

1) Family number: 22794216 (US3050833A)

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Title: METHOD OF MAKING ELECTRICALLY INSULATED HEATING UNITS

Abstract: (Claim 1) 1. The method of making an electrically insulated heating unit which comprises surrounding a resistor element in a closely confined space within a shell with dry particles of a material of a class consisting of fused and ground magnesium oxide, cuprous oxide, aluminum oxide, and zinc oxide, which are capable of reacting with phosphoric acid to form a stone-like solid mass, saturating the material with excess phosphoric acid by slight pressure applied thereto and retaining the acid material in contact with the material to form a solid embedment in positive engagement with the resistor element by chemical reaction of the acid with the material in situ at room temperature, suctionally removing excess acid, and drying the embedment produced by a positive heating action below the boiling temperature.

Classifications:

International (IPC 8-9): H05B3/18 H05B3/46 (Advanced/Invention); H05B3/10 H05B3/42 (Core/Invention)

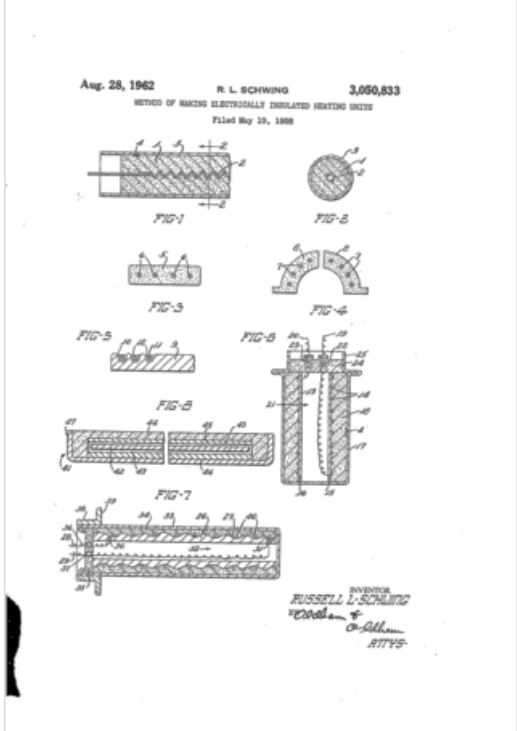
International (IPC 1-7): H05B3/10 H05B3/48

CPC: H05B3/46 H05B3/18 Y10T29/49089

European: H05B3/18 H05B3/46

US: 264/109 264/272.12 264/340 264/345 29/614 338/248

PatBase - US3050833_A



Family:

Publication number	Publication date	Application number	Application date
US3050833 A	19620828	US19580736393	19580519

Priority:

US19580736393 19580519

Probable Assignee: THERMAL MFG CO

Assignee(s): (std): THERMAL MFG CO ; THERMAL MFG COMPANY

Assignee(s): THERMAL MANUFACTURING COMPANY

Inventor(s): (std): SCHWING RUSSELL L

2) Family number: 8337551 (WO9221458A1)

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Title: METHOD AND APPARATUS FOR PRODUCING METAL MATRIX COMPOSITES USING ELECTROMAGNETIC BODY FORCES

Abstract: A method for producing metal matrix composites, in a continuous or batch mode, including the steps of placing a substantially liquid metal in the vicinity of a reinforcement material and the source of a transient magnetic field sufficient to produce an electromagnetic body force within the metal, and activating the magnetic field, propelling the substantially liquid metal into the reinforcement material. Also described are apparatus for producing these metal matrix composites, including an infiltration zone having adjoining liquid metal (16) and reinforcement material (18) subzones and an electromagnetic field source (22) capable of being activated and deactivated adjacent to the liquid metal subzone of the infiltration zone that produces a transient magnetic field and associated eddy currents within the metal, the electromagnetic field source oriented so as to propel the metal into the reinforcement material subzone of the infiltration zone.

Classifications:

International (IPC 8-9): B22D11/00 B22D19/14

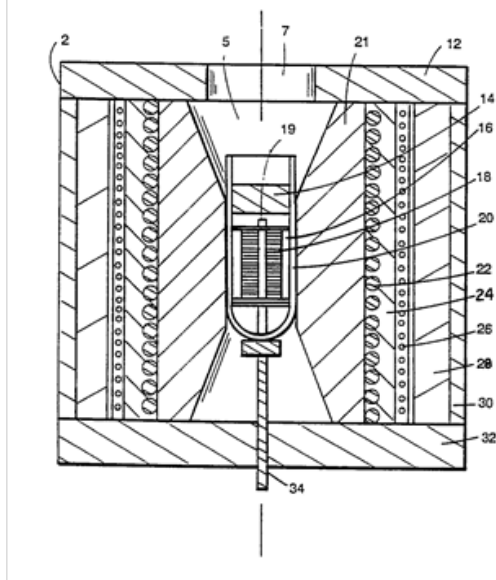
B22D27/02 (Advanced/Invention);

B22D11/00 B22D19/14 B22D27/02 (Core/Invention)

International (IPC 1-7): B22D11/00 B22D19/14 B22D27/02

CPC: B22D19/14

European: B22D19/14

**Family:**

Publication number	Publication date	Application number	Application date
AU199184204 A1	19930108	AU19910084204	19910606
EP0587560 A1	19940323	EP19910915508	19910606
EP0587560 A4	19941012	EP19910915508	19910606
JP6507347 T2	19940825	JP19910514422T	19910606
WO9221458 A1	19921210	WO1991US03994	19910606

Priority:

US19910674424 19910322 AU19910084204 19910606 WO1991US03994 19910606

Probable Assignee: MASSACHUSETTS INST TECHNOLOGY

Assignee(s): (std): MASSACHUSETTS INST TECHNOLOGY

Assignee(s): MASSACHUSETTS INSTITUTE OF TECHNOLOGY ; MASSACHUSETTS INST OF TECHNOLOGY

Inventor(s): (std): ANDREWS RICHARD M ; MORTENSEN ANDREAS ; FLEMINGS MERTON C

Inventor(s): MERTON C FLEMINGS ; RICHARD M ANDREWS ; ANDREAS MORTENSEN

Designated states: AT AU BE CA CH DE DK ES FR GB GR IT JP KR LI LU NL SE SU US

3) Family number: 40889553 (WO07138230A2)

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Title: NOVEL ELECTRIC HEATER STRUCTURE, IN PARTICULAR FOR USE IN LABORATORY, IN SCHOOLS AND/OR UNIVERSITIES

Abstract: The invention concerns an electric heater, in particular for use in laboratories. Said heater comprises a base element (4) for supporting a counter and a top element (5), between which is provided a sterilizing chamber (3) equipped with an electric resistor (10). According to the invention, the heating sterilizing chamber (3) comprises on at least part of its periphery, at least one lateral opening (6) provided with a protective grid (7) and two horizontal plates (11 and 12) delimiting between them a space wherein the electric resistor extends (19); said horizontal plates (11, 12) are made of a material promoting a radial orientation of the heat radiation produced by the electric resistor (10), so as to provide a sterile or quasi-sterile work zone, opposite and proximate the lateral opening(s).

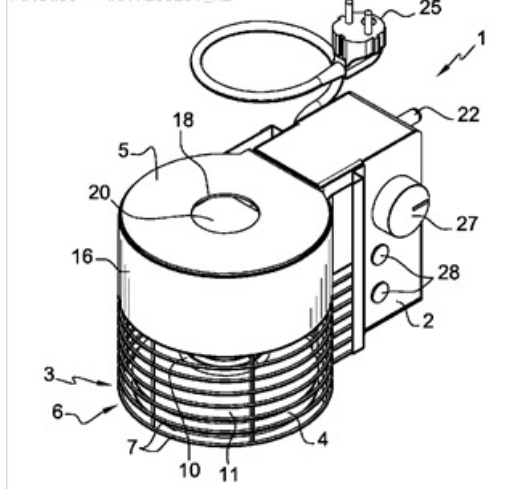
Classifications:

International (IPC 8-9): A61L2/04 F24C7/04 (Advanced/Invention); A61L2/04 F24C7/04 (Core/Invention)

CPC: A61L2/04 A61L2/08 A61L2/12

European: A61L2/04 A61L2/08 A61L2/12

PatBase - W007138230_A2

**Family:**

Publication number	Publication date	Application number	Application date
FR2901865 A1	20071207	FR20060004899	20060601
FR2901865 B1	20081219	FR20060004899	20060601

WO07138230 A2	20071206	WO2007FR51358	20070530
WO07138230 A3	20080207	WO2007FR51358	20070530

Priority:

FR20060004899 20060601

Probable Assignee: MEDLINE SCIENT LTD

Assignee(s): (std): BERNARD DANIEL ; MEDLINE SCIENT LTD

Assignee(s): MEDLINE SCIENTIFIC LIMITED ; MEDLINE SCIENTIFIC LTD

Inventor(s): (std): BERNARD DANIEL

Inventor(s): DANIEL BERNARD

Agent(s): CABINET HARLE ET PHELIP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

4) Family number: 21191591 (US2242203A)

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Title: Electrical heating element

Abstract: 1. An electrical heating element comprising, in combination, a rigid metallic resistor at least one end of which is resilient substantially radially, a ceramic gas-tight cover for said resistor, said resilient end projecting beyond said cover, a hollow metallic plug gas-tightly and rigidly connected with the adjacent end of said cover and engaging said resilient end so that a permanent electrical contact is established between said plug and said resilient end and the latter can move relative to the former. _

Classifications:

International (IPC 8-9): H05B3/06 (Advanced/Invention);

H05B3/06 (Core/Invention)

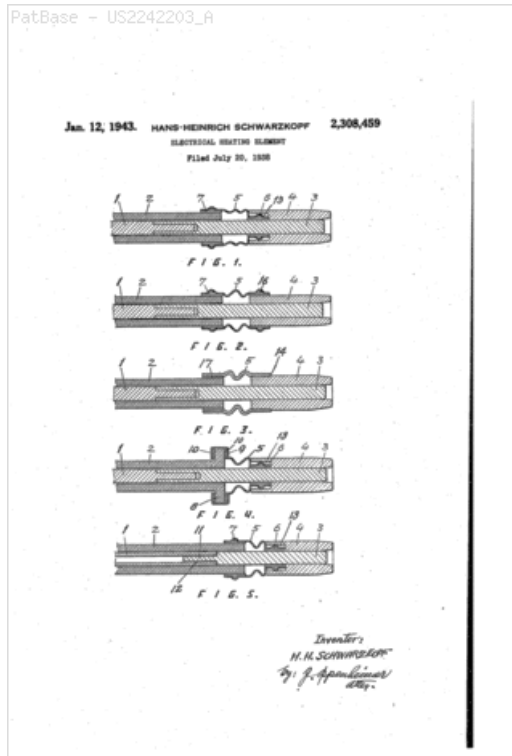
International (IPC 1-7): H05B3/08

CPC: H05B3/06

European: H05B3/06

US: 174/75R 338/209 338/237 338/272 338/274 338/322 338/332

PatBase - US2242203_A



Family:

Publication number	Publication date	Application number	Application date
US2242203 A	19410513	US19390306779	19391130
US2308459 A	19430112	US19380220211	19380720

Priority:

DE1937N040979 19370720 US19380220211 19380720 US19390306779 19391130

Probable Assignee: AMERICAN ELECTRO METAL CORP

Assignee(s): (std): AMERICAN ELECTRO METAL CORP

Inventor(s): (std): HANS HEINRICH SCHWARZKOPF ; SCHWARZKOPF HANS HEINRICH

5) Family number: 20659742 (US5586214A)

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Title: IMMERSION HEATING ELEMENT WITH ELECTRIC RESISTANCE HEATING MATERIAL AND POLYMERIC LAYER DISPOSED THEREON

Abstract: Polymeric heating elements and water heaters containing these elements are provided by this invention which utilize polymeric materials in contact with electric resistance heating materials and in contact with fluid to be heated. These polymeric materials also provide a substantially self-supporting structure for the resistance heating material. The heating elements include an electrically conductive resistance material capable of heating fluid when energized. The winding is insulated and protected by a polymer layer integrally disposed over the resistance material. The elements are lightweight, inexpensive to produce and use, and minimize galvanic corrosion and lime depositing without sacrificing heating capacity.

Classifications:

International (IPC 8-9): F24H1/20 F24H1/43 H01C1/028 H01C1/032 H01C7/00 H05B H05B1/02 H05B3/00 H05B3/02 H05B3/04 H05B3/10 H05B3/18 H05B3/28 H05B3/40 H05B3/42 H05B3/46 H05B3/48 H05B3/78 H05B3/82 (Advanced/Invention);
H05B1/02 H05B3/40 H05B3/78 (Advanced/Non-invention);
H05B1/02 H05B3/02 H05B3/10 H05B3/28 H05B3/40 H05B3/42 H05B3/78 (Core/Invention)

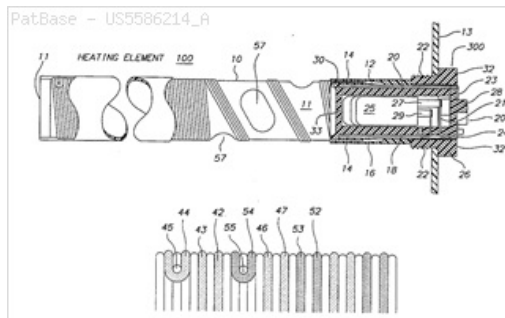
International (IPC 1-7): B29C45/14 B29C70/70 C08G75/20 F24H F24H1/43 H01C3/20 H01C7/00 H05B 3/28 H05B 3/78 H05B01/02 H05B03/28 H05B03/40 H05B03/78 H05B03/82 H05B1/00 H05B1/02 H05B3/00 H05B3/04 H05B3/10 H05B3/18 H05B3/28 H05B3/40 H05B3/42 H05B3/44 H05B3/48 H05B3/78 H05B3/82

CPC: H05B3/00 H05B3/78 H05B3/04 H05B3/46 H05B3/48 H05B3/82 H05B2203/021

European: H05B3/00 H05B3/04 H05B3/46 H05B3/48 H05B3/78 H05B3/82 T05B203/021

US: 219/216 219/523 219/544 264/263 264/272.11 264/272.15 264/275 338/286 338/318 392/497 392/500 392/503

PatBase - US5586214_A

**Family:**

Publication number	Publication date	Application number	Application date
AR000608 AA	19970710	AR19960334896	19960102
AR010308 AA	20000607	AR1997P105546	19971126
AR010357 AA	20000607	AR1997P105900	19971216
AU199646094 A1	19960724	AU19960046094	19951228
AU199852671 A1	19980622	AU19980052671	19971120
AU199857035 A1	19980715	AU19980057035	19971202
AU200039095 A1	20001009	AU20000039095	20000323
AU200039095 A5	20001009	AU20000039095D	20000323
AU691395 B2	19980514	AU19960046094	19951228
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HK1029483 B	20040827	HK20000101749	20000322
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PL185058 B1	20030228	PL19970333823	19971120
PL185348 B1	20030430	PL19970334022	19971202
PL321070 A1	19971124	PL19950321070	19951228
PL334022 A1	20000131	PL19970334022	19971202
RU2171550 C2	20010727	RU19970112877	19951228
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SK85797 A3	19980114	SK19970000857	19951228
TH17787 B	20041019	TH19951003464	19951226
TH22250 A	19961211	TH19951003464	19951226
TH23646 B	20080502	TH19971004800	19971124
TH25610 B	20090312	TH19971005086	19971212
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TH34723 A	19990827	TH19971005086	19971212
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TR9901313 T2	19990921	TR19990001313T	19971202
TW382876 B	20000221	TW19980100716	19971121
TW391017 B	20000521	TW19970118581	19971210
TW452313 Y	20010821	TW19990211588U	19960117
US5586214 A	19961217	US19940365920	19941229
US5835679 A	19981110	US19960755836	19961126
US5930459 A	19990727	US19960767156	19961216
US6233398 BA	20010515	US19990275161	19990324
US6432344 BA	20020813	US19980186017	19981104
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VN1982 A1	20010625	VN19970000678	19970725
WO0057674 A1	20000928	WO2000US07599	20000323
WO0057674 B1	20001207	WO2000US07599	20000323
WO9621336 A1	19960711	WO1995US16928	19951228
WO9824269 A1	19980604	WO1997US21711	19971120
WO9827789 A1	19980625	WO1997US23166	19971202
ZA9510741 A	19970618	ZA19950010741	19951218

Priority:

US19940365920	19941229	WO1995US16928	19951228	US19960755836	19961126
US19960775836	19961126	US19960767156	19961216	WO1997US21711	19971120
WO1997US23166	19971202	US19980186017	19981104	US19990275161	19990324
WO2000US07599	20000323				

Probable Assignee: RHEEM MFG CO

Assignee(s): (std): ENERGY CONVENTORS INC ; ENERGY CONVERTERS INC ; ENERGY CONVERTOR INC ; ENERGY CONVENTORS INC ; ENERGY CONVERTORS INC AND RHEEM MFG COMP ; ECKMAN CHARLES M ; EHNERDZHI KONVERTORS INK ; ENERG CORP INC ; HOCHBERG ARIE ; RHEEM MANUFACTURING CO ; RHEEM MFG CO ; RHEEM MFG CO NEW YORK ; RHEEM MFG CO ; RIIM MEHN JUFEKCHURING KOMPANI ; RODEN JAMES S ; WATLOW POLYMER TECHNOLOGY ; ENERGY CONVERTORS INC AND RHEEM ; RHEEM TECHNOLOGY INC ; WATLOW POLYMER TECHNOLOGIES ; PHEEM MFG CO

Assignee(s): WATLOWPOLYMER TECHNOLOGIES ; WATLOWPOLYMER TECHNOLOGIES 1265 SANBORN STREETWINO ; RHEEM MFG CO NEW YORK NEW YORK ; ENERGY CONVENTORS INC Y RHEEM MFG CO ; ENERGY CONVENTORS INC AND RHEEM MFG CO ; ENERGY CONVERTORS ; ENERGY CONVERTERS INC LOWER

DEMUNDS ROAD DALLAS PEN ; US006958 ; WATLOW ELECTRIC MANUFACTURING FA ; WATLOW ELECTRIC MFG ; WATLOW ELECTRIC MFG CO ; RHEEM MFG CO 405 LEXINGTON AVENUE NEW YORK NEW YORK ; RHEEM MFG ; ENERG INC CORP ; ENERGY CONVERTORS INC LOWER DEMUNDS ROAD DALLAS PENNSYLVANIA 18612 ; ENERGY CONVERTORS INC LOWER DEMUNDS ROAD DALLAS PEN

Inventor(s): (std): ARIE HOCHBERG ; C M ECKMAN ; CHARLES M ECKMAN ; CM ECKMAN ; ECKMAN C M ; ECKMAN CHARLES M ; ECKMAN CHARLZ M ; J S RODEN ; JAMES S RODEN ; JAMES SRODEN ; JS RODEN ; RODEN J S ; RODEN JAMES S ; VON ARX THEODORE ; HOCHBERG ARIE ; ECKMAN M ; ECKMAN CHARLES J ; RUTHERFORD JAMES M ; RODEN S ; ARX THEODORE VON

Inventor(s): CHARLES M ECKMAN ; JAMES M RUTHERFORD ; CHARLES J ECKMAN ; THEODORE VON ARX

Agent(s): SPRUSON AND FERGUSON; ASPEN PHARMA PTY LTD; SMART AND BIGGAR; SARGENT; CLT PATENT AND TRADEMARK HK LTD; LUZZATTO AND LUZZATTO

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CR CU CY CZ DE DK DM DZ EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

6) Family number: 28157876 (US2002025436A)

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Title: SPHEROIDAL SLAG AND FLY ASH PARTICLES AND APPARATUS AND PROCESS FOR PRODUCING SAME

Abstract: The present invention provides spheroidal particles of coal slag, and methods of making the spheroidal particles. One method of the invention includes delivering a feedstock of irregularly shaped particles of coal fly ash or coal slag to a drop tube, dropping the irregularly shaped particles into the drop tube in a manner such that the irregularly shaped particles flow in a substantially vertical downward path as individualized particles, and heating the irregularly shaped particles to cause at least the outer surface of the irregularly shaped particles to melt and form spheroidal particles due to surface tension at the outer surface. The spheroidal particles typically have a diameter in the range of about 0.001 to 5 mm, and comprise SiO₂, Al₂O₃, Fe₂O₃, FeO, Na₂O, and K₂O.

Classifications:

International (IPC 8-9): B01D39/06 B24C11/00 C03B19/10 C03C19/00 C04B18/02 (Advanced/Invention);

B01D39/02 B24C11/00 C03B19/00 C03C19/00

C04B18/00 (Core/Invention)

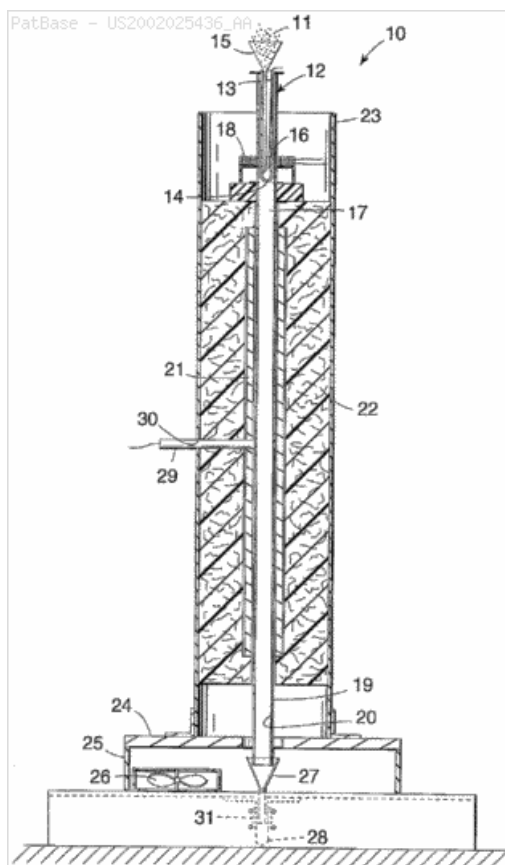
International (IPC 1-7): B28B1/00 B29C9/16 B32B1/502 B32B15/02 B32B5/16

CPC: Y10T428/2991 Y10T428/2993 C03C19/00 B01D39/06

B24C11/00 C03B19/1025 C04B18/026 Y02W30/92

European: B01D39/06 B24C11/00 C03B19/10B4B C03C19/00 C04B18/02F4

US: 264/15 425/332 428/403 428/404



Family:

Publication number	Publication date	Application number	Application date
US2002025436 AA	20020228	US20010870055	20010530
US2003180537 AA	20030925	US20020305864	20021126
US6258456 BA	20010710	US19980016707	19980130
US6746636 BB	20040608	US20010870055	20010530

Priority:

US19980016707 19980130 US20000691349 20001017 US20010870055 20010530
US20020305864 20021126

Probable Assignee: BLACK DIAMOND GRANULES INC

Assignee(s): (std): BLACK DIAMOND GRANULES ; BLACK DIAMOND GRANULES INC

Assignee(s): DIAMOND GRIT OF ORTONVILLE INC

Inventor(s): (std): MEYER PAUL W

Inventor(s): PAUL W MEYER

Agent(s): MERCHANT AND GOULD PC