

1 R	MISCELLANEOUS	168	..By solar pressure
1 N	.Noise abatement	169	..By jet motor
1 A	.Lightning arresters and static eliminators	170	..By nutation damper
1 TD	.Trailing devices	171	..With attitude sensor means
2	COMPOSITE AIRCRAFT	171.1	.With propulsion
3	.Trains	171.2	..Steerable mount
3.1	MISSILE STABILIZATION OR TRAJECTORY CONTROL	171.3	..Launch from surface to orbit
3.11	.Remote control	171.4	...Horizontal launch
3.12	..Trailing wire	171.5	..Without mass expulsion
3.13	..Beam rider	171.6	.Having launch pad cooperating structure
3.14	..Radio wave	171.7	.With shield or other protective means (e.g., meteorite shield, insulation, radiation/plasma shield)
3.15	.Automatic guidance	171.8	..Active thermal control
3.16	..Optical (includes infrared)	171.9	.With special crew accommodations
3.17	...Optical correlation	172.1	..Emergency rescue means (e.g., escape pod)
3.18	..Celestial navigation	172.2	.With fuel system details
3.19	..Radio wave	172.3	..Fuel tank arrangement
3.2	..Inertial	172.4	.Rendezvous or docking
3.21	..Attitude control mechanisms	172.5	..Including satellite servicing
3.22	...Fluid reaction type	172.6	.With deployable appendage
3.23	.Stabilized by rotation	172.7	.With solar panel
3.24	.Externally mounted stabilizing appendage (e.g., fin)	172.8	..Having solar concentrator
3.25	..Removable	172.9	..Having launch hold down means
3.26	..Sliding	173.1	.With payload accommodation
3.27	..Collapsible	173.2	..Including vibration control
3.28	...Longitudinally rotating	173.3	..And payload deployment
3.29	...Radially rotating	4 R	AIRCRAFT, HEAVIER-THAN-AIR
3.3	..Extending beyond rear of missile	5	.Airplanes, weight diminished by bouyant gas
158.1	SPACECRAFT	6	.Airplane and helicopter sustained
158.2	.Tethered	7 R	..Convertible
158.3	.Inflated	7 A	...Rotary wing
158.4	.Spacecraft formation, orbit, or interplanetary path	7 B	...Tail sitters
158.5	..Orbit insertion	7 C	...Tilting wing
158.6	..Orbital control	8	.Airplane and auto-rotating wing sustained
158.7	...Aerobraking	9	.Airplane and paddle wheel sustained
158.8	...Automatic	10	.Airplane and cylindrical rotor sustained
158.9	.Reusable or returnable	11	.Airplane and beating wing sustained
159.1	..With reentry shield	12.1	.Airplane and fluid sustained
159.2	...Inflatable	12.2	..Circular
159.3	..Having aerodynamic lifting body (e.g., Space Shuttle)	12.3	..Dual propulsion
159.4	.Modular and assembled in space	12.4	..Thrust tilting
159.5	..Foldable	12.5	..With thrust diverting
159.6	..Including use of launch vehicle part	12.6	..Channel wing
164	.Attitude control		
165	..By gyroscope or flywheel		
166	..By magnetic effect		
167	..By gravity gradient		

13	.Airplane sustained	199.2	....Of tip vortex
14	..Aerial torpedoes	199.3	.....Active
15	..Fluid propelled	199.4	.....Wing tip foils/fences
16	..Glider	200	...By characteristic of airfoil's skin
17.11	.Helicopter or auto-rotating wing sustained, i.e., gyroplanes	200.1	....Vortex generation in boundary layer
17.13	..Automatic or condition responsive control	201	...Variable
17.15	..With safety lowering device	202	...With landing gear
17.17	..With landing, mooring, or nonaerial propelling or steering gear	203	....Condition responsive
		204	....By controlling boundary layer
17.19	..With auxiliary propulsion, counter-torque or steering device	204.1	.....Actively controlled vortex generator
		205	.....With ionic or electrostatic surface
17.21	...Auxiliary rotor	206	.....With rotating member
17.23	..Having plural lifting rotors	207	.....With blowing
17.25	..Lifting rotor having lift direction varying means	208	.....And suction
		209	.....With suction
17.27	..Lifting rotor supports, e.g., pylons	210	.....With nose slot
		211	.....Having trailing edge flap
19	.Paddle wheel sustained	212	.....Having trailing edge flap
20	..Feathering	213	...By flap and/or spoiler
21	.Cylindrical rotor sustained	214	.....At leading edge
22	.Beating wing sustained	215	.....At trailing edge
23 R	.Fluid sustained	216	.....Variable gap type, e.g., "Fowler Flap"
23 A	..Lifting thrusters		
23 B	..Dual propulsion means, horizontal and vertical	217	.....Plural, relatively pivotable
23 C	..Circular configuration	218	....Area
23 D	..Thrust diverters	219	....Camber
4 A	.Body attached	45 R	..Arrangement
24	AIRCRAFT, LIGHTER-THAN-AIR	46	...Variable
25	.Airships with sustaining wings	47	....Dihedral
26	.Airship and helicopter sustained	48	....Incidence
27	.Airship and paddle wheel sustained	49	....Folding
		45 A	...Canard
28	.Airship and beating wing sustained	35 A	..Compressible flow
		34 A	.Annular airfoils
29	.Airship and fluid sustained	50	AIRCRAFT PROPULSION AND STEERING ON LAND OR WATER
30	.Airships		
31	.Balloons	51	AIRCRAFT, STEERING PROPULSION
32	..With parachutes	52	.Fluid
33	..Captive	53 R	AIRCRAFT POWER PLANTS
34 R	AIRCRAFT SUSTENTATION	54	.Mounting
35 R	..Sustaining airfoils	55	.Arrangement
36	..Lifting fuselages	56	..Tilting
37	..Lifting struts	57	.Radiator arrangement
38	..Resiliently mounted	58	.Auxiliary
39	..Rotatable	59	.High altitude
198	..With lift modification	60	.Transmission of power
199.1	...By vortex control outside of boundary layer	61	.Power plant using airship gas as fuel

53 A	.Starters	82	..Vane operated
53 B	.Air intakes	76 A	..Motor torque control of flaps or tabs
62	AIRCRAFT PROPULSION	76 B	..Velocity operated devices
63	.Launching	76 C	..Gust compensators
64	.Manual	76 J	..Steerable jets
65	.Screw	220	.Pilot operated
66	..Tilting	221	..Control system
67	..Body encircling	222	...Other than hand or foot actuated
68	..Elongated	223	...With feel
69	..Contra-propeller arrangements	224	...With locking means
70	.Paddle wheel	225	...With dual purpose surface structure (e.g., elevons)
71	.Reciprocating propeller	226	...Fluid
72	.Beating wing	227	...With electric control
73 R	.Fluid	228	...Electric
74	..Explosive jet	229	...Dual
73 B	..Vacuum induced by radial flow	230	...With variable output
73 C	..Radial outward and downward flow	231	...With interengaging gearing
75.1	AIRCRAFT CONTROL	232	...With cable and linkage
76 R	.Automatic	233	...Cable
174	..Flutter control	234	..Controller
175	..Electric course control	235	...Rudder bar and pedal
177	...Multiple-axis altitude stabilization	236	...Electrical pickup
178	...Trim control	237	...Three-way steering, single control
179	...By change in bank	87	.Rudders and empennage
180	...By change in altitude	88	..Rudders universally mounted
181	...By change in pitch, angle of attack or flight path	89	..Elevators both front and rear
182	...By change in speed	90 R	..Ailerons and other roll control devices
183	..Of aircraft on its landing course	90 A	...Roll control spoilers
184	...By steering or yaw	90 B	...Balanced air pressure
185	....And vertical glide path control	91	.Vertical fins
186	...Vertical glide path control	92	.Stabilizing propellers
187	....With "flare-out" detection	93	.Stabilizing weights
188	....Slope control by throttle	94	..Ballast storage and release
189	..By remote radio signal	95	..Ballast making
190	...Of pilotless aircraft	96	.Airship control
191	..Acceleration control	97	..Buoyancy varying
192	..With "dead-zone" control	98	..Gas bag inflation
193	..With "softener" circuit	99	..Gas release
194	..Monitoring circuit or response	99.1	.Fuselage
195	...Self-adaptive control	99.11	.Wing
196	..Override of automatic control by human pilot	99.12	.Drag
197	...By engaging manual control system	99.13	.Flutter control
78.1	..Fluid	99.14	.Trim tab
78.2	..Fluid amplifiers	99.2	.Specific control connection or actuator
79	..Gyroscope actuated	99.3	..Linkage
80	..Gravity actuated	99.4	..Redundant arrangements
81	..Operated by landing	99.5	..Fluid

99.6	...Fluid pressure source arrangement	120	..Sectional
99.7	..Nonlinear fluid actuator	121	..Shields and other protective devices
99.8	..Actively deformable material (e.g., piezoelectric, shape memory, magnetostrictive, electrostrictive)	122 R	..Seats and safety belts
99.9	..Failure tolerant (e.g., jam tolerant, no-back control connection)	122 A	...Ejection seats
100 R	LANDING GEAR	122 AB	....Catapult and rocket combined
101	.Amphibian	122 AC	.....Catapult
102 R	.Retractable	122 AD	.....Rocket
102 A	..Interconnected elements	122 AE	....Automatic sequence
102 SL	..Strut locks	122 AF	....Canopy release
102 SS	..Strut shortening	122 AG	....Restraint positioning and protective devices
103 R	.Wheel	122 AH	....Seat separation
104 R	..Resiliently mounted	122 B	...Safety belts
104 CS	...Coil spring	123.1	.Airfoil construction
104 FP	...Fluid pressure	123.11	..Inflatable
104 LS	...Leaf spring	123.12	..Corrugated panels
103 S	..Prerotation	123.13	..Honeycomb in skin panels
103 W	..Crosswind gear	123.14	..Hollow
105	.Water landing	123.2	..Sparless frame construction
106	..Flying boat	123.3	...Integral frame and skin
107	..Emergency	123.4	...Open truss/lattice construction
108	.Skids	123.5	..Nonmetallic filler (e.g., metal skin with foam, cork, or rubber filler)
109	.Tail supports	123.6	...Honeycomb
100 C	.Endless track	123.7	..Box beam
100 A	.Inflatable	123.8	..Main spar
110 R	RETARDING AND RESTRAINING DEVICES	123.9	...Tubular spar
111	.Wheel brake arrangement	124	..Sectional
112	.Water brake arrangement	125	.Airship hull construction
113	.Aerodynamic retarders	126	.Airship skin construction
110 A	.Brake	127	.Airship load attachment
110 B	.Thrust reversers	128	.Airship gas cell construction and arrangement
110 C	.Cable or net support	129.1	.Details
110 D	.Aerodynamic braking	129.2	..Fire prevention devices
110 E	.Landing platforms	129.3	..Windows
110 F	.Snares	129.4	..Closures
110 G	.Arresting hoods	129.5	...Door
110 H	.Friction brakes	118.3	....Displaceable to function as ramp
114 R	LANDING FIELD ARRANGEMENT	129.6	..Steps
115	.Mooring devices	130	..Aerodynamic resistance reducing
116	..Movable	131	..Joints and connections
114 B	.Blast deflectors	132	..Skin fastening devices
117 R	AIRCRAFT STRUCTURE	133	..Materials of construction
118.1	.Load (e.g., cargo) accommodation	134 R	.Ice prevention
118.2	..Removable, load bearing, airframe section	134 A	..Flexible surfaces
118.5	.Passenger or crew accommodation	134 B	..Heating fluid in airfoil
118.6	..Seating arrangement: berth or berthage	134 C	..Deicing fluid on airfoil exterior
119	.Fuselage and body construction	134 D	..Electric

134 E ..Nature of surface
 134 F ..Initiators and indicators
 135 R .Fuel supply
 135 A ..Aircraft refueling
 135 B ..Flexible containers
 135 C ..Fuel balancing systems
 136 ..Material discharging and
 diffusing
 137.1 ..Passenger or cargo loading or
 discharging
 137.2 ..Passenger
 137.3 ..Aerial cargo unloading by
 parachute extraction
 137.4 ..Releasable, externally mounted
 cargo
 117 A ..Skin cooling
 138 R **SAFETY LOWERING DEVICES**
 139 ..Entire aircraft
 140 ..Passenger compartment
 141 ..Seat
 142 ..Parachutes
 143 ..Garment attached
 144 ..Aircraft element convertible to
 parachute
 145 ..Canopy construction
 146 ..Inflated bracing
 147 ..Storage and release
 148 ...Packs
 149 ...Opening devices
 150 ...Timing mechanism
 151 R ..Harness
 151 A ...Parachute harness connection
 151 B ...Parachute load releasing
 152 ..Control devices
 138 A ..Rotating vanes
 153 R **KITES**
 154 ..Airplane type
 155 R ..Accessories
 155 A ..Kite controls
 153 A ..Rotating

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Any foreign patents or nonpatent literature from subclasses that have been reclassified have been transferred directly to the FOR Collection listed below. These classifications 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.

FOR 100 **AIRCRAFT CONTROL (244/75 R)**
 FOR 101 .Flutter prevention (244/75 A)
 FOR 102 ..Fluid (244/78)
 FOR 103 .Airfoil construction (244/123)
 FOR 104 **SPACECRAFT (244/158 R)**
 FOR 105 .Exterior surface air resistance
 heat control (244/158 A)
 FOR 106 .Space station (244/159)
 FOR 107 .Reentry vehicle (244/160)
 FOR 108 ..Rendezvous and docking (244/
 161)
 FOR 109 ..Manned (244/162)
 FOR 110 ...Environmental control (244/
 163)
 FOR 111 ..With propulsion (244/172)
 FOR 112 ..With solar panel (244/173)
 FOR 113 ...Spaceship control (244/176)
 FOR 114 ...By vortex generator or
 dissipator (244/199)

CROSS-REFERENCE ART COLLECTIONS

900 **LIGHTWEIGHT, WINGED, AIR VEHICLE**
 (E,G, . ULTRALIGHT OR HANG
 GLIDER)
 901 ..Having delta shaped wing
 902 ..Having parachute type wing
 903 ..Powered
 904 ..Miscellaneous hardware or
 control
 905 **INFLATABLE EVACUATION SLIDE**

