

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

CLASSIFICATION ORDER 1908

APRIL 5, 2011

PROJECT C-A210

**The following classification changes will be effected by this order:**

	<u>Class</u>	<u>Subclass</u>	<u>Art Unit</u>	<u>Ex'r Search Room</u>
<b>Abolished:</b>	210	747	1776	RND0000B15
<b>Established:</b>	210	747.1-747.9	1776	RND0000B15
<b>Title Change:</b>	210	170.08	1776	RND0000B15

**The following classes are also impacted by this order.**

405

**This order includes the following:**

- A. CLASSIFICATION MANUAL CHANGES
- B. LISTING OF PRINCIPAL SOURCE OF ESTABLISHED AND DISPOSITION OF ABOLISHED SUBCLASSES
- C. CHANGES TO THE USPC-TO-IPC CONCORDANCE
- D. DEFINITION CHANGES AND NEW OR ADDITIONAL DEFINITIONS

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600	<b>PROCESSES</b>	629	...And internally circulating the liquid
601	.Treatment by living organism	630	...And anaerobic treatment
602	..Including plant or animal of higher order	631	..And additional treating agent other than mere mechanical manipulation (e.g., chemical, sorption, etc.)
603	..Including collecting or storing gas (e.g., fuel, carbon monoxide, etc.)	632	.Treating by enzyme
604	...And reusing oxidant	633	.Extracting utilizing solid solute
605	..Anaerobically, with subsequently aerobically treating liquid	634	.Liquid/liquid solvent or colloidal extraction or diffusing or passing through septum selective as to material of a component of liquid; such diffusing or passing being effected by other than only an ion exchange or sorption process
606	..Adding enzyme or releasing same by treating microorganism	635	..Liquid/liquid or gel type (i.e., jellylike) chromatography
607	..Dividing, treating, and recombining liquid	636	..Including cleaning or sterilizing of apparatus
608	..Regulating floating constituent	637	..Including regulating pressure to control constituent gradient at membrane or to prevent rupture of membrane
609	..Including dewatering sludge	638	..Including ion exchange or other chemical reaction
610	..Including adding ancillary growth medium for microorganism	639	..Including prior use of additive (e.g., changing pH, etc.)
611	...For or with specific microorganism	640	..Passing through membrane in vapor phase
612	..And regulating temperature during biological step	641	..Utilizing plural diverse membranes
613	...Digesting sludge	642	..Extracting water from brine utilizing liquid/liquid solvent or colloidal extraction
614	..Controlling process in response to stream constituent or reactant concentration	643	..Utilizing liquid membrane (e.g., emulsion) in liquid/liquid solvent or colloidal extraction
615	..Utilizing contact surfaces supporting microorganism (e.g., trickling filter, etc.)	644	..Diffusing or passing through septum selective as to material of a component in liquid/liquid solvent or colloidal extraction
616	...Particulate media	645	...Biological fluid (e.g., blood, urine, etc.)
617	....In bed form	646	...Hemodialysis
618	....And rehabilitating or regenerating same	647	....Maintaining critical concentration(s)
619	..Rotating contactor		
620	..Aerobic treatment		
621	...Recirculating to prior step		
622	....Of separated liquid		
623	....Of sludge or separated solid		
624	....And returning to or withdrawing from diverse treating zones		
625	....Treating outside mainstream		
626	....To mainstream oxygenation (e.g., activated sludge, etc.)		
627	.....Utilizing specific oxidant, other than air alone (e.g., oxygen-enriched air, ozone, peroxide, etc.)		
628	.....Utilizing mechanical aeration means		

648	...Including regenerating or rehabilitating the extracting liquid in liquid/liquid solvent or colloidal extraction	675	...Rehabilitating or regenerating in diverse zone or chamber
649	..Diffusing or passing through septum selective as to material of a component of liquid	676	...Continuous cyclic process
650	...Filtering through membrane (e.g., ultrafiltration)	677	...Using conserved or recirculated fluid
651	...Removing specified material	678	...Including liquid flow direction change
652	...Hyperfiltration (e.g., reverse osmosis, etc.)	679	..Utilizing exchange or sorbent material associated with inert material
653	....Utilizing specified membrane material	680	...Including oil sorbent
654	.....Synthetic resin	681	..Removing ions
655	.....Cellulosic	682	...Radioactive
656	.Chromatography	683	...Anions
657	..Utilizing rotating column	684	....Metal complexed (e.g., chromate, ferricyanide, chlorplatinatate, etc.)
658	..Utilizing paper or thin layer plate	685	....Including cation
659	..Including liquid flow diversion	686	....Utilizing mixed bed or amphoteric material
660	.Ion exchange or selective sorption	687	..Calcium or magnesium (e.g., hardness, water softening, etc.)
661	..By passing through suspended bed	688	...Heavy metal
662	..And liquid testing or volume measuring	689	..Sorbing water from diverse liquid
663	..Including diverse separating or treating of liquid	690	..Sorbing organic constituent
664	..By distilling or degassing	691	...From aqueous material
665	..By making an insoluble substance or accreting suspended constituents	692	....Utilizing synthetic resin
666	....Utilizing organic agent	693	....Oil removed
667	....Utilizing aluminum, calcium, or iron containing agent	694	....Utilizing activated carbon
668	...By chemically modifying or inhibiting dispersed constituent	695	.Using magnetic force
669	...Prior to ion exchange or sorption	696	.Preventing, decreasing, or delaying precipitation, coagulation or flocculation
670	..Including rehabilitating or regenerating exchange material or sorbent	697	..Utilizing inorganic phosphorus agent
671	...Of oil sorbent material	698	..Utilizing organic agent
672	...Fractional, selective, or partial type	699	...Phosphorus containing
673	...Utilizing gas, water, or chemical oxidizing or reducing agent	700	...Nitrogen containing
674	...Utilizing organic regenerant	701	...Acrylic polymer
		702	.Making an insoluble substance or accreting suspended constituents
		703	..Effecting flotation
		704	...Including chemical addition (with or without bouyancy gas)
		705	...Chemically specified precipitant, coagulant, or flocculant
		706	....And significant characteristic of the bouyancy gas, other than mere addition of same

707	.....Generating gas in situ	746	..Electrical property sensing
708	..Including emulsion breaking	747.1	..Including geographic feature
709	..Controlling process in response to stream condition	747.2	..Stormwater treatment
710	..Treating the insoluble substance	747.3	...Filtering
711	...For recovery of a treating agent	747.4	..Dredging sediments/water mixture from underwater beds treated
712	..Including recycling	747.5	..Body of freshwater, surface flowing freshwater, or body of saltwater
713	...Of separated solids	747.6	...Utilizing floating treating means
714	..Seeding	747.7	..Groundwater treatment
715	..Utilizing sludge or floc blanket	747.8	...By chemical treatment
716	..Including step of manufacturing inorganic treating agent	747.9	..Utilizing artificial waste pond or pit (e.g., waste lagoon, wastewater pond, etc.)
717	...In situ	748.01	..Utilizing electrical or wave energy directly applied to liquid or material being treated
718	..Including degassing	748.02	..Sound waves
719	..Including chemical reduction	748.03	...Destroying living organisms
720	...Of chromium material	748.04	...Destroying/degradation of chemical contaminant
721	..Including oxidation	748.05	...Separating particles
722	...Of iron or manganese material	748.06	..Laser
723	..Utilizing precipitant, flocculant, or coagulant, each with accelerator or with each other or plural precipitants, flocculants, or coagulants	748.07	..Microwaves
724	...Regulating pH	748.08	..Infrared radiation
725	....Utilizing organic precipitant	748.09	..Visible light
726	...Sequential introduction	748.1	..Ultraviolet radiation
727	....Including organic agent	748.11	...Destroying living organisms
728	...Including organic agent	748.12	....Including generation of treatment chemical
729	..Utilizing organic precipitant	748.13	...Destroying/degradation of chemical contaminant
730	...From natural source or chemical modification thereof	748.14	....Photocatalytic
731	....Starch	748.15	....Utilizing hydrogen peroxide, ozone, or oxygen
732	...Synthetic polymer	748.16	..Including chemical treatment
733	....Acrylic	748.17	...Generating treatment chemical by electrical energy
734	....Nitrogen containing (e.g., amine, azo, etc.)	748.18	....Metal ion or metal
735	....Nitrogen containing (e.g., amine, azo, etc.)	748.19	....Ozone
736	....Derived from alkyl halide or epihalohydrin reactant	748.2	....Chlorine or chlorine compound
737	..Including temperature change	749	..Chemical treatment
738	..Including agitation	750	..Including degassing
739	..Including controlling process in response to a sensed condition	752	..Plural spaced feedings
740	..Density or specific gravity sensing	753	..Utilizing halogen or halogen containing material
741	..Pressure sensing	754	...Chlorine or bromine containing
742	..Temperature sensing	755	....Organic
743	..pH sensing	756	....Hypochlorite
744	..Level sensing	757	..By chemical reduction
745	..Turbidity or optically sensing	758	..By oxidation

759	...Utilizing peroxy compound (e.g., hydrogen peroxide, peracid, etc.)	795	.....Expanded bed
760	...Utilizing ozone	796	....Including mechanical agitation
761	...Liquid phase high temperature and pressure (e.g., "wet air", etc.)	797	...By diverse fluid
762	....Catalytic	798	....Reverse flow
763	...Catalytic	799	..Filtering immiscible liquids
764	..Destroying microorganisms	800	..Utilizing gravitational force
765	..Including liquid recirculation	801	...Including change of mainstream flow direction
766	..Including temperature change	802	....Utilizing parallel separation passages
767	..Separating	803	...Including specified feature of settled solids removal
768	..Including treating separated solids	804	...And additional diverse separation
769	..Destroying cake or solid component	805	..And recirculating liquid
770	...Including drying (e.g., by squeezing or heating, etc.)	806	..Plural separating
771	....By gas contact	807	..Utilizing particulate bed
772	...Washing with a fluid other than the prefilter	808	..Including specified pressure change
773	..Including preliminary conversion to liquid state	85	<b>WITH ALARM, INDICATOR, REGISTER, RECORDER, SIGNAL OR INSPECTION MEANS</b>
774	..Including temperature change	86	.Material level or thickness responsive
775	...Thermal diffusion	87	.Responsive to fluid flow
776	..Skimming	88	..Meter-controlled cyclic systems
777	..Including precoating filter medium with filter aid	89	...With time control
778	...With or by addition to prefilter	90	.Fluid pressure responsive
779	..Discharging residue to prefilter	91	.Position or extent of motion
780	..Including movement of filter during filtration	92	.Test valve
781	...Centrifugally extracting	93	.In effluent conduit
782	....Blood	94	.Transparent
783	...Rotating belt	95	..Sight glass
784	...Rotating drum	96.1	<b>CONSTITUENT MIXTURE VARIATION RESPONSIVE</b>
785	...Cleaning filter utilizing wave energy (e.g., vibrating, pulsating, etc.)	96.2	.With membrane
786	..Of particulate bed (e.g., fluidized or moving bed, etc.)	97	<b>FLOW, FLUID PRESSURE OR MATERIAL LEVEL, RESPONSIVE</b>
787	..Cyclonic, or centrifugal (e.g., whirling or helical motion or by vortex, etc.)	98	.Fluid current controlled cyclic system
788	...Introducing liquid tangentially	99	.Prefilter diverting to drain by prefilter accumulation
789	...Isolating layer	100	.Flow cut-off requiring reset
790	..Dividing and recombining	101	.Proportionate feed means
791	..Rehabilitating or regenerating filter medium	102	.Programming plural units
792	...Particulate bed	103	.Diverse sensing means
793	....Reverse flow	104	..Responsive to material level
794	....Including addition of diverse fluid	105	..With control for auxiliary liquid inlet
		106	.Filter cleaning
		107	..Rotary movement of filter or mechanical cleaner
		108	..Backwash or blowback
		109	.Discharge of treated material

110	..With separator inlet control	146	..Controlled cover latch
111	..Responsive to prefilter accumulation or filter clogging	147 148 149	..Controlled discharge means .Container movement operated .Thermal
112	..Heavier constituent	150	<b>WITH GAS-LIQUID SURFACE CONTACT MEANS</b>
113	...By weight of solids		
114	...By treated liquid accumulation	151	..With separator
115	...With lighter constituent outlet control	153 154	<b>STRUCTURAL INSTALLATION</b> .Flume stream type
116	..Permitted by filtrate accumulation	155 156	..Plural or diverse screens ..Fluid stream or residue operated
117	..Check valve controlled		
118	..Non-closing, e.g., sand valve	157	...Revolving cylindrical strainer
119	...Float type	158	..With cleaner for movable strainer
120	.Vent control		
121	.Float	159	..With cleaner and means to remove residue therefrom
122	..Controls movable separator		
123	..Controls valve	160	..Endless belt strainer
124	...Controls flow between two separators	161 162	..Revolving strainer ..Fixed strainer
125	...Separator between float and valve	163	.Grated inlet surface drain
126	...Float in separate rehabilitating fluid tank	164 165	..Flat grating at surface level ...With subsurface weep means
127	...Additional fluid inlet control	166	..Concentric guard ring or rib
128	...Float in receptacle other than that of separator	167.01	.Closed circulating system
129	....In flow between inlet and separator	167.02	..For lubrication system
130	.Fluid pressure responsive by- pass	167.03	...Having magnetic treating means
131	..By movement of separation medium	167.04	...Plural separators
132	..With additional separation or treating means	167.05	....Having bypass line
133	..In inlet and outlet closure header	167.06	...With heating or cooling means
134	.Plural elements controlled	167.07	....Evaporator
135	..Including manually controlled element	167.08	...Separator for transmission system
136	.Check valve	167.09	...With separator cleaning means
137	.Maintaining stream pressure or flow	167.1	..For swimming pool or spa (e.g., skimmer, etc.)
138	<b>WITH TIME CONTROL</b>	167.11	..With means to add treating material
139	.Of additional fluid	167.12	...Separator external to swimming pool or spa
140	..Preparation for treating operation	167.13	....Particulate solid filter
141	<b>WITH PROGRAM ACTUATOR</b>	167.14	....With separator cleaning means (e.g., backwash means, etc.)
142	.Plural treating units or sections sequentially controlled	167.15	...Separator for use on swimming pool or spa bottom and separator for use at water surface
143	<b>AUTOMATIC CONTROL</b>	167.16	...Separator for use on swimming pool or spa bottom
144	..Responsive to vibration or unbalance	167.17	....Debris collecting bag
145	..Responsive to rotation	167.18	...Skimmer arm at skimmer opening at water surface
		167.19	...Mesh or screen filter at or near water surface

167.2	...Having floating means	178	..With mechanical agitator or movable separator
167.21	..For aquarium		
167.22	..Separator using living organism	179	.With mechanical agitator or movable separator
167.23	...Separator or part thereof associated with bottom of aquarium (e.g., means positioned under gravel, etc.)	180	.Vapor or gas removal
		181	.Flow line connected in series with distinct separator
		182	.Diverse separators
167.24	...Having solid sorbent	183	..Common casing coaxial with heater
167.25	..Particulate filter or particulate sorbent	184	.For filter
167.26	..Separator with aerator	185	..Imbedded or between filter media
167.27	..Separator mounted on top edge of aquarium wall	186	..External of casing
167.28	..For cooking oil system	187	.Within gravitational separator
167.29	..Having magnetic treating means	188	<b>WITH GAS SEPARATOR</b>
167.3	..With means to add treating material	189	<b>PLURAL CHAMBERS WITH MOVEMENT OF GRANULES THEREBETWEEN</b>
167.31	..Plural separators	190	<b>WITH EXTERNAL SUPPLY MEANS FOR REGENERATING MEDIUM, E.G., WATER SOFTENING SYSTEM</b>
167.32	..With heating or cooling means		
170.01	.Geographic		
170.02	..For fishpond	191	.With pump, injector or siphon
170.03	..For stormwater treatment (e.g., rainwater runoff, stormsewer treatment, etc.)	192	<b>WITH PRELIMINARY CHEMICAL MANUFACTURE</b>
		193	<b>WITH PRECOAT ADDING OR APPLYING MEANS</b>
170.04	..For excavating means		
170.05	..Floating means	194	<b>RECIRCULATION</b>
170.06	..Separator with aerator	195.1	.Serially connected distinct treating or storage units
170.07	..Groundwater		
170.08	..Septic system including drain field or leach field or waste liquid treatment system	195.2	..With semipermeable membrane, e.g., dialyzer, etc.
		195.3	..With sediment recycle means directly to main stream
170.09	..Body of freshwater (e.g., pond, lake, reservoir, etc.)	195.4	...Means is baffle slot
170.1	..Surface flowing freshwater (e.g., stream, river, ditch, canal, etc.)	196	.Of filtrate
		197	.From bottom of separator
170.11	..Body of saltwater (e.g., sea, ocean, etc.)	198.1	<b>WITH MEANS TO ADD TREATING MATERIAL</b>
		198.2	.Chromatography
171	.Machinery	198.3	..Thin layer, e.g., plate, etc.
172.1	..Separator ancillary to storage tank	199	.Spaced along flow path
		200	.Plural distinct separators
172.2	..Submerged separator	201	..Serially connected
172.3	...On pump suction intake	202	...Diverse type
172.4	...Filter supported by frame (e.g., bag shaped filter in fuel tank for engine, etc.)	203	..Filters
		204	...Sectional chamber press type
		205	.With distinct reactor tank, trough or compartment
172.5	...Having tethering means		
172.6	..In tank inlet	206	..Chemical holder in series with separator
173	<b>COMMINUTING</b>		
174	.Cylindrical strainer	207	..Within gravitational separator
175	<b>WITH HEATER OR HEAT EXCHANGER</b>	208	...With mechanical agitator
176	.Thermal diffusion	209	.Directly applied to separator
177	..With treating fluid addition		

210	..To interior of moving filter, e.g., drum	244	<b>PORTABLE RECEPTACLE WITH HOOD OR CLOSURE</b>
211	...Through separator supporting rotary shaft	245	.Attached variable flow controller
212	...With stationary casing closure feature	246	.Limited opening cover
213	...With coaxial rotary impeller or distributor	247	<b>FILTRATE SPLASH PLATE AND/OR DEFLECTOR</b>
214	...With stationary mount for movable distributor	248	<b>WITH DRIP, OVERFLOW OR CONTENT DRAINING FEATURE</b>
215	...With effluent dividing means	249	<b>BRACKET OR LEG SUPPORT FOR STATIC SEPARATOR ASSEMBLY</b>
216	..Moving filter medium	250	.Leg
217	...Drum	251	<b>COMBINED</b>
218	..Gas removed from closed tank	252	<b>SERIALLY CONNECTED DISTINCT TREATING WITH OR WITHOUT STORAGE UNITS</b>
219	..With mechanical agitator		
220	..Submerged fluid inlet		
221.1	...With outlet at surface, e.g., froth flotation, etc.	253	.Parallel
221.2	...And gas injecting means other than by mechanical agitation	254	.With by-pass
222	<b>MAGNETIC</b>	255	.Cascade
223	..With additional separator	256	.One unit inside another
224	<b>SECTIONAL CHAMBER PRESS TYPE</b>	257.1	.With storage unit
225	..With residue removal or liquid agitation	257.2	..Having membrane
226	..With porous filler	258	.With pump, gas pressure or vacuum source
227	..Medium clamped in joint	259	.Diverse
228	..With spacing frame	260	..Including multiple operation unit
229	..Imperforate base recess in plate	261	..One unit supports another
230	..With repair or assembling means	262	..On different levels
231	..Plates or frames	263	<b>PARTICULATE MATERIAL TYPE SEPARATOR, E.G., ION EXCHANGE OR SAND BED</b>
232	<b>WITH REPAIR OR ASSEMBLING MEANS</b>	264	.Selective units or compartments
233	..Piercing or closure knock out means	265	.With gravitational separator
234	..Removable treatment part with normally disabled flow controller	266	.With spaced non-particulate separating means
235	..Placement of container opens flow controller	267	.Trunnion mounted casing
236	..Sliding or rolling on guide means	268	.Gravity flow of particles type
237	..Hoist or handle means	269	.With rehabilitation means
238	..Hand manipulable	270	..Movable means for particle pickup and redeposit
239	<b>CONVERTIBLE</b>	271	..Surface traversing type
240	..Filter having selectively usable flow connector means	272	...Rotating on stationary axis
241	<b>WITH MOVABLE SUPPORT</b>	273	...Moving fluid distributor
242.1	..Float	274	..Including means to apply gas to bed
242.2	..With aerating means	275	..Backwash or blowback means
242.3	..With oil water skimmer	276	...With mechanical agitator or residue remover
242.4	..With oil water sorption means	277	...Flow controller external of closed casing
243	<b>ELECTRICAL INSULATING OR ELECTRICITY DISCHARGING</b>	278	...Multi-way valve unit
		279	...With embedded fluid distributor

280	..With agitator	316	...One adjacent inlet or outlet conduit
281	..With access opening to normally closed casing	317	...Including non-self-supporting medium
282	.Removable cartridge or hand-manipulated container	318	...Incompatible shapes
283	.Pervious divider between and contacting beds	319	.With agitator
284	.Spaced beds	320	.With baffle perpendicular to flow direction
285	.Embedded baffle	321.6	<b>CASING DIVIDED BY MEMBRANE INTO SECTIONS HAVING INLET(S) AND/OR OUTLET(S)</b>
286	..Vertical	321.61	.Membrane secured with adhesive of specified composition
287	.Within flow line or flow line connected closed casing	321.62	.Antithrombogenic membrane
288	..Conduit through bed, inlet and outlet at same end of casing	321.63	.Rotating mechanical agitator adjacent membrane
289	..With particular liquid receiving means or foraminous bed retainer	321.64	.Plural diverse structured membranes within a single casing
290	.With multi-layer beds	321.65	.Permeated liquid quantity measurement or control
291	.Particular liquid receiving means or foraminous bed retainer	321.66	.Energy recovery from treated liquid
292	..Hood or top protector type	321.67	.Membrane movement during purification
293	..Floor type, e.g., false bottom	321.68	..Nontranslatory rotary
294	<b>DIVERSE DISTINCT SEPARATORS</b>	321.69	.With membrane cleaning or sterilizing means (other than by filter movement or rotating agitator)
295	.Including a filter	321.7	..Solid cleaning material (e.g., balls)
296	..Including liquid as a separating medium	321.71	.Dialyzer with dialysate proportioning means
297	..Moving filter medium	321.72	.Each section having inlet(s) and outlet(s)
298	..With mechanical residue or sediment mover	321.73	..Noncoiled nonannular cross section tube
299	..Including constituent trapping feature	321.74	..Coiled membrane
300	...Alternate filters and traps in series	321.75	..Planar membrane
301	....Plural traps	321.76	...Spiral flow
302	..Flow-line valve upstream of separator	321.77	..Pleated membrane
303	...Cut-off sediment trap	321.78	..Cylindrical membrane
304	...Tangential flow, spiral or convolute baffle	321.79	...Plural cylindrical membranes all connected for parallel flow
305	..Baffle preceding or within sediment trap	321.8	....All cylindrical membranes are parallel
306	....Deflecting prefilter from filter medium	321.81	....With embedded baffle
307	...Downstream of filter medium	321.82	.Noncoiled nonannular cross section tube
308	...Directly communicating with tubular filter interior	321.83	.Coiled membrane
309	....Attached to filter element	321.84	.Planar membrane
310	...Lateral trap	321.85	..Spiral flow
311	..Downflow inlet, upflow through filter medium	321.86	.Pleated membrane
312	...Sediment discharge means		
313	....Valve controlled		
314	..Spaced filters		
315	...One within another		

321.87	.Cylindrical membrane	353	.Free cleaning means, e.g., loose abrading particles
321.88	..Plural cylindrical membranes all connected for parallel flow	354	.Medium, cleaner or agitator moved by fluid
321.89	...All cylindrical membranes are parallel	355	..Cleaner
321.9	...With embedded baffle	356	..Medium flexed
322	<b>PLURAL DISTINCT SEPARATORS</b>	357	.Relatively movable members interleaved for cleaning
323.1	.Filters	358	.Imperforate drum, medium on arc, chord or end
323.2	..Tubular	359	.Movable medium
324	..Movable separating elements	360.1	..Centrifugal extractor
325	...Planetary	360.2	...With inward flow of feed component
326	...Drum type on parallel axis	361	...With individual article container or support
327	...Plural cleaners and plural movable elements	362	...Container or support reversible
328	...Pivotally mounted sections	363	...With adjustable rotation stabilizer
329	...Relatively movable	364	...Casing, shaft and filter unit gyrationally mounted
330	...Connected for group operation	365	...Shaft and filter unit gyrationally mounted
331	...Spaced filter wall type, e.g., multiple hollow leaves	366	...Gyratory mounting above filter
332	..With residue removal or liquid agitation	367	...Filter gyrationally mounted on shaft
333.01	...Backwash or blowback	368	...With rotation brake
333.1	...Sequential backwash	369	...Discharging residue
334	..Alternating filter and residue remover	370	...Secondary motion of filter medium
335	..In series for prefilter flow	371	...With variable flow controller
336	...Tortuous path	372	...By residue engaging means
337	...Nested units	373	....Fixed
338	...Concentric filter elements	374	....Rotatable
339	...Internal flange supporting filter element	375	.....Pivoted
340	..Parallel filters with flow controller	376	....Axially reciprocable
341	...Individually controlled for removal with common receiver	377	...Internal work distributor
342	..One element within another	378	...Including filtrate receiving means having plural filtrate outlets
343	..Alternating oppositely opening liquid distributors	379	...Including filtrate receiving trough adjacent top discharge
344	..Abutted alternating medium and pan type receiver	380.1	...Rotating element construction
345	..Radial or radially connected to central header	380.2	...Laundry
346	..Spaced wall-type filters	380.3	...Horizontal axis
347	...Central header	381	...Inwardly extending partitions
348	<b>FILTER</b>	382	...Top filtrate discharge
349	.Pulsation dampener or gas trapping	383	..Separate agitator
350	.With movable means to compress medium	384	..Vibrator and unidirectional motion filter medium
351	..Actuating means external of closed casing	385	..With plural motion
352	..Internal spring	386	..Rolls or confining members contacting residue

387	..Unrollable	420	..Selective directive flow relative to filter
388	..Vibrating or longitudinally reciprocating	421	...Pivoted prefilter deflector
389	...Longitudinally moving prefilter type	422	...Plural outlets from filter casing
390	..Mounted on movable valve element	423	....Attached unitary plural passage header
391	..With cleaning means	424	...Multi-way valve
392	...Fixed position or attached valve blocking means	425	....Backwash
393	...Backwash or blowback and additional cleaner	426	....Encased
394	...Discharging inside, e.g., internal-type drum	427	...Backwash
395	..With filter-driven valve means	428	..Combining or dividing flow passages with filter in combined passage
396	...Solid cleaner, e.g., scraper	429	..Filter coaxial with valve seat or valve stem
397	...With plural outlets from filter casing	430	...Filter surrounds valve
398	..Within sealed enclosure	431	...Filter fixed to valve seat, opposed to valve head
399	...Movable casing	432	..Filter in valve body recess
400	..Belt type	433.1	.Divided filtered, and unfiltered liquid passages
401	...Superimposed on additional moving support	434	..Recombining
402	..Drum type	435	.Within flow line or flow line connected close casing
403	...Internal feed	436	..Vented
404	...Annular segmented compartment	437	..Central internal liquid receiver, e.g., tube
405	.Movable prefilter distributor	438	...Imperforate central liquid tube
406	.Vacuumized filtrate receiver	439	...Axial flow through filter element
407	.With residue removing means or agitation of liquid	440	...Inlet and outlet at same end
408	..Diverse, e.g., combined agitators, scrapers, aeration blowback	441	...Attached to casing
409	..Fluid cleaning	442	...Head and base connected
410	...Air pump type	443	..Inlet and outlet at same end
411	...Backwash or blowback	444	...Filter suspended from head
412	...Liquid pulsator	445	..Clamped in casing joint
413	..Fixed filter medium and movable stirrer or cleaner	446	..Axially aligned inlet and outlet
414	...With plural outlets from filter casing	447	...Laterally removable
415	...Nontranslatory rotary	448	...Single open-end-type filter element
416.1	.With pump, gas pressure, or suction source	449	...Pipe end attached closed casing, e.g., faucet
416.2	..For aquarium or swimming pool	450	..Gasket within casing or spaced removable end members
416.3	..For drinking water	451	..Internal fixed shoulder supporting filter element
416.4	..For fuel system	452	...Single open-end-type filter element
416.5	..For lubricating or oil treating system	453	..Filter element clamped between closure and end wall
417	.Alternating oppositely opening liquid distributors	454	..Filter element attached to closure
418	.With flow controller for material being treated		
419	..Attached to or within portable prefilter receiver		

455	..Receptacle and modified spacing surface or support for filter medium	490	....Integral or coated layers
456	..Prefilt flow distributor or diverter	491	.....All fibrous
457	..With central pervious tubular receiver	492	...Alternating dissimilar
458	..Plural concentric receivers	493.1	..Pleated
459	..Pipe or plate attached type	493.2	...Bonded end caps
460	..Attached to open end of pipe	493.3	...Rectangularly shaped
461	...Spaced wall-type element	493.4	...Spirally formed
462	...Pipe is connection to plate	493.5	...Filter element
463	...Inserted holder	494.1	..Convolute
464	..Portable receptacle draining type	494.2	...Metal
465	..Cooperating handles on receptacle and drainer	494.3	...With edge spacer
466	..Receptacle spout	495	..Single ring or closed frame type
467	...Within receptacle proper	496	..Bound, fused or matted, e.g., porous shapes, sponges, etc.
468	...Spaced from spout discharge	497.01	..Cylindrical, conical, or trough shape
469	..On or adjacent receptacle upper edge	497.1	...Helically wound
470	..Handled	497.2	...Filter blank
471	..Ring type	497.3	...Conical
472	..Vented	498	..Perforated or grooved plates
473	..Resting on supporting receiver, e.g., portable	499	..Screens, e.g., woven
474	..At upper edge of filtrate receiver	500.1	..Material
475	...Filter offset in cover	500.21	..Semipermeable membrane
476	...Telescoped receivers or receiver sections	500.22	...Isotropically pored
477	..Resting on internal stop or surface	500.23	...Hollow fiber or cylinder
478	...Unitary filter medium and radially expandable retainer	500.24	...Antithrombogenic coating or membrane
479	...Inner separate retainer	500.25	...Metal containing
480	...With contractor for expandable retainer	500.26	...Glass
481	...Longitudinal retainer or guide, (e.g., reflex coffee maker)	500.27	...Organic
482	..At lower end or prefilt receiver	500.28	....Cyclic
483	..Supported, shaped or superimposed formed mediums	500.29	.....Cellulosic
484	..Medium within foraminous supporting container or sheath	500.3	.....Cellulose acetate
485	..External cage-type support	500.31	.....Cellulose diacetate
486	..Spaced wall type, e.g., hollow leaf	500.32	.....Cellulose triacetate
487	...Concentric, convolute or pleated	500.33	....Homocyclic
488	..Abutted or superimposed members	500.34	.....Styrene
489	...For series flow	500.35	...Acrylate
		500.36	...Alkene other than vinyl
		500.37	...Amine
		500.38	.....Amide
		500.39	.....Imide
		500.4	...Carbonate
		500.41	...Sulfone
		500.42	...Vinyl
		500.43	....Acrylonitrile
		501	..Sterilizing or neutralizing agent containing
		502.1	..Sorptive component containing
		503	..Diverse granular or fibrous
		504	...With adhered coating or impregnant
		505	...Including fibers

506	..Coated or impregnated, e.g., adhesively bound		
507	...Fabrics		
508	...Fibrous		
509	...Inorganic		
510.1	..Porous unitary mass	900	<b>ULTRA PURE WATER (E.G., CONDUCTIVITY WATER)</b>
511	<b>LIQUID AS SEPARATING MEDIUM</b>		
512.1	<b>TANGENTIAL FLOW OR CENTRIFUGAL FLUID ACTION</b>	901	<b>SPECIFIED LAND FILL FEATURE (E.G., PREVENTION OF GROUND WATER FOULING)</b>
512.2	..Multiple cyclone		
512.3	..With movable means affecting flow	902	<b>MATERIALS REMOVED</b>
513	<b>GRAVITATIONAL SEPARATOR</b>	903	..Nitrogenous
514	..Portable invertible, e.g., milk and cream separator	904	..-CN containing
515	..Selective withdrawal of constituents	905	..Protein
516	..Resilient deformable isolator	906	..Phosphorus containing
517	...Hinged to handle	907	..Phosphate slimes
518	..Sectional isolator	908	..Organic
519	..Material supply distributor	909	..Aromatic compound (e.g., PCB, phenol, etc.)
520	..Rotatable	910	..Nonbiodegradable surfacant
521	..Superposed compartments or baffles, e.g., parallel plate type	911	..Cumulative poison
522	..Each with lighter constituent discharge	912	..Heavy metal
523	..Mechanical constituent mover	913	...Chromium
524	..Diverse serial	914	...Mercury
525	..Scum sediment removal	915	..Fluorine containing
526	..Endless belt or chain	916	..Odor (including control or abatement)
527	..Rectilinearly movable supporting means	917	..Color
528	..Horizontally rotating scraper	918	<b>MISCELLANEOUS SPECIFIC TECHNIQUES</b>
529	...Polygonal container and correlating mover	919	..Using combined systems by merging parallel diverse waste systems
530	...Tank rim-supported carriage	920	..Using combined systems of sequential local and regional or municipal sewage systems
531	...Elevatable scrapers	921	..Flow equalization or time controlled stages or cycles
532.1	..Heavier constituent trap, chamber, or recess	922	..Oil spill cleanup (e.g., bacterial, etc.)
532.2	..Septic tank	923	..Using mechanical means (e.g., skimmers, pump, etc.)
533	..Closure or valve controlled discharge	924	..Using physical agent (e.g., sponge, mop, etc.)
534	...In sloping recess	925	..Using chemical agent
535	...Downstream of separator	926	..Using oxidation ditch (e.g., carousel, etc.)
536	...In side wall of separator		
537	...With discharge means for two or more lighter constituents	928	<b>PAPER MILL WASTE (E.G., WHITE WATER, BLACK LIQUOR, ETC.) TREATED</b>
538	..Lighter constituent trap		
539	..Gas vent or bypass	929	<b>HEMOULTRAFILTRATE VOLUME MEASUREMENT OR CONTROL PROCESSES</b>
540	..With discharge port		
541	<b>ADJUNCTS</b>		
542	<b>MISCELLANEOUS</b>	930	<b>PAINT DETACKIFYING</b>
		931	<b>ZEBRA MUSSEL MITIGATION OR TREATMENT</b>

**FOREIGN ART COLLECTIONS****FOR 000 CLASS-RELATED FOREIGN DOCUMENTS**

Any foreign patents or nonpatent literature from subclasses that have been reclassified have been transferred directly to the FOR Collection listed below. These Collections contain ONLY foreign patents or nonpatent literature. The parenthetical references in the Collection titles refer to the abolished subclasses from which these Collections were derived.

**STRUCTURAL INSTALLATION (210/153)**

- FOR 100 .Closed circulating systems (210/167)
- FOR 101 ..Lubrication (210/168)
- FOR 102 ..Aquarium or swimming pool (210/169)
- FOR 103 .Geographic (e.g., drainage ditch, septic, pond) (210/170)
- FOR 104 .Ancillary to storage tank (210/172)

**PROCESSES (210/600)**

- FOR 105 .Utilizing electrical or wave energy (directly applied to liquid or material being treated) (210/748)
- FOR 106 .Including geographic feature (e.g., drainage ditch, septic, pond) (210/747)

**DIGESTS**

- DIG 3 **BELT ALIGNMENT**
- DIG 5 **COALESCER**
- DIG 6 **DEHYDRATORS**
- DIG 7 **DRIER BLOCKS**
- DIG 8 **FAT FRYER**
- DIG 9 **FLOATING COVER**
- DIG 13 **PART FLOW-FULL FLOW**
- DIG 17 **TWIST-ON**

APRIL 5, 2011

## PROJECT C-A210

SOURCE CLASSIFICATION(S) OF PATENTS  
IN NEWLY ESTABLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>New</u> <u>Classification</u>	<u>Number</u> <u>of ORs</u>	<u>Source</u> <u>Classification</u>	<u>Number</u> <u>of ORs</u>
205/745	1	210/747	236
210/170.03	1	210/747	236
210/170.07	1	210/747	236
210/601	1	210/747	236
210/660	2	210/747	236
210/691	1	210/747	236
210/747.1	1	210/747	236
	33	210/747	236
210/747.2	7	210/747	236
210/747.3	26	210/747	236
210/747.4	9	210/747	236
210/747.5	32	210/747	236
210/747.6	28	210/747	236
210/747.7	21	210/747	236
210/747.8	37	210/747	236
210/747.9	20	210/747	236
210/748.08	1	210/747	236
210/748.14	1	210/747	236
210/776	1	210/747	236
37/338	1	210/747	236
405/128.5	4	210/747	236
423/437.1	1	210/747	236
423/659	1	210/747	236
52/12	2	210/747	236
588/250	1	210/747	236
73/1.07	1	210/747	236
95/263	1	210/747	236

## CLASSIFICATION ORDER 1908

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PROJECT C-A210

DISPOSITION CLASSIFICATION(S) OF PATENTS  
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>Source Classification</u>	<u>Number of ORs</u>	<u>New Classification</u>	<u>Number of ORs</u>
210/747	236	210/747.3	26
		210/747.5	32
		210/776	1
		210/170.03	1
		588/250	1
		37/338	1
		405/128.5	4
		423/659	1
		210/601	1
		210/748.14	1
		210/170.07	1
		52/12	2
		210/691	1
		210/747.6	28
		210/748.08	1
		210/747.4	9
		423/437.1	1
		210/660	2
		210/747.9	20
		210/747.2	7
		210/747.1	33
		210/747.8	37
		73/1.07	1
		95/263	1
		205/745	1
		210/747.7	21
		210/747.1	1

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C. CHANGES TO THE USPC-TO-IPC CONCORDANCE

<u>Class</u>	<u>USPC</u> <u>Subclass</u>	<u>Subclass</u>	<u>IPC</u> <u>Subclass</u>	<u>Notation</u>
210	747.1-747.9		C02F	1/00

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PROJECT C-A210

D. CHANGES TO THE DEFINITIONS

## CLASS 210 – LIQUID PURIFICATION OR SEPARATION

Definitions AbolishedSubclasses

747

Definitions Modified

Subclass 170.03:

Insert:

SEE OR SEARCH CLASS:

- 52, Static Structures (e. g., Buildings), subclass 12 for a roof with a surface water receiver at an eave with a separator.
- 404, Road Structure, Process, or Apparatus, subclasses 2 through 5 for roadway drain or gutter structure.

Subclass 170.08:

Delete:

The title and the definition.

Insert:**170.08 Septic system including drain field or leach field or waste liquid treatment system:**

This subclass is indented under subclass 170.01. Apparatus in which the liquid purification or separation means comprises a tank in which a continuous flow of waste material is decomposed by bacteria and from which liquids overflow through an outlet of the tank into a disposal field where they can leach into the soil or comprises a group of devices including liquid purification or separation means that purify or separate the waste liquid.

- (1) Note. While septic tanks are normally found to be underground, the term septic tank is not considered to be a geographic feature.

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D. CHANGES TO THE DEFINITIONS

SEE OR SEARCH THIS CLASS, SUBCLASS:

532.2, for a septic tank not associated with a geographic feature.

Definitions Established**747.1 Including geographic feature:**

This subclass is indented under subclass 600. Process in which a relationship to a particular feature of the earth's surface (e.g., ground, a body of water, etc.) is positively recited, other than mere discharge to the particular feature of the earth's surface.

- (1) Note. While septic tanks are normally found to be underground, the term septic tank is not considered to be a geographic feature.
- (2) Note. While discharge to the ground or a body of water is not a geographic feature, discharge at a specified depth or in a particular strata or formation, or in a particular location in a body of water is considered to be a geographic feature.
- (3) Note. Included in this subclass is in situ purging of flowing or still liquid (e.g., in drainage ditch, pond, etc.) wherein the method of separating or purifying has (a) at least part of a system installed on natural or modified terrain to convey rain, snow melt, a river, sewage, well water or oil, etc. or (b) a relationship to a particular nonland geographic feature, such as a lake, ocean, sea, etc.

SEE OR SEARCH CLASS:

405, Hydraulic and Earth Engineering, subclasses 36-51 for drainage devices; subclasses 52-127 for fluid control, treatment, or containment; subclasses 128.1-128.9 for soil remediation; and subclasses 129.1-129.95 for subterranean waste disposal, containment, or treatment.

**747.2 Stormwater treatment:**

This subclass is indented under subclass 747.1. Process in which fallen precipitation is subjected to a chemical or physical process that improves or alters the fallen precipitation (e.g., rainwater runoff, storm sewer treatment, etc.).

SEE OR SEARCH CLASS:

- 52, Static Structures (e. g., Buildings), subclass 12 for a roof with a surface water receiver at an eave with a separator.
- 404, Road Structure, Process, or Apparatus, subclasses 2 through 5 for roadway drain or gutter structure.

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D. CHANGES TO THE DEFINITIONS**747.3 Filtering:**

This subclass is indented under subclass 747.2. Process in which the fallen precipitation passes through a foraminous or porous mass which separates solid matter from the fallen precipitation by entrapment and retention while permitting the fallen precipitation to pass through.

**747.4 Dredging sediments/water mixture from underwater beds treated:**

This subclass is indented under subclass 747.1. Process in which disturbed solids and water at the bottom of a body of water are purified or separated.

SEE OR SEARCH CLASS:

37, Excavating, appropriate subclasses for excavating processes.

**747.5 Body of freshwater, surface flowing freshwater, or body of saltwater:**

This subclass is indented under subclass 747.1. Process in which the particular feature of the earth's surface that the liquid purification or separation process is related to is a bounded aggregate of still water that is not salty (e.g., pond, lake, reservoir, etc.), a bounded aggregate of nonsalty, running water flowing on the earth's surface (e.g., stream, river, ditch, canal, etc.), or an aggregate of salt water covering most of the earth's surface (e.g., sea, ocean, etc.).

(1) Note. The water may be what is purified or separated or the purification or separation process may include apparatus located in the water for purifying or separating a liquid other than the water itself.

**747.6 Utilizing floating treating means:**

This subclass is indented under subclass 747.5. Process in which the liquid purification or separation process uses liquid purification or separation means that is buoyed on or in the water.

**747.7 Groundwater treatment:**

This subclass is indented under subclass 747.1. Process in which water within the earth's surface is purified or separated.

**747.8 By chemical treatment:**

This subclass is indented under subclass 747.7. Process in which a treating agent chemically reacts with a component in the groundwater.

**747.9 Utilizing artificial waste pond or pit (e.g., waste lagoon, wastewater pond, etc.):**

This subclass is indented under subclass 747.1. Process in which the particular feature of the earth's surface that the liquid purification or separation process is related to is a man-made body of liquid for processing waste liquids (e.g., waste lagoon, wastewater pond, etc.).

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PROJECT C-A210

D. CHANGES TO THE DEFINITIONS**FOREIGN ART COLLECTIONS****FOR 106 Including geographic feature (e.g., drainage ditch, septic, pond) (210/747):**

This foreign art collection is indented under unnumbered placeholder 210/600. Process in which a relationship to or a feature of the terrain is positively recited, other than mere discharge to the earth or to a body of water.

- (1) Note. While septic tanks are normally found to be underground, the term septic tank is not considered a geographic feature.
- (2) Note. While discharge to the ground is not a geographic feature, discharge at a specified depth or in a particular strata or formation, or in a particular location in a body of water is considered a geographic feature.
- (3) Note. Included in this subclass is in situ purging of flowing or still liquid (e.g., drainage ditch, septic system, pond) wherein the method of separating or purifying has (a) at least part of a system installed on natural or modified terrain to convey rain, snow melt, a river, sewage, well water or oil, etc. or (b) a relationship to a particular nonland geographic feature, such as a lake, ocean, sea, etc.

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PROJECT C-A210

D. CHANGES TO THE DEFINITIONS

CLASS 405 — HYDRAULIC AND EARTH ENGINEERING

Definitions Modified

Subclass 36: Under SEE OR SEARCH CLASS

Delete:

The reference to Class 210.

Insert:

210, Liquid Purification or Separation, subclasses 170.01 through 170.11 for liquid purification or separation means installed in a geographic feature and subclasses 747.1 through 747.9 for liquid purification or separation processes including a geographic feature.

Subclass 52: Under SEE OR SEARCH CLASS

Delete:

The reference to Class 210.

Insert:

210, Liquid Purification or Separation, subclasses 170.01 through 170.11 for liquid purification or separation means installed in a geographic feature and subclasses 747.1 through 747.9 for liquid purification or separation processes including a geographic feature.

Subclass 74: Under SEE OR SEARCH CLASS

Delete:

The reference to Class 210.

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D. CHANGES TO THE DEFINITIONS

Insert:

- 210, Liquid Purification or Separation, subclasses 170.01 through 170.11 for liquid purification or separation means installed in a geographic feature and subclasses 747.1 through 747.9 for liquid purification or separation processes including a geographic feature.

Subclass 128.1: Under SEE OR SEARCH CLASS

Delete:

The reference to Class 210.

Insert:

- 210, Liquid Purification or Separation, subclass 601 for a chemical treatment process to treat groundwater with the use of microorganisms and subclass 747.8 for a chemical treatment process wherein a material is added to the liquid and chemically reacts with a constituent in the liquid to perfect the liquid for an intended use or render the liquid less noxious, wherein the liquid may be groundwater.