

Search history

Search 1: CPC=(C10J3/42 or C10J3/48 or C10L3/00 or B01D45/14 or C10J3/20 or C10J3/26 or C10J3/46 or C10J3/66) (Results 6183)
Search 2: FT=(rotating 1w grill) (Results 228)
Search 3: 1 and 2 (Results 2)
Search 4: reactor and biomasa (Results 3297)
Search 5: 1 and 4 (Results 58)
Search 6: rotating and 5 (Results 18)
Search 7: cylinder and 5 (Results 17)
Search 8: FT=(rotating 1w ashtray) (Results 16)
Search 9: 1 and 8 (Results 0)
Search 10: ashtray (Results 17029)
Search 11: 1 and 10 (Results 22)
Search 12: FT=(gasificator and multiple) (Results 3)
Search 13: multiple and 1 (Results 677)
Search 14: grill and 13 (Results 8)

Title: VERFAHREN UND EINRICHTUNG ZUM INBERUEHRUNGBRINGEN EINER FLUESSIGKEIT MIT EINEM GAS ODER DAMPF
METHOD AND DEVICE FOR contacting a liquid with a gas OR STEAM (Machine translation)

Abstract: Source: DE1050316B [DE] (Claim1) PATENTANSPRUECHE:1 Verfahren zum Inberuehrungbringen einerFluessigkeit mit einem Gas oder Dampf, insbeson tiere zum Auswaschen von Gasen, wobei die Flues- sigkeit mittels Zentrifugalkraefte von innen nach aussen less than lurch einen mit Durchlaessen versehenen rotierenden Koerper und das Gas von aussen nach ilineil lurch reh deiI gleichen Koerper bewegt wird, da- durch gekennzeichnet, dass die Fluessigkeit zunaechst auf mit dem rotierenden Koerper (3) umlaufendeVerteilervorrichtungen (18) gebracht wird, ehe sie von diesen auf den rotierenden I(oerper uebergeht.

Machine translation: (Claim1) CLAIMS: einerFluessigkeit a method for contacting a gas or vapor, in particular animals to wash out of gases, the fluid-Flues by centrifugal forces from the inside out less than a lurch fitted with diffusers rotating body and the gas to the outside ilineil lurch reh DEII same body is moved, there-by in that fluid starts initially with the rotating body (3) peripheral devices distributor (18) is brought before them is of them on the rotating I(oerper goes over.

Classifications:

International (IPC 8-9): B01D45/14 B01J19/18

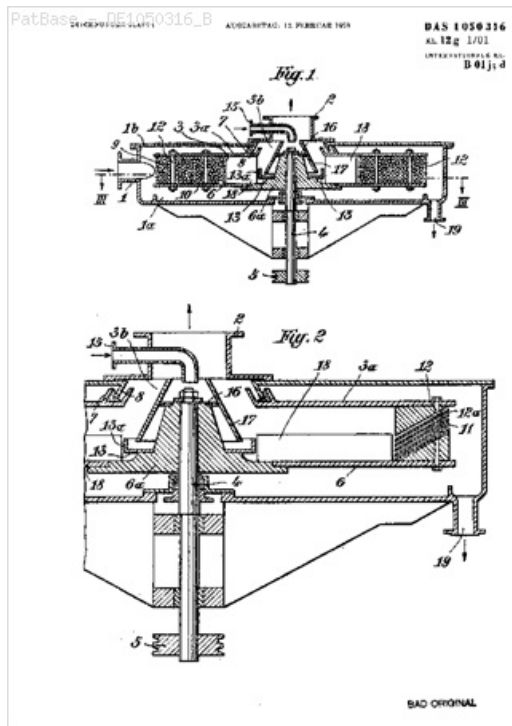
C10K1/10 (Advanced/Invention);

B01D45/12 B01J19/18 C10K1/00 (Core/Invention)

International (IPC 1-7): B01D11/04 B01D47/16 B01F5/10 B01J19/18 C07B29/00 F26B25/00

CPC: B01D45/14 B01J19/1806 B01J2219/00094 C10K1/10

European: B01D45/14 B01J19/18B C10K1/10 L01J219/00B2D4D



Family:

Publication number	Publication date	Application number	Application date
BE529962 A	00000000		00000000
CH337821 A	19590430		19540625
DE1050316 B	19590212	DE1954P012216	19540626

Priority:

19530629 19531029 19540617
DE1954P012216 19540626

Probable Assignee: KOPPERS GMBH HEINRICH

Assignee(s): (std): CLAES WILHELM PILO ; KOPPERS GMBH HEINRICH ; PILO CLAES WILHELM

Assignee(s): HEINRICH KOPPERS GES MIT BESCHRAENKTER HAFTUNG ; HEINRICH KOPPERS GESELLSCHAFT MIT BESCHRAENKTER HA ; HEINRICH KOPPERS GESELLSCHAFT MIT BESCHRAENKTER HAFTUNG

Inventor(s): (std): CLAES WILHELM PILO ; DAHLBECK SVEN ; PILO CLAES WILHELM

Inventor(s): WILHELM PILO CLAES

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
BE529962 A	00000000	LSPB	+	published / reissued	
BE529962 A	19200101	PEXP		Calculated Patent Term Expiry	
CH337821 A	19590430	LSGT	+	granted / extensions (spc, cpc, pte)	
CH337821 A	19740625	PEXP		Calculated Patent Term Expiry	
DE1050316 B	19590212	LSPB	+	published / reissued	

Title: CO-CURRENT GAS GENERATOR WITH DOWNDRAFT

Abstract: A co-current gas generator which is also suitable for vehicles consists of a generator chamber having a centrally arranged feed pipe for the gasifying agent and a conical mobile grate. The grate 20 is designed as a flat conical grate which is provided with vertical tubular channels 22. The grate 20 is rigidly joined via a standpipe 28 to a vibrator 36. The height of the feed pipe 50, arranged centrally in the generator 10 for feeding the gasifying agent 90 and having the distributor head 52, in the generator chamber is adjustable. The product gas passes around a deflection baffle 60 and through a screen-like gas passage 70 into a pipe branch 64 of the type of a cyclone. Above the grate 20, the generator chamber has a lining 14 of ceramic, and the grate 20 as well as the distributor head 52 likewise consist of ceramic.

Classifications:

International (IPC 8-9): C10J3/26 C10J3/36

C10J3/44 (Advanced/Invention);

C10J3/02 (Core/Invention)

International (IPC 1-7): C10J3/26 C10J3/40 C10J3/44

CPC: C10J3/26 C10J3/36 C10J3/40 C10J3/44 C10J3/726 C10J3/74

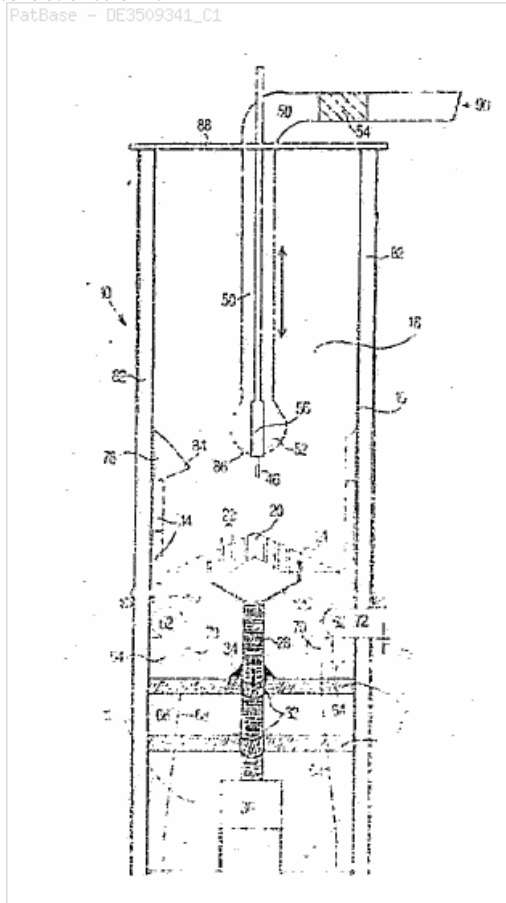
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C10J2300/0946 C10J2300/0956 C10J2300/0959 C10J2300/0969

C10J2300/0976

European: C10J3/26 C10J3/36 C10J3/44

PatBase - DE3509341_C1



Family:

Publication number	Publication date	Application number	Application date
DE3509341 C1	19860227	DE19853509341	19850315

Priority:

DE19853509341 19850315

Probable Assignee: GREUL ARTUR RICHARD

Assignee(s): (std): GREUL ARTUR RICHARD

Assignee(s): GREUL ARTUR RICHARD 6000 FRANKFURT DE

Inventor(s): (std): GREUL ARTUR RICHARD ; RICHARD GREUL ARTUR

Inventor(s): GREUL ARTUR RICHARD 6000 FRANKFURT DE

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
DE3509341 C1	19860227	LSGT	+	granted / extensions (spc, cpc, pte)	
DE3509341 C1	19860227	LSPB	+8100	PUBLICATION OF THE EXAMINED APPLICATION WITHOUT PUBLICATION OF UNEXAMINED APPLICATION	
DE3509341 C1	19860227	LSGT	+D1	GRANT (NO UNEXAMINED APPLICATION PUBLISHED) PATENT LAW 81	
DE3509341 C1	19860821	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
DE3509341 C1	19880317	LSLE	-8339	CEASED/NON-PAYMENT OF THE ANNUAL FEE	

Title: CONTINUOUS DEGASIFICATION AND/OR GASIFICATION OF A SOLID FUEL OR WASTE MATERIAL

Abstract: The invention pertains to a process and apparatus for continuous gasification/degasification of sorted and processed lumps of fuel/waste material in a shaft-like reactor (3). The batch, gaseous gasifying agent and generated gaseous fuel are fed downward in unidirectional flow and the gasifying agent (6) is preheated by the gaseous fuel (7) in a helical countercurrent heat exchanger (21; 22) situated in the mantle section and is heated further in helical or undulatory channels (25; 23; 35) in the ceramic hearth (8) and in a movable or fixed, conical or paraboloid central body (10) that projects into the lower part of the batch and serves to close off the hearth. The grate is formed by a rotatable, vertically displaceable counterpart which describes a full cone (10) or a hollow-cone-shaped ring body (47; 50) and which leaves an adjustable ring-shaped passage (15) open to the lower part of the hearth for drawing off the gaseous fuel generated (14; 26) and for discharging (16) the solid or liquid reaction products in the form of ashes, dross or distillation residue.

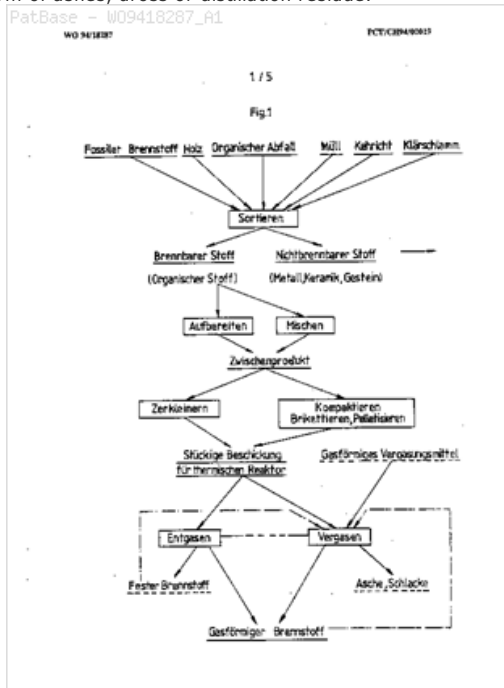
Classifications:

International (IPC 8-9): C10J3/26 C10J3/80 (Advanced/Invention); C10J3/00 C10J3/02 (Core/Invention)

International (IPC 1-7): C10J3/26 C10J3/80

CPC: C10J3/42 C10J3/74 C10J2300/0906 C10J2300/1861 C10J3/26 C10J3/80 F28F21/083

European: C10J3/26 C10J3/80



Family:

Publication number	Publication date	Application number	Application date
AU199458564 A1	19940829	AU19940058564	19940128
EP0609802 A1	19940810	EP19940101381	19940131
WO9418287 A1	19940818	WO1994CH00019	19940128

Priority:

CH19930000296 19930202 WO1994CH00019 19940128

Probable Assignee: JUCH HELMUT

Assignee(s): (std): HELMUT JUCH ; JUCH HELMUT

Inventor(s): (std): JUCH HELMUT

Inventor(s): HELMUT JUCH

Designated states: AT AU BE BR CA CH CN CZ DE DK ES FI FR GB GR IE IT JP KR LI LU MC NL NO PT RU SE SK US

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AU199458564 A1	19940829	LSPB	+	published / reissued	
EP0609802 A1	19940810	LSPB	+	published / reissued	
EP0609802 A1	19951108	LSDW	-18D	APPLICATION DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 19950211
WO9418287 A1	19940818	LSPB	+	published / reissued	
WO9418287 A1	19951122	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF COUNTRY CODE : WO
WO9418287 A1	19951202	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : CA

Title: CYCLONE-TYPE DUST COLLECTING APPARATUS FOR A VACUUM CLEANER

Abstract: The cyclone-type dust-collecting apparatus for a vacuum cleaner according to the disclosed invention has a **grill** cleaning means for automatically removing fine dusts covering the **grill** when the cleaner is in use. The **grill** cleaning means preferably comprises a **grill** rotating means for rotating the **grill** while the cleaner is in use and a dusting member disposed to extend along one side of the inner cyclone body to contact the outer circumference of the rotating **grill**. The **grill** rotating means comprises a rotation member disposed at top of the cyclone body to rotatably support the **grill** in relation to the cyclone body and to rotate together with the **grill**, connected with the **grill** by a number of connection members, and having an upper surface of the cyclone body excluding the air discharge port positioned in between, and provided with a gear portion formed around the outer circumference, a driving source for providing driving force for rotating the rotation member, and a power transferring means for transferring power of the driving source to the rotation member. The driving source may comprise a turbine fan disposed in the discharge pipe of the air discharge unit to be rotated by air discharged through the discharge pipe.

Classifications:

International (IPC 8-9): A47L5/30 A47L9/12 A47L9/16 A47L9/20 B01D45/14 B01D45/18 B04C5/12 B04C5/13 B04C5/185 B04C5/22 B04C9/00 (Advanced/Invention);

A47L9/16 (Advanced/Non-invention);

A47L5/22 A47L9/10 A47L9/20 B01D45/00 B01D45/12 B04C5/00

B04C9/00 (Core/Invention);

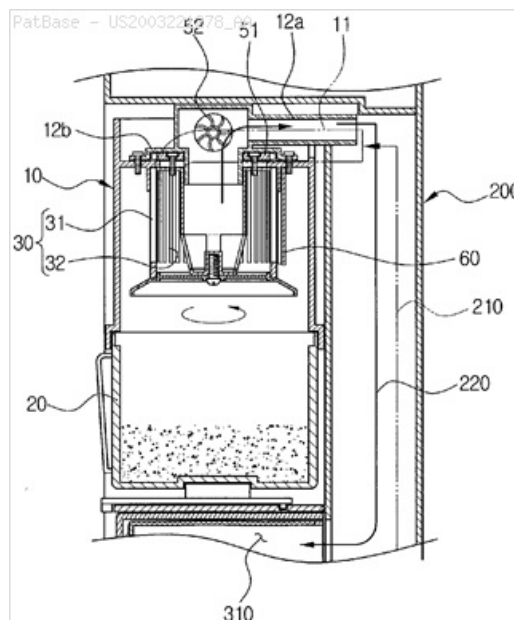
A47L (Subclass/Invention)

International (IPC 1-7): A47L5/24 A47L5/30 A47L9/04 A47L9/10 A47L9/16 A47L9/20 B01D45/12 B04C5/12 B04C5/185 B04C5/22 B04C9/00

CPC: Y10S55/03 A47L9/1675 A47L9/20 B01D45/14 B04C5/13 B04C5/22 B04C9/00 B04C2009/007

European: A47L9/12 A47L9/16 A47L9/16E2B A47L9/20 B01D45/14 B04C5/13 B04C5/22 B04C9/00 L04C9/00G

US: 15/352 15/352P 15/353 15/353S 55/304 55/405 55/429 55/459.1 55/DIG.3

**Family:**

Publication number	Publication date	Application number	Application date
AU2002313986 AA	20031218	AU20020313986	20021206
CA2413398 AA	20031130	CA20022413398	20021203
CN1277502 C	20061004	CN20031001524	20030116
CN1462604 A	20031224	CN20031001524	20030116
DE10303678 A1	20031218	DE20031003678	20030130
ES2265703 AA	20070216	ES20030001250	20030527
FR2840184 A1	20031205	FR20030006445	20030527
GB200300942 A0	20030212	GB20030000942	20030115
GB2389064 A1	20031203	GB20030000942	20030115
GB2389064 B2	20040721	GB20030000942	20030115
ITTO20030373 A1	20031201	IT2003TO00373	20030520
JP2004000408 A2	20040108	JP20020237543	20020816
JP3784754 B2	20060614	JP20020237543	20020816
KR100437106 B1	20040623	KR20020030721	20020531
KR20030092882 A	20031206	KR20020030721	20020531
NL1023022 A1	20031202	NL20031023022	20030326
NL1023022 C2	20040414	NL20031023022	20030326
RU2003102242 A	20040820	RU20030102242	20030127
RU2253347 C2	20050610	RU20030102242	20030127
US2003221278 AA	20031204	US20020271884	20021016
US6916351 BB	20050712	US20020271884	20021016

Priority:

KR20020030721 20020531 CA20022413398 20021203

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Inventor(s): (std): CHANG GVN O ; OKH DZANG KEUN ; OH JANG KEUN ; OH JANG GEUN

Inventor(s): JANG KEUN OH ; O CHANG GVN ; OKH DZANG-KEUN

Agent(s): SPRUSON AND FERGUSON; MARKS AND CLERK; LADAS AND PARRY LLP

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Patent	Date recorded	Event group	Code	Event	Details
AU2002313986 AA	20031218	LSPB	+	published / reissued	
AU2002313986 AA	20090702	LSLE	-MK4	APPLICATION LAPSED SECTION 142(2)(D) - NO CONTINUATION FEE PAID FOR THE APPLICATION	
CA2413398 AA	20031130	LSPB	+	published / reissued	
CA2413398 AA	20031210	LSSES	+EEER	EXAMINATION REQUEST	
CA2413398 AA	20090119	LSLE	-FZDE	DEAD	
CN1277502 C	20061004	LSGT	+	granted / extensions (spc, cpc, pte)	
CN1277502 C	20061004	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN1277502 C	20090318	LSLE	-C19	LAPSE OF PATENT RIGHT DUE TO NON-PAYMENT OF THE ANNUAL FEE	
CN1277502 C	20230116	PEXP		Calculated Patent Term Expiry	
CN1462604 A	20031224	LSPB	+	published / reissued	
CN1462604 A	20031224	LSPB	+C06	PUBLICATION	
DE10303678 A1	20031218	LSPB	+	published / reissued	
DE10303678 A1	20031218	LSSES	+OP8	REQUEST FOR EXAMINATION AS TO PARAGRAPH 44 PATENT LAW	
DE10303678 A1	20081120	LSLE	-8139	DISPOSAL/NON-PAYMENT OF THE ANNUAL FEE	
ES2265703 AA	20070216	LSPB	+	published / reissued	
ES2265703 AA	20070216	LSSES	+EC2A	SEARCH REPORT PUBLISHED	DATE OF REF DOCUMENT : 20070216 KIND CODE OF REF DOCUMENT : A1 DESIGNATED STATE(S) :
ES2265703 AA	20081016	LSRV	-FC2A	GRANT REFUSED	EFFECTIVE DATE : 20080916
FR2840184 A1	20031205	LSPB	+	published / reissued	
GB2389064 A1	20031203	LSPB	+	published / reissued	
GB2389064 B2	20040721	LSGT	+	granted / extensions (spc, cpc, pte)	
GB2389064 B2	20080924	LSLE	-PCNP	PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	EFFECTIVE DATE : 20080115
GB2389064 B2	20230115	PEXP		Calculated Patent Term Expiry	
ITTO20030373 A1	20031201	LSPB	+	published / reissued	
JP2004000408 A2	20040108	LSPB	+	published / reissued	
JP2004000408 A2	20050223	LSSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20050222
JP2004000408 A2	20050421	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20050420
JP2004000408 A2	20060303	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2004000408 A2	20060308	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20060307
JP2004000408 A2	20060323	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	TEXT : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20060315
JP2004000408 A2	20060324	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	TEXT : JAPANESE INTERMEDIATE CODE: R150
JP3784754 B2	20060614	LSGT	+	granted / extensions (spc, cpc, pte)	
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				OF NO PAYMENT OF ANNUAL FEES	
JP3784754 B2	20220816	PEXP		Calculated Patent Term Expiry	
KR100437106 B1	20040623	LSGT	+	granted / extensions (spc, cpc, pte)	
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KR100437106 B1	20220531	PEXP		Calculated Patent Term Expiry	
KR20030092882 A	20031206	LSPB	+	published / reissued	
KR20030092882 A	20020531	LSES	A201	REQUEST FOR EXAMINATION	
KR20030092882 A	20040525	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT	
KR20030092882 A	20040611	LSGT	+GRNT	WRITTEN DECISION TO GRANT	
NL1023022 A1	20031202	LSPB	+	published / reissued	
NL1023022 A1	20040202	LSES	+AD1A	A REQUEST FOR SEARCH OR AN INTERNATIONAL TYPE SEARCH HAS BEEN FILED	
NL1023022 C2	20040414	LSGT	+	granted / extensions (spc, cpc, pte)	
NL1023022 C2	20040601	LSES	+PD2B	A SEARCH REPORT HAS BEEN DRAWN UP	
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NL1023022 C2	20230326	PEXP		Calculated Patent Term Expiry	
RU2003102242 A	20040820	LSPB	+	published / reissued	
RU2253347 C2	20050610	LSGT	+	granted / extensions (spc, cpc, pte)	
RU2253347 C2	20100720	LSLE	-MM4A	THE PATENT IS INVALID DUE TO NON-PAYMENT OF FEES	EFFECTIVE DATE : 20080128
RU2253347 C2	20230127	PEXP		Calculated Patent Term Expiry	
US2003221278 AA	20031204	LSPB	+	published / reissued	
US2003221278 AA	20021016	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : SAMSUNG GWANGJU ELECTRONICS CO., LTD., KOREA, REPU OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:OH, JANG-KEUN; REEL/FRAME:013406/0742 EFFECTIVE DATE : 20021009
US2003221278 AA	20090810	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US6916351 BB	20050712	LSGT	+	granted / extensions (spc, cpc, pte)	
US6916351 BB	20090712	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US6916351 BB	20090901	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20090712
US6916351 BB	20231207	PEXP		Calculated Patent Term Expiry (PTA 417 days)	

Title: WET TYPE AIR PURIFICATION APPARATUS UTILIZING A CENTRIFUGAL IMPELLER

Abstract: This invention relates to a wet type air cleaner utilizing a centrifugal impeller with an electric motor instead of using filters, thus the separation of particular dust, mist can be absolutely eliminated from air with the difference of specific gravity between gas and pollution liquid under centrifugal force. An wet type air cleaner utilizing a centrifugal impeller comprising: protection grill (400) and water tank (401) located on an inlet pipe (405), an electric motor (433) with a centrifugal impeller (408) and a bearing (434) located inside of centrifugal cleaner (407), a drain trap (441) and humidity controller (442) installed on an exit pipe (432) etc. Therefore centrifugal wet type air cleaner make fresh air efficiently to be carried out by centrifugal force without using filters in the field of home, office, passenger car, dust place like cement factory, machine center, exhaust gas cleaner for an industrial burner and an internal combustion engine.

Classifications:

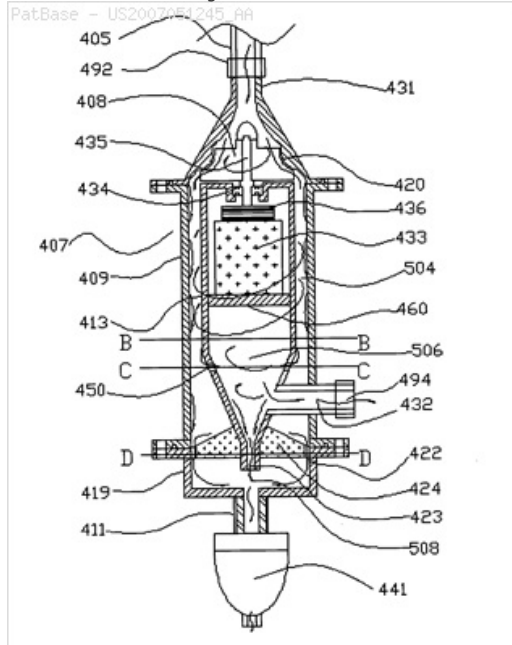
International (IPC 8-9): A61L9/14 A61L9/16 B01D45/00 B01D45/10 B01D45/12 B01D45/14 B01D47/00 B01D47/06 B01D47/08 B01D47/10 B01D47/16 B01D50/00 B01D53/14 F01N3/00 F01N3/037 F01N3/04 F04B39/16 F23J15/02 (Advanced/Invention); B01D45/10 B01D45/12 B01D47/08 F01N3/00 F01N3/037 (Advanced/Non-invention); A61L9/14 A61L9/16 B01D45/00 B01D45/12 B01D47/00 B01D47/06 B01D50/00 B01D53/14 F01N3/00 F01N3/037 F01N3/04 F23J15/00 F23J15/02 (Core/Invention); F01N3/00 (Core/Non-invention)

International (IPC 1-7): B01D45/10 B01D45/12 B01D47/08 F01N3/037

CPC: B01D47/16 B01D53/24 B01D53/77 B01D2259/4558 F01N3/005 F01N2240/20 F01N2290/04 F01N2290/06 F23J15/02 F23J2217/40 F23J2217/50 B01D47/085 B01D45/16 B01D53/18 F01N3/04 Y02T10/20 B01D45/12 B01D46/42 F01N3/037 Y02A50/2355 B01D47/06 B01D45/14 B01D47/10 B01D50/004 B01D2279/30

European: B01D45/14 B01D45/16 B01D47/06 B01D47/08 B01D47/10 B01D47/16 B01D50/00C B01D53/18 B01D53/24 F01N3/00B F01N3/037 F01N3/04 F23J15/02 L01D259/45T2 L01D279/30 L01D53/77 R01N240/20 R01N290/04 R01N290/06 R01N3/00B R23J217/40 R23J217/50

US: 55/437 96/244 96/251 96/251P 96/281 96/282 96/282S 96/284 96/286 96/306 96/306S 96/309 96/309P 96/311 96/311S

**Family:**

Publication number	Publication date	Application number	Application date
BRPI0506637 A	20071218	BR2005PI06637	20050203
CN100586532 C	20100203	CN200680003893	20060123
CN101072930 A	20071114	CN200580041755	20050915
CN101072930 B	20100908	CN200580041755	20050915
CN101111296 A	20080123	CN200680003893	20060123
CN1918369 A	20070221	CN200580004476	20050203
CN1918369 B	20120509	CN200580004476	20050203
EP1718849 A1	20061108	EP20050726360	20050203
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EP1843827 A1	20071017	EP20060702914	20060123
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IN04041DN2006 A	20070803	IN2006DN04041	20060713
JP2007531561 T2	20071108	JP20060552048T	20050203
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JP5065032 B2	20121031	JP20070535596T	20050915
KR100653137 B1	20061201	KR20050099316	20051020
KR100663667 B1	20070102	KR20040079691	20041006
KR100716903 B1	20070510	KR20040080482	20041008
KR20040043138 A	20040522	KR20040008187	20040207
KR20040043140 A	20040522	KR20040019159	20040320
KR20040096483 A	20041116	KR20040075696	20040921
KR20040098610 A	20041120	KR20040079691	20041006
KR20040099193 A	20041126	KR20040080482	20041008
KR20050103897 A	20051101	KR20050099316	20051020
MXPA06008922 A1	20070326	MX2006PA08922	20050203
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US2008250933 AA	20081016	US20060815496	20060123
US2012031275 AA	20120209	US20110198936	20110805
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WO06112590 A1	20061026	WO2006KR00251	20060123

Priority:

KR20020036656U 20021207

KR20040008187 20040207

KR20040019159 20040320

KR20040075696 20040921 KR20040079691 20041006 KR20040080482 20041008
WO2005KR00324 20050203 WO2005KR03061 20050915 KR20050099316 20051020
WO2006KR00251 20060123 US20070815496 20070803 US20110198936 20110805

Probable Assignee: KIM TAE SOO

Assignee(s): (std): JANGSHIK YUN ; JUN DZHANGSHIK ; KIM TAE SOO ; TAE SOO KIM ; YUN JANG SHIK ; YUN JANGSHIK ; YUN JANG SIK ; YIN ZHANGZHI

Assignee(s): BROOKS KUSHMAN PC

Inventor(s): (std): JANGSHIK YUN ; YUN JANGSHIK ; YUN JANG SHIK ; JUN DZHANGSHIK ; YUN JANG SIK

Agent(s): IPLA PA; BROOKS KUSHMAN PC

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

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
BRPI0506637 A	20071218	LSPB	+	published / reissued	
BRPI0506637 A	20110329	LSFE	-B08F	APPLICATION FEES: DISMISSAL - ARTICLE 86 OF INDUSTRIAL PROPERTY LAW	TEXT : REFERENTE A 3A ANUIDADES
BRPI0506637 A	20120502	LSFE	+B08G	APPLICATION FEES: RESTORATION	
BRPI0506637 A	20160419	LSFE	-B08F	APPLICATION FEES: DISMISSAL - ARTICLE 86 OF INDUSTRIAL PROPERTY LAW	TEXT : REFERENTE A 11A ANUIDADE.
BRPI0506637 A	20160830	LSLE	-B08K	LAPSE AS NO EVIDENCE OF PAYMENT OF THE ANNUAL FEE HAS BEEN FURNISHED TO INPI (ACC. ART. 87)	TEXT : EM VIRTUDE DO ARQUIVAMENTO PUBLICADO NA RPI 2363 DE 19-04-2016 E CONSIDERANDO AUSENCIA DE MANIFESTACAO DENTRO DOS PRAZOS LEGAIS, INFORMO QUE CABE SER MANTIDO O ARQUIVAMENTO DO PEDIDO DE PATENTE, CONFORME O DISPOSTO NO ARTIGO 12, DA RESOLUCAO 113/2013.
CN100586532 C	20100203	LSGT	+	granted / extensions (spc, cpc, pte)	
CN100586532 C	20100203	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN100586532 C	20131002	LSAS	ASS	SUCCESSION OR ASSIGNMENT OF PATENT RIGHT	PARTYTYPE : OWNER OWNER : YIN ZHANGZHI EFFECTIVE DATE : 20130911
CN100586532 C	20131002	LSAS	ASS	SUCCESSION OR ASSIGNMENT OF PATENT RIGHT	TEXT : FORMER OWNER: YIN ZHANGZHI EFFECTIVE DATE : 20130911
CN100586532 C	20131002	LSAS	C41	TRANSFER OF PATENT APPLICATION OR PATENT RIGHT OR UTILITY MODEL	
CN100586532 C	20131002	LSRE	COR	CHANGE OF BIBLIOGRAPHIC DATA	TEXT : CORRECT: ADDRESS; TO: 300061 HEXI, TIANJIN
CN100586532 C	20180209	LSLE	-CF01	TERMINATION OF PATENT RIGHT DUE TO NON-PAYMENT OF ANNUAL FEE	
CN100586532 C	20260123	PEXP		Calculated Patent Term Expiry	
CN101072930 A	20071114	LSPB	+	published / reissued	
CN101072930 A	20071114	LSPB	+C06	PUBLICATION	
CN101072930 B	20100908	LSGT	+	granted / extensions (spc, cpc, pte)	

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CN101072930 B	20250915	PEXP		Calculated Patent Term Expiry	
CN101111296 A	20080123	LSPB	+	published / reissued	
CN101111296 A	20080123	LSPB	+C06	PUBLICATION	
CN1918369 A	20070221	LSPB	+	published / reissued	
CN1918369 A	20070221	LSPB	+C06	PUBLICATION	
CN1918369 A	20080604	LSAS	ASS	SUCCESSION OR ASSIGNMENT OF PATENT RIGHT	PARTYTYPE : OWNER OWNER : YIN ZHANGZHI OLDPARTY : FORMER OWNER: JIN TAIZHU EFFECTIVE DATE : 20080509
CN1918369 A	20080604	LSAS	C41	TRANSFER OF PATENT APPLICATION OR PATENT RIGHT OR UTILITY MODEL	
CN1918369 B	20120509	LSGT	+	granted / extensions (spc, cpc, pte)	
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CN1918369 B	20180306	LSLE	-CF01	TERMINATION OF PATENT RIGHT DUE TO NON-PAYMENT OF ANNUAL FEE	
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EP1718849 A1	20061108	LSPB	+	published / reissued	
EP1718849 A1	20061108	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20060907
EP1718849 A1	20090211	LSAS	RAP1	TRANSFER OF RIGHTS OF AN APPLICATION	PARTYTYPE : OWNER OWNER : YUN, JANGSHIK
EP1718849 A4	20090415	LSES	+A4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20090317
EP1718849 A4	20090415	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : F01N 3/037 20060101AFI20050822BHEP
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EP1718849 A4	20100106	LSES	+R17C	DESPATCH OF FIRST EXAMINATION REPORT (CORRECTION)	EFFECTIVE DATE : 20091203
EP1718849 A4	20131127	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R003
EP1718849 A4	20140618	LSRV	-18R	REFUSED	EFFECTIVE DATE : 20131127

EP1843827 A1	20071017	LSPB	+	published / reissued	
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EP1843827 A4	20090415	LSES	+A4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20090312
EP1843827 A4	20090805	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20090701
EP1843827 A4	20100602	LSDW	-18D	APPLICATION DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20091112
IN04041DN2006 A	20070803	LSPB	+	published / reissued	
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JP2008518142 T2	20080529	LSPB	+	published / reissued	
JP2008518142 T2	20080229	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20080228
JP2008518142 T2	20080913	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	TEXT : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20080912
JP2008518142 T2	20110427	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20110426
JP2008518142 T2	20111026	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20111025
JP2008518142 T2	20120425	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20120424
JP2008518142 T2	20120530	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20120529
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JP2008518142 T2	20120816	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	TEXT : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20120809
JP2008518142 T2	20120817	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	TEXT : JAPANESE INTERMEDIATE CODE: R150
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JP2008540067 T2	20120127	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	TEXT : JAPANESE INTERMEDIATE CODE: R150
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JP4913073 B2	20150129	LSFE	R20	特許料納付書 Patent fee payment form	
JP4913073 B2	20150203	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
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KR20040043140 A	20040522	LSPB	+	published / reissued	
KR20040043140 A	20090421	LSDW	-WITN	WITHDRAWAL DUE TO NO REQUEST FOR EXAMINATION	
KR20040096483 A	20041116	LSPB	+	published / reissued	
KR20040096483 A	20091022	LSDW	-WITN	WITHDRAWAL DUE TO NO REQUEST FOR EXAMINATION	
KR20040098610 A	20041120	LSPB	+	published / reissued	
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KR20040099193 A	20050915	LSES	A201	REQUEST FOR EXAMINATION	
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KR20040099193 A	20061026	LSRV	-E90F	NOTIFICATION OF REASON FOR FINAL REFUSAL	
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KR20050103897 A	20051101	LSPB	+	published / reissued	
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MXPA06008922 A1	20090413	LSGT	+FG	GRANT OR REGISTRATION	
MXPA06008922 A1	20090910	LSAS	GB	TRANSFER OR ASSIGNMENT	
RU2006130377 A	20080320	LSPB	+	published / reissued	
RU2372500 C2	20091110	LSGT	+	granted / extensions (spc, cpc, pte)	
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RU2372500 C2	20250203	PEXP		Calculated Patent Term Expiry	
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US2008034717 AA	20080214	LSPB	+	published / reissued	
US2008034717 AA	20100524	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2008250933 AA	20081016	LSPB	+	published / reissued	
US2012031275 AA	20120209	LSPB	+	published / reissued	
US2012031275 AA	20150204	LSWD	-ABD2	Abandoned -- Failure to Pay Issue Fee	
US8012248 BB	20110906	LSGT	+	granted / extensions (spc, cpc, pte)	
US8012248 BB	20110817	LSGT	PAT1	Patented Case	
US8012248 BB	20120103	LSRE	CC	CERTIFICATE OF CORRECTION	
US8012248 BB	20150907	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8012248 BB	20151113	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BROOKS KUSHMAN P.C., MICHIGAN OLDPARTY : LIEN; ASSIGNOR:YUN, JANG-SHIK; REEL/FRAME:037148/0296 EFFECTIVE DATE : 20070405
US8012248 BB	20280704	PEXP		Calculated Patent Term Expiry (PTA 893 days)	
WO05075799 A1	20050818	LSPB	+	published / reissued	
WO05075799 A1	20060420	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 10595460 COUNTRY OF REF DOCUMENT : US
WO05075799 A1	20060420	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2007051245 COUNTRY OF REF DOCUMENT : US

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WO05075799 A1	20060807	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : PA/A/2006/008922 COUNTRY OF REF DOCUMENT : MX
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WO05075799 A1	20060907	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2006130377 COUNTRY OF REF DOCUMENT : RU
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WO05075799 A1	20070308	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 10595460 COUNTRY OF REF DOCUMENT : US
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WO06112590 A1	20070719	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2006702914 COUNTRY OF REF DOCUMENT : EP
WO06112590 A1	20070730	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2007554005 COUNTRY OF REF DOCUMENT : JP
WO06112590 A1	20070802	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 200680003893.9 COUNTRY OF REF DOCUMENT : CN
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WO06112590 A1	20071017	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2006702914 COUNTRY OF REF DOCUMENT : EP

Title: CYCLONE DUST SEPARATING APPARATUS FOR VACUUM CLEANER AND VACUUM CLEANER HAVING THE SAME

Abstract: A cyclone dust separating apparatus has a first cyclone chamber for separating particles from the externally-drawn fluid by centrifugal force, one or more second cyclone chambers for separating particles from the fluid discharged from the first cyclone chamber by centrifugal force, and one or more third cyclone chambers for separating particles from the fluid discharged from the second cyclone chambers, and causing the fluid to be discharged out via a discharge passage. The second and the third cyclone chambers are arranged in radial relation with respect to the first cyclone chamber, and thus, surround the first cyclone chamber. Therefore, the cyclone dust separating apparatus provides multi-stage centrifugal cleaning process and improved cleaning efficiency, while remaining compact-sized.

Classifications:

International (IPC 8-9): A47L5/12 A47L9/10 A47L9/16 B01D45/12 B04C5/24 (Advanced/Invention);

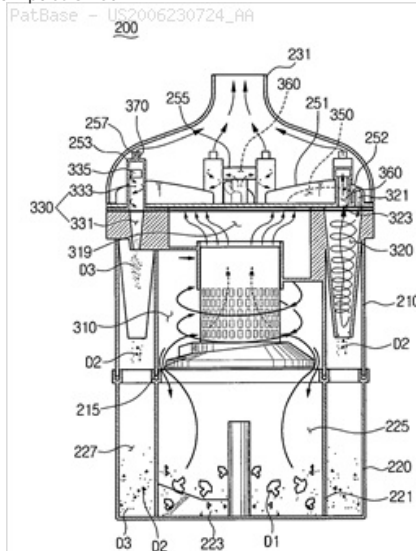
A47L9/10 A47L9/16 (Advanced/Non-invention);

A47L5/12 A47L9/10 B01D45/12 (Core/Invention)

CPC: Y10S55/03 A47L9/1625 A47L9/1641 A47L9/1683 B01D45/14 B04C5/24 B04C5/26

European: A47L9/16 A47L9/16C2 A47L9/16C4 A47L9/16F B01D45/14 B04C5/24 B04C5/26

US: 55/343 55/345 55/345P 55/346 55/349 55/429 55/459.1 55/DIG.3



Family:

Publication number	Publication date	Application number	Application date
CN101283891 A	20081015	CN200810092191	20060118
CN1839744 A	20061004	CN200610002182	20060118
CN1839744 B	20120509	CN200610002182	20060118
GB200602219 A0	20060315	GB20060002219	20060203
GB2424606 A1	20061004	GB20060002219	20060203
GB2424606 B2	20070314	GB20060002219	20060203
GB2424606 C	20101201	GB20060002219	20060203
KR100622550 B1	20060913	KR20050038738	20050510
US2006230724 AA	20061019	US20050318177	20051223
US7462212 BB	20081209	US20050318177	20051223

Priority:

US20050665941P 20050329 KR20050038738 20050510 US20050318177 20051223

Probable Assignee: SAMSUNG GWANGJU ELECTRONICS CO LTD

Assignee(s): (std): SAMSUNG ELECTRONICS CO LTD ; SAMSUNG KWANGJU ELECTRONICS CO ; SAMSUNG KWANGJU ELECTRONICS CO LTD

Assignee(s): SAMSUNG GWANGJU ELECTRONICS CO ; SAMSUNG GWANGJU ELECTRONICS CO LTD ; SAMSUNG ELECTRONICS CO

Inventor(s): (std): JANG KEUN OH ; JUNG GYUN HAN ; KIM MIN HA ; MIN HA HAN JUNG GYUN OH JANG K ; MIN HA KIM ; OH JANG KEUN ; HAN JUNG GYUN

Inventor(s): HAN JUNG GYUN OH JANG KEUN KIM MIN HA

Agent(s): PAUL D GREELEY ESQ OHLANDT GREELEY RUGGIERO AND PERLE LLP; STAAS AND HALSEY LLP

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CN101283891 A	20081015	LSPB	+	published / reissued	
CN101283891 A	20081015	LSPB	+C06	PUBLICATION	
CN101283891 A	20101124	LSDW	-C02	DEEMED WITHDRAWAL OF PATENT APPLICATION AFTER PUBLICATION (PATENT LAW 2001)	
CN1839744 A	20061004	LSPB	+	published / reissued	
CN1839744 A	20061004	LSPB	+C06	PUBLICATION	

CN1839744 A	20100811	LSRV	-C12	REJECTION OF A PATENT APPLICATION AFTER ITS PUBLICATION	
CN1839744 A	20110907	LSAS	ASS	SUCCESSION OR ASSIGNMENT OF PATENT RIGHT	PARTYTYPE : OWNER OWNER : SAMSUNG ELECTRONICS CO., LTD. OLDPARTY : FORMER OWNER : SAMSUNG KWANGIU ELECTRONICS CO., LTD. EFFECTIVE DATE : 20110728
CN1839744 A	20110907	LSAS	C41	TRANSFER OF PATENT APPLICATION OR PATENT RIGHT OR UTILITY MODEL	
CN1839744 B	20120509	LSGT	+	granted / extensions (spc, cpc, pte)	
CN1839744 B	20120509	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN1839744 B	20260118	PEXP		Calculated Patent Term Expiry	
GB2424606 A1	20061004	LSPB	+	published / reissued	
GB2424606 B2	20070314	LSGT	+	granted / extensions (spc, cpc, pte)	
GB2424606 B2	20090701	LSRE	S27	AMENDMENT OF SPECIFICATION AFTER GRANT (SECT. 27/PATENTS ACT 1977)	
GB2424606 B2	20260203	PEXP		Calculated Patent Term Expiry	
KR100622550 B1	20060913	LSGT	+	granted / extensions (spc, cpc, pte)	
KR100622550 B1	20050510	LSES	A201	REQUEST FOR EXAMINATION	
KR100622550 B1	20060424	LSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR100622550 B1	20060830	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT	
KR100622550 B1	20060904	LSGT	+GRNT	WRITTEN DECISION TO GRANT	
KR100622550 B1	20120829	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20120830 YEAR OF FEE PAYMENT : 7
KR100622550 B1	20130828	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20130829 YEAR OF FEE PAYMENT : 8
KR100622550 B1	20140827	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20140828 YEAR OF FEE PAYMENT : 9
KR100622550 B1	20150827	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20150828 YEAR OF FEE PAYMENT : 10
KR100622550 B1	20160829	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20160830 YEAR OF FEE PAYMENT : 11
KR100622550 B1	20250510	PEXP		Calculated Patent Term Expiry	
US2006230724 AA	20061019	LSPB	+	published / reissued	
US2006230724 AA	20051223	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : SAMSUNG GWANGJU ELECTRONICS CO., LTD., KOREA, REPU OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS: HAN, JUNG-GYUN; OH, JANG-KEUN; KIM, MIN-HA; REEL/FRAME: 017432/0191 EFFECTIVE DATE : 20051219
US7462212 BB	20081209	LSGT	+	granted / extensions (spc, cpc, pte)	
US7462212 BB	20081119	LSGT	PAT1	Patented Case	

US7462212 BB	20090414	LSRE	CC	CERTIFICATE OF CORRECTION	
US7462212 BB	20120516	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7462212 BB	20160524	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7462212 BB	20270808	PEXP		Calculated Patent Term Expiry (PTA 593 days)	

Title: CENTRIFUGAL, WET-TYPE AIR CLEANER

Abstract: A centrifugal, wet-type air cleaner with a centrifugal fan for generating vortex flow directly with the rotating torque of its blade, whereby pollutions can be eliminated centrifugally by creating a depressurized chamber includes on the basis of the aqua viscosity of water mist.

Classifications:

International (IPC 8-9): A61L9/14 B01D45/14 B01D46/00 B01D47/06 B01D53/18 B04C3/00 B04C3/06 B65H C02F1/28 C02F1/32 F01N F01N3/037 F24F F24F3/16 F24F5/00 F24F7/00 (Advanced/Invention);

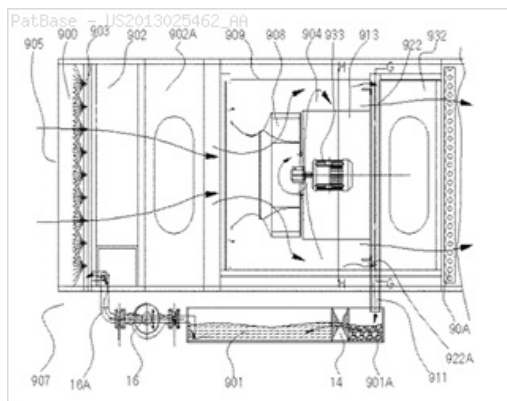
F01N3/037 (Core/Invention);

B65H F01N F24F (Subclass/Invention)

CPC: B01D45/14

European: B01D45/14

US: 96/256



Family:

Publication number	Publication date	Application number	Application date
AU2010283139 AA	20110217	AU20100283139	20100808
CA2770988 AA	20110217	CA20102770988	20100808
CN102834593 A	20121219	CN201080036087	20100808
EP2466085 A2	20120620	EP20100808319	20100808
EP2466085 A4	20130327	EP20100808319	20100808
IL218053 A0	20120430	IL20100218053	20100808
IN02115DN2012 A	20150821	IN2012DN02115	20120309
JP2013501614 T2	20130117	JP20120524636T	20100808
KR20110017800 A	20110222	KR20090075461	20090814
MX2012001894 A1	20120907	MX20120001894	20100808
RU2012108201 A	20130920	RU20120108201	20100808
TH129254 A	20131114	TH20121000572	20100808
US2013025462 AA	20130131	US20100390109	20100808
WO11019170 A2	20110217	WO2010KR05190	20100808
WO11019170 A3	20110707	WO2010KR05190	20100808
ZA201201848 A	20121128	ZA20120001848	20120313

Priority:

KR20090075461 20090814 WO2010KR05190 20100808

Probable Assignee: BROOKS KUSHMAN PC

Assignee(s): (std): JANG SHIK YUN ; YUN JANG SHIK ; YUN JANG SIK ; YUN JANGSHIK

Assignee(s): BROOKS KUSHMAN PC

Inventor(s): (std): JANG SHIK YUN ; YUN JANG SHIK ; YUN JANG SIK ; YUN JANGSHIK

Inventor(s): YUN JANG

Agent(s): SHELSTON IP; SHELSTON IP PTY LTD; BORDEN LADNER GERVAIS LLP; RUPPRECHT KAY; KITA AOYAMA INT PATENT BUREAU

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL 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 KZ LA LC LI 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 PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AU2010283139 AA	20110217	LSPB	+	published / reissued	
AU2010283139 AA	20150305	LSLE	-MK4	APPLICATION LAPSED SECTION 142(2)(D) - NO CONTINUATION FEE PAID FOR THE APPLICATION	
CA2770988 AA	20110217	LSPB	+	published / reissued	
CA2770988 AA	20160921	LSLE	-FZDE	DEAD	EFFECTIVE DATE : 20160810
CN102834593 A	20121219	LSPB	+	published / reissued	
CN102834593 A	20121219	LSPB	+C06	PUBLICATION	
EP2466085 A2	20120620	LSPB	+	published / reissued	
EP2466085 A2	20120620	LSSE	+17P	REQUEST FOR	EFFECTIVE DATE : 20120314

				EXAMINATION FILED	
EP2466085 A4	20130327	LSES	+A4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20130221
EP2466085 A4	20130327	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : F24F 5/00 20060101ALI20130215BHEP
EP2466085 A4	20130327	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : B01D 45/14 20060101AFI20130215BHEP
EP2466085 A4	20130327	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : F24F 3/16 20060101ALI20130215BHEP
EP2466085 A4	20130327	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : B01D 46/00 20060101ALI20130215BHEP
EP2466085 A4	20130327	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : F01N 3/037 20060101ALI20130215BHEP
EP2466085 A4	20140326	LSDW	-18D	APPLICATION DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20130924
IN02115DN2012 A	20150821	LSPB	+	published / reissued	
JP2013501614 T2	20130117	LSPB	+	published / reissued	
JP2013501614 T2	20130809	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	TEXT : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20130808
JP2013501614 T2	20140723	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20140722
JP2013501614 T2	20141120	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20141119
JP2013501614 T2	20150527	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20150526
JP2013501614 T2	20160106	LSRV	-A02	DECISION OF REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20160105
KR20110017800 A	20110222	LSPB	+	published / reissued	
KR20110017800 A	20140916	LSDW	-WITN	WITHDRAWAL DUE TO NO REQUEST FOR EXAMINATION	
MX2012001894 A1	20120907	LSPB	+	published / reissued	
MX2012001894 A1	20150805	LSGT	+FG	GRANT OR REGISTRATION	
RU2012108201 A	20130920	LSPB	+	published / reissued	
RU2012108201 A	20131220	LSWD	-FA93	ACKNOWLEDGEMENT OF APPLICATION WITHDRAWN (NO REQUEST FOR EXAMINATION)	EFFECTIVE DATE : 20131009
TH129254 A	20131114	LSPB	+	published / reissued	
US2013025462 AA	20130131	LSPB	+	published / reissued	
US2013025462 AA	20150814	LSES	NFA1	Non Final Action Mailed	
US2013025462 AA	20151113	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BROOKS KUSHMAN P.C., MICHIGAN OLDPARTY : LIEN; ASSIGNOR:YUN, JANG-SHIK; REEL/FRAME:037148/0296 EFFECTIVE DATE : 20070405
US2013025462 AA	20160304	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office	

Action					
WO11019170 A2	20110217	LSPB	+	published / reissued	
WO11019170 A3	20120209	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2012524636 COUNTRY OF REF DOCUMENT : JP
WO11019170 A3	20120212	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 218053 COUNTRY OF REF DOCUMENT : IL
WO11019170 A3	20120213	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2010283139 COUNTRY OF REF DOCUMENT : AU
WO11019170 A3	20120213	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2770988 COUNTRY OF REF DOCUMENT : CA
WO11019170 A3	20120214	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO11019170 A3	20120214	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 1201000572 COUNTRY OF REF DOCUMENT : TH
WO11019170 A3	20120308	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2010283139 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20100808 KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
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WO11019170 A3	20120416	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 13390109 COUNTRY OF REF DOCUMENT : US
ZA201201848 A	20121128	LSGT	+	granted / extensions (spc, cpc, pte)	
ZA201201848 A	20320312	PEXP		Calculated Patent Term Expiry	

Title: EQUIPMENT AND METHOD FOR ANALYSING THE CONVERSION OF CELLULOSE TO FUEL GAS

Abstract: The invention relates to a gasification system and a method for producing a gas mixture with high energy potential by making use of plant species, comprising the design of a countercurrent fixed bed reactor and a system for taking samples of the primary variables involved in the gasification process.

Classifications:

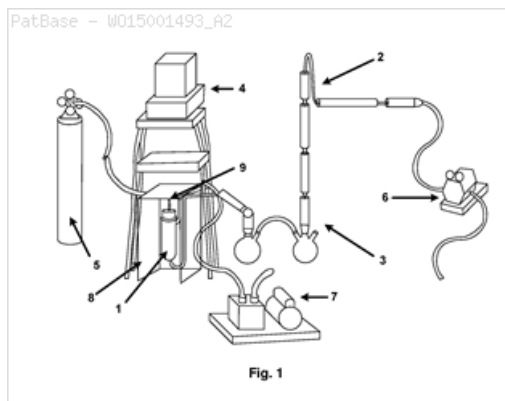
International (IPC 8-9): B01J7/00 C10J3/02 C10J3/04 C10J3/06

C10J3/20 C10J3/72 F23G5/027 G01G1/00

G01N5/04 (Advanced/Invention)

CPC: C10J3/02 C10J3/20 C10J2200/33 C10J2300/0916

C10J2300/0956 C10J2300/0959 C10J2300/0969



Family:

Publication number	Publication date	Application number	Application date
CO6710153 A1	20130715	CO20130155544	20130702
WO15001493 A2	20150108	WO2014IB62777	20140701
WO15001493 A3	20150423	WO2014IB62777	20140701

Priority:

CO20130155544 20130702

Probable Assignee: UNIV MILITAR NUEVA GRANADA

Assignee(s): (std): BARON NUNEZ MARBY ROCIO ; DELGADO TOBON ARNOLDO EMILIO ; UNIV MILITAR NUEVA GRANADA ; VILLADA PINILLA WILHER ANDRES

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Inventor(s): (std): BARON NUNEZ MARBY ROCIO ; VILLADA PINILLA WILHER ANDRES ; DELGADO TOBON ARNOLDO EMILIO

Inventor(s): WILHER ANDRES VILLADA PINILLA ; MARBY ROCIO BARON NUNEZ ; ARNOLDO EMILIO DELGADO TOBON

Agent(s): SILVANA MARIA LOPEZ DIAZ ; LOPEZ DIAZ SILVANA MARIA

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL 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 IR 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 PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

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Patent	Date recorded	Event group	Code	Event	Details
CO6710153 A1	20130715	LSPB	+	published / reissued	
WO15001493 A2	20150108	LSPB	+	published / reissued	
WO15001493 A3	20160727	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 14820126 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A2 DESIGNATED STATE(S) :