	United States	12/28/1998	75/612,481	12/3/2002	2,656,808
THERMAPLATE	United States	12/28/1998	75/612,482	12/3/2002	2,656,809
THERMAPAD	United States	12/28/1998	75/612,480	7/23/2002	2,598,353
THERMA-FROST WWW.THERMACORE.COM	United States	3/6/2000	75/936,848	1/8/2002	2,526,781
THERMA-FIN	United States	2/18/2000	75/926,279	11/27/2001	2,511,815
THERMA-CUBE	United States	5/10/1999	75/702,761	10/23/2001	2,499,425
THERMA-LOOP	United States	5/5/2000	76/041,562	5/1/2001	2,447,899
THERMA-TOWER	United States	2/3/2000	75/913,094	5/15/2001	2,450,833
THERMA-BUS	United States	10/16/2000	76/147,589	12/17/2002	2,664,151
THERMA-CAN	United States	8/18/2000	76/111,407		
THERMACHAMBER	United States	12/28/1998	75/612,484	7/16/2002	2,594,672
THERMA-CHARGE	United States	10/2/2000	76/140,142	8/6/2002	2,605,636
THERMA-CHIP	United States	8/31/2000	76/119,823	12/3/2002	2.657,014
THERMA-CORD	United States	2/8/2001	76/206,226	11/4/2003	2,780,058
THERMASPREADER	United States	12/28/1998	75/612,483	7/2/2002	2,588,849
THERMACORE	Japan	8/23/2001	2001-76341	3/14/2003	4652856
THERMACORE	South Korea	8/17/2001	2001-35974	1/9/2003	538983
THERMACORE	European Community	8/17/2001	002342897	2/5/2004	002 342 897
THERMACORE	Mexico	9/6/2001	505805	12/11/2001	727527
THERMACORE	China	9/7/2001	2001166501	7/28/2004	1978506
THERMACORE	Canada	2/12/2002	1,130,849	1/28/2004	TMA600,834
THERMACORE	Taiwan			4/15/1998	800847
THERMACORE (in Chinese Characters)	Taiwan			7/31/1999	861146
THERMACORE	Brazil	8/27/2001	823.810.887		
THERMA-PULSE	United States	10/23/2001	78/089,646	3/18/2003	2,698,851
HX – Filed Application 6/12/07	United States	9/27/2001	78/085,887	12/3/2002	2,657,444
HXi	United States	9/28/2001	76/319,201	12/16/2003	2,795,530

HXC (stylized)	United States	9/28/2001	76/319,202	6/3/2003	2,722,393
THERMA-TAPE	United States	9/27/2001	78/085,891	3/25/2003	2,701,479
THERMA-FLEX	United States	9/27/2001	78/085,889	7/15/2003	2,739,053
THERMA-SHELF	United States	11/21/2001	78/094,619		
THERMA-VENT	United States	3/12/2002	78/114,288	8/19/2003	2,754,482
THERMACORE	United States	5/13/1983	425,797	2/5/1985	1,317,936
THERMA-BLADE	United States	10/9/2002	78/172,424	5/17/2005	2,953,096
THERMA-SINK	United States	8/5/2004	78/462,593	6/6/2006	3,101,946
THERMA-BASE	United States	2/16/1999	75/640,893	3/6/2001	2,432,762
THERMACORE	United States	8/9/2005	78/688,261		

3. Patents

PATENT	COUNTRY	APP. NO.	FILING DATE	PATENT NO.
INTEGRATED CIRCUIT COOLING APPARATUS (ABANDONED)	US	08/424791	04/18/95	5549155
ELECTRICALLY INSULATED ENVELOPE HEAT PIPE	US	08/607897	02/27/96	5642776
HEAT PIPES INSERTED INTO FIRST AND SECOND PARALLEL HOLES IN A BLOCK FOR TRANSFERRING HEAT BETWEEN HINGED DEVICES	US	08/735191	10/25/96	5822187
INTEGRATED CIRCUIT HEAT SINK WITH ROTATABLE HEAT PIPE	US	08/844811	04/23/97	5826645
INTEGRATED CIRCUIT HEAT PIPE HEAT SPREADER WITH THROUGH MOUNTING HOLES	CN	2.0058E+11	11/27/06	
INTEGRATED CIRCUIT HEAT PIPE HEAT SPREADER WITH THROUGH MOUNTING HOLES	DE	1.12005E+11	11/06/06	
INTEGRATED CIRCUIT HEAT PIPE HEAT SPREADER WITH THROUGH MOUNTING HOLES	US	09/310397	05/12/99	6302192

PATENT	COUNTRY	APP. NO.	FILING DATE	PATENT NO.
INTEGRATED CIRCUIT HEAT PIPE HEAT SPREADER WITH THROUGH MOUNTING HOLES	US	09/852322	05/09/01	7066240
INTEGRATED CIRCUIT HEAT PIPE HEAT SPREADER WITH THROUGH MOUNTING HOLES	US	10/739709	12/18/03	7100679
INTEGRATED CIRCUIT HEAT PIPE HEAT SPREADER WITH THROUGH MOUNTING HOLES	US	10/841784	05/07/04	6896039
INTEGRATED CIRCUIT HEAT PIPE HEAT SPREADER WITH THROUGH MOUNTING HOLES	US	11/069260	03/01/05	7028760
INTEGRATED CIRCUIT HEAT PIPE HEAT SPREADER WITH THROUGH MOUNTING HOLES	US	11/128453	05/13/05	
INTEGRATED CIRCUIT HEAT PIPE HEAT SPREADER WITH THROUGH MOUNTING HOLES	US	11/200349	08/09/05	7100680
INTEGRATED CIRCUIT HEAT PIPE HEAT SPREADER WITH THROUGH MOUNTING HOLES	WO	PCT/US00/1256	05/06/00	
INTEGRATED CIRCUIT HEAT PIPE HEAT SPREADER WITH THROUGH MOUNTING HOLES	WO	PCT/US2005/006370	02/28/05	
STRESS RELIEVED INTEGRATED CIRCUIT COOLER	US	09/431368	11/01/99	6169660
HEAT SPREADER WITH EXCESS SOLDER BASIN	US	09/476813	01/03/00	6191946
FOLDED FIN PLATE HEAT-EXCHANGER	US	09/898774	06/29/01	6408941
FLEXIBLE HEAT PIPE	US	09/625301	07/25/00	6446706
HEAT SINK ASSEMBLY WITH OVER-MOLDED COOLING FINS	US	09/639165	08/16/00	6408935
THERMAL JACKET FOR REDUCING CONDENSATION AND METHOD FOR MAKING SAME	US	09/717409	11/21/00	6367544
LIQUID COOLED HEAT EXCHANGER WITH ENHANCED FLOW	US	09/717860	LL/21/00	6578626

PATENT	COUNTRY	APP. NO.	FILING DATE	PATENT NO.
LIQUID COOLED HEAT EXCHANGER WITH ENHANCED FLOW	US	10/199568	07/19/02	6719039
LIQUID COOLED HEAT SINK WITH THERMAL JACKET	US	09/734092	12/11/00	6367543
THERMAL COOLED HEAT SINK WITH THERMAL JACKET	US	09/972458	10/05/01	6397932
CHEMICALLY COMPATIBLE, LIGHTWEIGHT HEAT PIPE	US	10/643435	08/19/03	7069978
CHEMICALLY COMPATIBLE, LIGHTWEIGHT HEAT PIPE	US	11/363806	02/28/06	7743502
SEMICONDUCTOR PACKAGE WITH INTERNAL HEAT SPREADER	US	09/753893	01/03/01	6437437
SEMICONDUCTOR PACKAGE WITH LID HEAT SPREADER	US	09/774475	01/30/01	6525420
SEMICONDUCTOR PACKAGE WITH LID HEAT SPREADER	US	10/241947	09/12/02	6858929
SEMICONDUCTOR PACKAGE WITH LID HEAT SPREADER	US	10/999261	11/30/04	7005738
CAPACITOR WITH HEAT PIPE COOLING	US	09/775729	02/05/01	6430024
PORTABLE COMPUTER AND DOCKING STATION COOLING	US	09/817921	03/27/01	6560104
HEAT MANAGEMENT SYSTEM	US	09/885470	06/20/01	6351381
POROUS VAPOR VALVE FOR IMPROVED LOOP THERMOSIPHON PERFORMANCE	US	09/885472	06/20/01	6615912
THERMAL BUS FOR CABINETS HOUSING HIGH POWER ELECTRONICS EQUIPMENT	US	09/902088	07/10/01	6536510
THERMAL BUS FOR CABINETS HOUSING HIGH POWER ELECTRONICS EQUIPMENT	WO	PCT/US2002/21511	07/09/02	
INTEGRATED THERMAL ARCHITECTURE FOR THERMAL MANAGEMENT OF HIGH POWER ELECTRONICS	US	09/909360	07/19/01	6388882
INTEGRATED THERMAL ARCHITECTURE FOR THERMAL MANAGEMENT OF HIGH POWER	WO	PCT/US2002/03955		

PATENT	COUNTRY	APP. NO.	FILING DATE	PATENT NO.
ELECTRONICS				
NON-INVERTED MENISCUS LOOP HEAT PIPE/CAPILLARY PUMPED LOOP EVAPORATOR	US	09/945909	09/04/01	6533029
BI-LEVEL HEAT SINK	US	10/038636	01/03/02	6626233
BI-LEVEL HEAT SINK	US	10/280876	10/25/02	6966361
HEAT SPREADER WITH OSCILLATING FLOW	US	10/073537	02/11/02	6631077
FIN WITH ELONGATED HOLE AND HEAT PIPE WITH ELONGATED CROSS SECTION	US	10/081703	02/21/02	6802362
ELECTRONICS PACKAGE WITH SPECIFIC AREAS HAVING LOW COEFFICIENT OF THERMAL EXPANSION	US	10/081470	02/21/02	6566743
ELECTRONICS PACKAGE WITH SPECIFIC AREAS HAVING LOW COEFFICIENT OF THERMAL EXPANSION	US	10/219731	08/15/02	6579747
FLAT PLATE FUEL CELL COOLER	US	10/105693	03/25/02	6817097
MULTIPLE TEMPERATURE SENSITIVE DEVICES USING TWO HEAT PIPES	US	10/106277	03/26/02	6675887
MULTIPLE TEMPERATURE SENSITIVE DEVICES USING TWO HEAT PIPES	US	10/696270	10/29/03	
LOOP THERMOSYPHONS AND THEIR APPLICATIONS TO HIGH DENSITY	US	10/180166	06/26/02	6657121
LOOP THERMOSYPHONS AND THEIR APPLICATIONS TO HIGH DENSITY	US	10/658828	09/09/03	6972365
LOOP THERMOSYPHONS AND THEIR APPLICATIONS TO HIGH DENSITY	US	11/218747	09/02/05	7071408
HEAT PIPE SYSTEM FOR COOLING FLYWHEEL ENERGY STORAGE SYSTEMS	US	09/964303	09/26/01	6808011
COOLING SYSTEM FOR HINGED PORTABLE COMPUTING DEVICE	US	10/280726	10/25/02	6771498
CYLINDRICAL FIN TOWER HEAT SINK AND HEAT EXCHANGER	US	10/300094	11/20/02	6712128

PATENT	COUNTRY	APP. NO.	FILING DATE	PATENT NO.
HEAT PIPE FOR CAUTERY SURGICAL INSTRUMENT	US	10/305608	11/26/02	6905499
HEAT PIPE FOR CAUTERY SURGICAL INSTRUMENT	US	10/305609	11/26/02	6800077
HEAT PIPE FOR CAUTERY SURGICAL INSTRUMENT	US	10/970030	10/21/04	
HEAT PIPE FOR CAUTERY SURGICAL INSTRUMENT	US	11/195454	08/02/05	
DEFORMABLE END CAP FOR HEAT PIPE	US	10/364435	02/10/03	6907918
DEFORMABLE END CAP FOR HEAT PIPE	US	10/983429	11/08/04	7090002
DEFORMABLE END CAP FOR HEAT PIPE	US	11/341327	01/27/06	7143511
HEAT PIPE HAVING A WICK STRUCTURE CONTAINING PHASE CHANGE MATERIALS	US	10/370349	02/18/03	6889755
HEAT DISSIPATION UNIT WITH DIRECT CONTACT HEAT PIPE	US	10/413601	04/14/03	6717813
HEAT DISSIPATION UNIT WITH DIRECT CONTACT HEAT PIPE	US	10/817170	04/02/04	7698815
SINTERED GROOVED WICK WITH PARTICLE WEB	CN	2.0048E+11	12/30/05	
SINTERED GROOVED WICK WITH PARTICLE WEB	EP	4750725.6	11/10/05	
SINTERED GROOVED WICK WITH PARTICLE WEB	US	10/422878	04/21/03	6945317
SINTERED GROOVED WICK WITH PARTICLE WEB	US	11/128454	05/13/05	7013958
SINTERED GROOVED WICK WITH PARTICLE WEB	WO	PCT/US04/12933	04/26/04	
MULTIPLE HEAT PIPE TOWER MANUFACTURABILITY ENHANCEMENT FEATURE	US	10/457309	06/03/03	6830098
MULTIPLE HEAT PIPE TOWER MANUFACTURABILITY ENHANCEMENT FEATURE	US	10/983428	11/08/04	7117930

PATENT	COUNTRY	APP. NO.	FILING DATE	PATENT NO.
MULTIPLE HEAT PIPE TOWER MANUFACTURABILITY ENHANCEMENT FEATURE	US	11/467711	08/28/06	
CTE-MATCHED HEAT PIPE	US	10/458168	06/10/03	6793009
CTE-MATCHED HEAT PIPE	US	60/561436	04/12/04	
CTE-MATCHED HEAT PIPE	US	60/574158	05/25/04	
CTE-MATCHED HEAT PIPE	US	10/924586	08/24/04	7048039
CTE-MATCHED HEAT PIPE	US	11/065465	02/24/05	
CTE-MATCHED HEAT PIPE	US	11/079852	03/14/05	
BRAZED WICK FOR A HEAT TRANSFER DEVICE AND METHOD OF MAKING SAME	CN	2.0048E+11	02/15/06	
BRAZED WICK FOR A HEAT TRANSFER DEVICE AND METHOD OF MAKING SAME	CN	2.0048E+11	02/15/08	
BRAZED WICK FOR A HEAT TRANSFER DEVICE AND METHOD OF MAKING SAME	CN	2.0048E+11	12/04/05	
BRAZED WICK FOR A HEAT TRANSFER DEVICE AND METHOD OF MAKING SAME	DE	1.12004E+11	10/23/06	
BRAZED WICK FOR A HEAT TRANSFER DEVICE AND METHOD OF MAKING SAME	US	10/607337	06/26/03	6994152
BRAZED WICK FOR A HEAT TRANSFER DEVICE AND METHOD OF MAKING SAME	US	10/765660	01/27/04	7028759
BRAZED WICK FOR A HEAT TRANSFER DEVICE AND METHOD OF MAKING SAME	US	10/829104	04/21/04	
BRAZED WICK FOR A HEAT TRANSFER DEVICE AND METHOD OF MAKING SAME	US	11/120238	05/02/05	
BRAZED WICK FOR A HEAT TRANSFER DEVICE AND METHOD OF MAKING SAME	US	11/344857	02/01/06	

PATENT	COUNTRY	APP. NO.	FILING DATE	PATENT NO.
BRAZED WICK FOR A HEAT TRANSFER DEVICE AND METHOD OF MAKING SAME	US	11/054825	02/10/05	7137443
BRAZED WICK FOR A HEAT TRANSFER DEVICE AND METHOD OF MAKING SAME	US	11/561658	00/20/06	
BRAZED WICK FOR A HEAT TRANSFER DEVICE AND METHOD OF MAKING SAME	US	11/099758	04/06/05	7124809
BRAZED WICK FOR A HEAT TRANSFER DEVICE AND METHOD OF MAKING SAME	US	11/561658	11/20/06	
BRAZED WICK FOR A HEAT TRANSFER DEVICE AND METHOD OF MAKING SAME	WO	PCT/US2004/017298	06/03/04	
BRAZED WICK FOR A HEAT TRANSFER DEVICE AND METHOD OF MAKING SAME	WO	PCT/US2004/017937	06/04/04	
VAPOR CHAMBER THERMAL SOLUTION FOR MOBILE PROCESSOR COOLING	US	10/606905	06/26/03	6880626
VAPOR CHAMBER THERMAL SOLUTION FOR MOBILE PROCESSOR COOLING	US	11/003246	12/03/04	6997245
TOWER HEAT SINK WITH SINTERED GROOVED WICK	CN.	2.0048E+11	01/09/06	
TOWER HEAT SINK WITH SINTERED GROOVED WICK	US	10/618965	07/14/03	6938680
TOWER HEAT SINK WITH SINTERED GROOVED WICK	WO	PCT/US2004/018039	06/04/04	
THERMAL CONNECTOR	EP	4794107.5	09/20/06	
THERMAL CONNECTOR	US	10/628645	07/28/03	6804117
THERMAL CONNECTOR	US	10/786431	02/25/04	7013955
THERMAL CONNECTOR	US	11/210548	08/23/05	7096928
THERMAL CONNECTOR	US	11/461878	08/02/06	
THERMAL CONNECTOR	WO	PCT/US2004/032635	10/01/04	

PATENT	COUNTRY	APP. NO.	FILING DATE	PATENT NO.
COOLING SYSTEM FOR ELECTRONICS WITH IMPROVED THERMAL INTERFACE	US	10/649454	08/26/03	6883594
FLUID CIRCUIT HEAT TRANSFER DEVICE FOR PLURAL HEAT SOURCES	US	10/685954	10/15/03	7431071
HYBRID LOOP HEAT PIPE	US	10/690906	10/22/03	6926072
HYBRID LOOP HEAT PIPE	US	10/987893	11/12/04	7111394
HEAT PIPE COMPONENT DEPLOYED FROM A COMPACT VOLUME	US	10/792198	03/03/04	7080681
HEAT PIPE COMPONENT DEPLOYED FROM A COMPACT VOLUME	US	11/421235	05/31/06	
AIR-TO-AIR HEAT EXCHANGER	US	60/552414	03/11/04	
AIR-TO-AIR HEAT EXCHANGER	US	10/893767	07/16/04	7159649
TWO PHASE COOLING SYSTEM FOR COOLING MULTIPLE HIGH POWER ELECTRONIC COMPONENTS	US	10/929869	08/30/04	7129731
TWO PHASE COOLING SYSTEM FOR COOLING MULTIPLE HIGH POWER ELECTRONIC COMPONENTS	US	10/930018	08/30/04	7013956
TWO PHASE COOLING SYSTEM FOR COOLING MULTIPLE HIGH POWER ELECTRONIC COMPONENTS	US	11/337407	06/23/006	7143818
POROUS METAL COLD PLATE FOR A SINGLE-PHASE PUMPED LOOP (ELECTRONICS COOLING)	US	10/970404	10/20/04	7044199
POROUS METAL COLD PLATE FOR A SINGLE-PHASE PUMPED LOOP (ELECTRONICS COOLING)	US	11/381439	05/03/06	7690419
MODULAR HEAT SINK	US	11/159485	06/23/05	7306028
VIDEO GRAPHICS CARD MEMORY MODULES LIQUID COOLED HEAT SINK PLUS LIQUID COOLING COLD PLATE RETENTION MECHANISM	US	11/220456	09/07/05	7149087
VIDEO GRAPHICS CARD MEMORY MODULES LIQUID COOLED HEAT SINK PLUS LIQUID COOLING COLD PLATE RETENTION MECHANISM	US	11/637633	12/12/06	7414844

PATENT	COUNTRY	APP. NO.	FILING DATE	PATENT NO.
HEAT PIPE WITH AXIAL AND LATERAL FLEXIBILITY	US	11/256708	10/24/05	7647961
FLUID COOLED SINGLE PHASE HEAT SINK	US	09/357226	07/20/99	6131650
COMPACT FLUID TO FLUID HEAT EXCHANGER	US	09/911762	07/24/01	6405792
HEAT PIPE COOLING FOR TURBINE STATORS	US	08/943626	10/03/97	5975841
DEVELOPMENT OF A GRAVITY-ASSIST WATER LOOP HEAT PIPE WITH FLAT EVAPORATOR FOR WASTE HEAT REMOVAL	US	10/805142	03/19/04	7823629
FORCED FLUID HEAT SINK	CN	2.004IE+11	12/13/04	
FORCED FLUID HEAT SINK	FR	452779	11/26/04	
FORCED FLUID HEAT SINK	KR	10-2004-0101025	12/03/04	
METHOD OF INSTALLING HEAT PIPES USING INTERNAL VAPOR PRESSURE (ABANDONED)	US	09/131528	08/10/98	6065664
TOWER HEAT PIPE WITH DONUT OR LC OIL COOLER	US			
PATENTABILITY SEARCH FOR CONCENTRIC AND SPIRAL FIN COLD PLATE	US			
SERPENTINE, SLIT FIN HEAT SINK DEVICE	US	10/098000	03/14/02	6590770
MODULAR COOLING SYSTEM AND THERMAL BUS FOR HIGH POWER ELECTRONICS CABINETS	CN	2143329.1	09/25/02	ZL02143329.1
MODULAR COOLING SYSTEM AND THERMAL BUS FOR HIGH POWER ELECTRONICS CABINETS	EP	2021333.6	09/20/02	
MODULAR COOLING SYSTEM AND THERMAL BUS FOR HIGH POWER ELECTRONICS CABINETS	JP	2002-278696	09/25/02	
COMBINATION TOWER AND SERPENTINE FIN HEAT SINK DEVICE	US	10/259311	09/27/02	6830097

PATENT	COUNTRY	APP. NO.	FILING DATE	PATENT NO.
COOLER FOR POWER ELECTRONICS	US	10/306545	11/27/02	6662859
HEAT EXCHANGER FOR ELECTRONIC/ELECTRICAL COMPONENTS	US	10/372732	02/21/03	6745823
BONDED SILICON COMPONENTS AND A METHOD OF FABRICATING THE SAME	CN	2.0051E+11	08/19/05	
BONDED SILICON COMPONENTS AND A METHOD OF FABRICATING THE SAME	DE	1.02005E+11	08/19/05	
BONDED SILICON COMPONENTS AND A METHOD OF FABRICATING THE SAME	JP	2005-236553	08/17/05	
BONDED SILICON COMPONENTS AND A METHOD OF FABRICATING THE SAME	KR	10-2005-0075656	08/18/05	
BONDED SILICON COMPONENTS AND A METHOD OF FABRICATING THE SAME	US	10/921527	08/19/04	7407083
VAPOR COMPRESSION COOLING SYSTEM FOR COOLING ELECTRONICS	DE	1.02006E+11	10/25/06	
VAPOR COMPRESSION COOLING SYSTEM FOR COOLING ELECTRONICS	JP	2006-296295	10/31/06	
VAPOR COMPRESSION COOLING SYSTEM FOR COOLING ELECTRONICS	US	11/264406	11/01/05	

[redacted]

1. COOLING SYSTEM FOR COMPUTER ELECTRONICS, PATENT NO. 7312955.
2. MODULAR COOLING SYSTEM AND THERMAL BUS FOR HIGH POWER ELECTRONIC CABINETS, PATENT NO. 6828675.
3. FORCED FLUID HEAT SINK, PATENT NO. 7017655.
4. VAPOR COOLING SYSTEM FOR ELECTRONICS, APP. NO. 2007-0095087.
5. BONDED SILICON COMPONENTS AND METHODS FOR MAKING SAME, PATENT APP. NO. 2006-0037994.

NAME	COUNTRY	APP NO.	DATE	PATENT NO.
Chemically Compatible LP, Lightweight Heat Pipe	US	12/825733	06/29/10	
Multiple Temperature Sensitive Devices Using Two Heat Pipes	US	12/197925	08/25/08	
Heat Transfer Device and Method of Making Same	US	12/367296	02/06/09	
Fluid Circuit Heat Transfer Device for Plural Heat Sources	US	12/247082	10/07/08	
Porous Media Cold Plate	US	12/752910	04/01/10	
Heat Pipe With Axial and Lateral Flexibility	US	12/689135	01/18/10	
Nickel Plating of Aluminum/Copper Substrate	US			
Capillary Assisted Loop Thermosiphon Apparatus	US	12/917090	11/01/10	
Heat Pipe and Thermo-Electrical Cooler for Cold Plate	US			

Form PTO-1595 (Rev 03-09)
OMB No 0651-0027 (exp 03/31/200

U S DEPARTMENT OF COMMERCE
United States Patent and Trademark Office

01/31/2011

1-31-11

10361/6563

SHEET 1

To the Director of the U S Pate

ached documents or the new address(es) below

1. Name of conveying party(ies)
Thermacore, Inc. and
Thermal Corp.

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

2. Name and address of receiving party(ies)
Name: Sovereign Bank
Internal Address: Mail Code 10-6438-CM9

Street Address: 601 Penn Street

City: Reading

State: Pennsylvania

Country: U.S.A. Zip 19601

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

3. Nature of conveyance/Execution Date(s):
Execution Date(s) December 30, 2010

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

4. Application or patent number(s): ☐ This document is being filed together with a new application

A. Patent Application No.(s)
08/424791

B. Patent No (s)
5549155

Assignment Recordation Branch U.S. Public Records Division Received JAN 31 2011 5th Floor

Additional numbers attached? ☒ Yes ☐ No

5. Name and address to whom correspondence concerning document should be mailed:
Name: Michael J. Gombar, Jr., Esquire
Internal Address: N/A

Street Address 1100 Berkshire Blvd.
Suite 201

City: Wyomissing

State: Pennsylvania Zip. 19610

Phone Number (610) 372-7700

Fax Number. (610) 372-4865

Email Address: mgombar@masanobradley.com

6. Total number of applications and patents involved: 129

7. Total fee (37 CFR 1.21(h) & 3 41) $ 5,160

☐ 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:

Signature

1/21/11
Date

Michael J. Gombar, Jr.
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

INTELLECTUAL PROPERTY SECURITY AGREEMENT

THIS INTELLECTUAL PROPERTY SECURITY AGREEMENT (the "Agreement") is made this 30th day of December, 2010, by and between SOVEREIGN BANK, a federal savings bank, with an address at 601 Penn Street, Reading, Berks County, Pennsylvania 19601 (the "Bank") and THERMACORE, INC., a Pennsylvania corporation, having an address at 780 Eden Road, Lancaster, Pennsylvania 17601 (the "Debtor").

BACKGROUND

A. The Debtor and the Bank have entered into a certain loan and line of credit agreement dated the date hereof (as it may be amended from time to time, the "Loan Agreement").

B. Pursuant to the Loan Agreement, the Bank has agreed to make certain credit facilities available to the Debtor in the form of two (2) lines of credit and a term loan in the aggregate amount of Six Million Five Hundred Thousand Dollars ($6,500,000.00) (collectively, the "Loan").

C. To evidence the Debtor's obligations in connection with the Loan Agreement and the Loan, the Debtor has executed and delivered to the Bank three (3) promissory notes bearing even date herewith, wherein the Debtor promises to pay to the Bank the respective principal sums of Three Million Dollars ($3,000,000.00), Five Hundred Thousand Dollars ($500,000.00) and Three Million Dollars ($3,000,000.00) (as they may be amended from time to time, collectively, the Note").

D. As security for the Debtor's obligations under the Loan and the Note, the Debtor has agreed to grant to the Bank a first lien security interest in its intellectual property under the terms and conditions contained in this Agreement and to execute this Agreement for recording with the U.S. Patent and Trademark Office and other governmental authorities; and

NOW, THEREFORE, the parties hereto, in consideration of the mutual covenants contained herein and intending to be legally bound, agree as follows:

1. Definitions. Capitalized terms used and not otherwise defined herein shall have the meanings assigned to them in the Loan Agreement and the Note.

2. Grant of Security. The Debtor hereby grants to the Bank a first lien security interest in and to all of the Debtor's right, title and interest and to the following (collectively, the "Collateral"):

(a) (i) all trademarks, trade names, corporate names, company names, business names, fictitious business names, trade styles, service marks, logos and other source or business identifiers, and the goodwill associated therewith, now existing or hereafter adopted or acquired, all registrations and recordings thereof, and all applications in connection therewith, whether in the United States Patent and Trademark Office or in any similar office or agency of the United States, any state thereof or any other country or any political subdivision thereof, or otherwise,

including, without limitation, those referred to in Schedule 2(a)(i) hereto, and (ii) all reissues, extensions or renewals thereof.

3. Security for Obligations. The grant of a security interest in the Collateral by the Debtor under this Agreement secures the payment of all of the indebtedness, obligations and liabilities of any kind and description arising in of the Debtor to the Bank, under or in respect of the Note.

4. Recordation. The Debtor authorizes and requests that the Commissioner of Patents and Trademarks, and any other applicable government officer record this Agreement.

5. Execution of Counterparts. This Agreement may be executed in any number of counterparts, each of which when so executed shall be deemed to be an original and all of which taken together shall constitute one and the same agreement.

6. Grants, Rights and Remedies. This Agreement has been entered into in conjunction with the provisions of the Loan Agreement and the Note. The Debtor does hereby acknowledge and confirm that the grant of the security interest hereunder to, and the rights and remedies of, the Bank with respect to the Collateral are more fully set forth in the Loan Agreement and Note, the terms and provisions of which are incorporated herein by reference as if fully set forth herein.

7. Governing Law. This Agreement shall be governed by and construed according to the laws of the Commonwealth of Pennsylvania, without regard to the conflict of laws provisions thereof.

[Remainder of this page intentionally left blank – signature page follows]

IN WITNESS WHEREOF, the parties have executed this Intellectual Property Security Agreement as of the day and year first above written.

THERMACORE, INC.

By: _____
Jerome E. Toth, President

SOVEREIGN BANK

By: _____
Philip B. Shober, Senior Vice President

SCHEDULE 2(a)(i)

INTELLECTUAL PROPERTY SECURITY AGREEMENT

THIS INTELLECTUAL PROPERTY SECURITY AGREEMENT (the "Agreement") is made this 30th day of December, 2010, by and between SOVEREIGN BANK, a federal savings bank, with an address at 601 Penn Street, Reading, Berks County, Pennsylvania 19601 (the "Bank") and THERMAL CORP., a Delaware corporation, having an address at 1105 N. Market Street, Wilmington, Delaware 19801 (the "Debtor").

BACKGROUND

A. THERMACORE, INC. (the "Borrower") and the Bank have entered into a certain loan and line of credit agreement dated the date hereof (as it may be amended from time to time, the "Loan Agreement").

B. Pursuant to the Loan Agreement, the Bank has agreed to make certain credit facilities available to the Borrower in the form of two (2) lines of credit and a term loan in the aggregate amount of Six Million Five Hundred Thousand Dollars ($6,500,000.00) (collectively, the "Loan").

C. To evidence the Borrower's obligations in connection with the Loan Agreement and the Loan, the Borrower has executed and delivered to the Bank three (3) promissory notes bearing even date herewith, wherein the Borrower promises to pay to the Bank the respective principal sums of Three Million Dollars ($3,000,000.00), Five Hundred Thousand Dollars ($500,000.00) and Three Million Dollars ($3,000,000.00) (as they may be amended from time to time, collectively, the Note").

D. The Debtor has agreed to guarantee the payment by the Borrower of the Note pursuant to an unlimited guaranty and suretyship agreement of even date herewith (the "Guaranty").

E. As security for the Debtor's obligations under the Guaranty, the Debtor has agreed to grant to the Bank a first lien security interest in its intellectual property under the terms and conditions contained in this Agreement and to execute this Agreement for recording with the U.S. Patent and Trademark Office and other governmental authorities; and

NOW, THEREFORE, the parties hereto, in consideration of the mutual covenants contained herein and intending to be legally bound, agree as follows:

1. Definitions. Capitalized terms used and not otherwise defined herein shall have the meanings assigned to them in the Loan Agreement and the Guaranty.

2. Grant of Security. The Debtor hereby grants to the Bank a first lien security interest in and to all of the Debtor's right, title and interest and to the following (collectively, the "Collateral"):

(a) (i) all trademarks, trade names, corporate names, company names, business names, fictitious business names, trade styles, service marks, logos and other source or business

identifiers, and the goodwill associated therewith, now existing or hereafter adopted or acquired, all registrations and recordings thereof, and all applications in connection therewith, whether in the United States Patent and Trademark Office or in any similar office or agency of the United States, any state thereof or any other country or any political subdivision thereof, or otherwise, including, without limitation, those referred to in Schedule 2(a)(i) hereto, and (ii) all reissues, extensions or renewals thereof.

3. Security for Obligations. The grant of a security interest in the Collateral by the Debtor under this Agreement secures the payment of all of the indebtedness, obligations and liabilities of any kind and description arising in of the Debtor to the Bank, under or in respect of the Guaranty.

4. Recordation. The Debtor authorizes and requests that the Commissioner of Patents and Trademarks, and any other applicable government officer record this Agreement.

5. Execution of Counterparts. This Agreement may be executed in any number of counterparts, each of which when so executed shall be deemed to be an original and all of which taken together shall constitute one and the same agreement.

6. Grants, Rights and Remedies. This Agreement has been entered into in conjunction with the provisions of the Loan Agreement and the Guaranty. The Debtor does hereby acknowledge and confirm that the grant of the security interest hereunder to, and the rights and remedies of, the Bank with respect to the Collateral are more fully set forth in the Loan Agreement and Guaranty, the terms and provisions of which are incorporated herein by reference as if fully set forth herein.

7. Governing Law. This Agreement shall be governed by and construed according to the laws of the Commonwealth of Pennsylvania, without regard to the conflict of laws provisions thereof.

[Remainder of this page intentionally left blank – signature page follows]

IN WITNESS WHEREOF, the parties have executed this Intellectual Property Security Agreement as of the day and year first above written.

THERMAL CORP.

By: _____
Jerome E. Toth, President

SOVEREIGN BANK

By: _____
Philip B. Shober, Senior Vice President