

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE

CLASSIFICATION ORDER 1881

JANUARY 6, 2009

PROJECT M-A180

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>
Abolished:	180	65.2-65.5	3618	OS0001
Cross-Reference Art Collections:	903	920-927, 940-943, 948	3618	ELEC0000
Established:	180	65.21, 65.22, 65.225, 65.23, 65.235, 65.24, 65.245, 65.25, 65.26, 65.265, 65.27, 65.275, 65.28, 65.285, 65.29, 65.31, 65.51	3618	OS0001
Title Change:				
Cross-Reference Art Collections:	903	944-947	3618	ELEC0000
Indent Change:				
Cross-Reference Art Collections:	903	944-947	3618	ELEC0000

No other classes were impacted by this order.

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

CLASSIFICATION ORDER 1881

JANUARY 6, 2009

PROJECT M-A180

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CLASS 180 MOTOR VEHICLES

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164	WITH POWERED MEANS FOR CREATING FLUID FORCE TO ATTRACT VEHICLE TO SURFACE OF TRAVEL	178	.Including electrically actuated servomechanism
116	SURFACE EFFECT VEHICLES (I.E., GROUND EFFECT MACHINES)	179	..And electrical quantities comparison means for development of electrical input
117	.Having propulsion or control means	180	SKI- OR SKATE-TYPE VEHICLE FOR IMPARTING MOVEMENT TO A PERSON STANDING THEREON
118	..Responsive to instability condition	181	.With power means or a portion thereof affixed to or built into the ski or skate
119	..Surface contacting control	182	INCLUDING ONE OR MORE SKI-LIKE OR RUNNER MEMBERS
120	..Integrated with working fluid	183	.Member substitutable for wheel type support structure
121	...With plural cushions	184	..With propulsion element of endless track type
122	...With dynamic seal or fluid curtain	185	...Track comprises substitute for or addition to propulsion element of traction wheel type
123	.Spray deflector	186	.With at least one surface-engaging propulsion element
124	.Expansible chamber	187	..Element shuffles along support surface
125	.Fluid bearing or fluid pad	188	..Spiral type element
126	.Rigid side walls	189	..Plural elements connected to and spaced along the plural throws of a common crankshaft
127	.Flexible skirt	190	..Endless track type element
128	..Having outlet for working fluid	191	...Protruding from member
129	.Dynamic seal or fluid curtain	192	...Plural tracks with interconnected drive or support means
130	..Recirculating	193	...With vertically movable track support located intermediate the forward and rearward extremities of the track
165	WITH FLUID OR MECHANICAL MEANS TO ACCUMULATE ENERGY (I) DERIVED FROM MOTION OF VEHICLE OR (II) OBTAINED FROM OPERATION OF VEHICLE MOTOR, AND GIVE UP THE ENERGY (1) WHEN NEEDED FOR VEHICLE ACCELERATION OR (2) TO POWER AN AUXILIARY SYSTEM OF THE VEHICLE	194	..Plural discrete elements protruding from a wheel, hub, or shaft
166	WHEELED INFANT CARRIAGE OR CRIB WITH DRIVEN MEANS FOR RECIPROCATING IT LONGITUDINALLY	195	...Each element moves relative to wheel, hub, or shaft
2.1	MOTOR SUPPLIED WITH POWER FROM EXTERNAL SOURCE	196	..Element comprises traction wheel
2.2	.Source comprises or includes energy derived from force of nature (e.g., sun, wind)	197	WITH MEANS FOR DETECTING WHEEL SLIP DURING VEHICLE ACCELERATION AND CONTROLLING IT BY REDUCING APPLICATION OF POWER TO WHEEL
167	WITH MEANS FOR CONTROLLING OPERATION RESPONSIVE TO ELECTROMAGNETIC RADIATION, MAGNETIC FORCE, OR SOUND WAVES RECEIVED FROM SOURCE, OR REFLECTED FROM OBJECT OR SURFACE, LOCATED APART FROM VEHICLE	198	PORTABLE CARRIER SUPPORTS MOTOR VEHICLE IN TOTO AND IS PROPELLED THEREBY
168	.Having controlling means adapted to interact with stationary means which describes course of vehicle's travel	199	WITH POWERED, GROUND-ENGAGING MEANS FOR PRODUCING, OR ASSISTING IN THE PRODUCTION OF, LATERAL MOVEMENT OF THE VEHICLE (E.G., FOR PARKING)
169	.Radiation, force, or waves reflected from external object or surface	200	.Comprising rotatably driven auxiliary wheel or endless track
170	WITH MEANS RESPONSIVE TO SPEED OF VEHICLE FOR MAINTAINING SPEED AT, OR PREVENTING IT FROM EXCEEDING, A PARTICULAR VALUE	201	..Driven by frictional engagement with tire of vehicle traction wheel
171	.Including device to signal to operator existence of unusual or unintended speed	202	..Driven by auxiliary electric or fluid motor
172	.Including device responsive to centrifugal force	203	.Comprising reciprocally driven stepper or rotatably driven cam
173	..And means to prevent tampering or unauthorized use		
174	..Having electrical switch		
175	.Including fluid pressure actuated servomechanism		
176	..And electrical quantities comparison means for development of input pressure		
177	..And one or more electrical components for establishing or regulating input pressure		

204	WITH DEVICE FOR PROGRAMMABLY OPERATING VEHICLE'S STEERABLE WHEELS	9.54	....With spring
6.2	STEERING BY DRIVING	9.56	.....Longitudinally extending coil spring
6.24	.Combined with manual steering	9.58	.....Leaf or torsion spring
6.26	..Interlocked	9.6	.....Transversely extending
6.28	...Electrical	9.62	...Toothed wheel drive
6.3	...Fluid	9.64	...Belt or chain driven
6.32	...Lever and/or linkage	10	..Annular
6.34	....With controller cam	11	MOTOR-CARRYING ATTACHMENTS
6.36	....Lost motion type	12	.Driven steering wheel type
6.38	....Geared	13	..Single wheel
6.4	...With flexible and/or yieldable link	14.1	VEHICLE TRAINS
6.44	.Auxiliary steering motor	14.2	.Motorized trailer
6.48	.Independently operable drive motors	14.3	..All motors supplied from power plant of a single vehicle
6.5	..Electrical	14.4	.Drive means between vehicles through coupling
6.54	.Variable contact	14.6	.Tractor drive effort varied by pull exerted by trailer
6.58	.Controlled from rotatably mounted superstructure	14.7	.Vehicle drive drives other vehicle wheel
6.6	..Steering responsive to rotary movement of superstructure	14.5	.Overload release
6.62	.Combined	15	ADDITIONAL TRACTION WHEEL
6.64	.Swinging traction frame responsive to differential drive	16	TRACTION WHEEL ATTACHMENTS
6.66	.Reversing drive to traction element	19.1	STEERED BY WALKING ATTENDANT
6.7	.Endless flexible track	19.2	.Who steerably controls steerable wheel
7.1	SPECIAL DRIVING DEVICE	19.3	.Handle movement controls vehicle drive
7.2	.Spiral type element	20	WITH ROLLERS
7.3	.Reaction jet propulsion	21	SPECIAL WHEEL BASE
7.4	.Propeller type	22	.Five or more wheels
7.5	.Vehicle mounted winch for pulling vehicle	23	..Driven steering wheel type
8.1	.Stepper	24	...Stub-axle type
8.2	..Step or abutment ascending/desending type vehicle	24.01	..Having tandem steerable or translatable wheels or wheel sets
8.3	..Wheel and stepper type	24.02	..Displaceable wheel shifts or proportions load
8.4	...Nonsupporting pusher type stepper	24.03	..Independently rotatable side-by-side dual wheels
8.5	..With alternately lifted supporting base and leg	24.04	..With differential housing integrally fixed to vehicle frame
8.6	..With alternately lifted feet or skid	24.05	..Rocker beam houses drive means
8.7	..Endless or rotary type	24.06	..Plural propelling motors
9	.Portable track	24.07	...Separate driving motor for each drive wheel
9.1	..Endless, flexible	24.08	..Each wheel positively driven
9.21	...Track substituted for drive wheel	24.09	..With interaxle differential
9.22	...Guided by walking attendant	24.1	..With drive interrupt means to either tandem drive wheel
9.23	...With attendant station	24.11	..Driven tandem wheels
9.25	....Rider straddles vehicle (e.g., motorcycle)	24.12	...One serially driven by other
9.26	...Convertible from wheel type	24.13	..Spring rocker beam
9.28	....Track remains with vehicle	205	.With mechanism of occupant-powered type for developing torque for supplementing, alternating with, or replacing torque of motor
9.3	....Wheel or track contacts ground	206	..And means for controlling motor in response to either operation of occupant powered mechanism or vehicular movement resulting therefrom
9.32	...With auxiliary obstacle surmounting means		
9.34	...With ground wheel		
9.36	....Opposite and laterally spaced		
9.38	....Steering		
9.4	...With hitch		
9.42	...Combined		
9.44	...With track-related steering means		
9.46	....Pivoted track frame		
9.48	...Laterally extendable track		
9.5	...Track support mounted for vertical movement		
9.52Adjustable		

CLASS 180 MOTOR VEHICLES

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	SPECIAL WHEEL BASE	235	..Comprising articulated frame and means for pivoting one portion of frame relative to other portion about vertical axis located centrally of vehicle
	.With mechanism of occupant-powered type for developing torque for supplementing, alternating with, or replacing torque of motor		
207	..Including member utilized in common by occupant-powered mechanism and by motor for transmitting torque output of each to wheel	236	..In a path of travel other than that produced by turning the front wheels and the rear wheels substantially equally and oppositely
208	.Collapsible or knockdown for storage or transport	237	..Comprising swingable, plural-wheel-carrying axles on individual, vertical axes of pivot
209	.With means for changing number of supporting wheels, or for adjusting relative location thereof	238	...At least one axle being offset from its pivotable axis
210	.Having only three wheels	239	...Including longitudinally extending, endless element for transmitting drive to wheels
211	..Including steerable and driven wheel	240	..Including rotatable shaft extending longitudinally from wheels at one end of vehicle to wheels at other end for transmitting steering force thereto
212	...All wheels motor driven	241	..Including longitudinally extending, endless element for transmitting drive to wheels
213	...Having motor mounted to swing with steerable wheel	242	.Including pump and fluid motor, or generator and electric motor, for driving one or more wheels
214	....Electrical-type motor	243	..And another means for driving the remaining driven wheels
215	..Including two wheels driven and having common axis of rotation	244	.With means for braking either (1) one or more driven wheels or (2) structure transmitting drive to wheel
216	...Electrical-type motor	245	.Including separate mechanical assemblies for transmitting drive to each of two wheels at one end of vehicle
217	...Including endless element for transmitting drive to wheels	246	..And assemblies for each of two wheels at other end, also
218	.Having only two wheels	247	.With manually operated means for disengaging drive to one or more, but fewer than all, of the four wheels
219	..Arranged in tandem	248	.With differential means for driving two wheel sets at dissimilar speeds
220	...Electrical-type motor	249	..And means for locking out the differential means
221	...Including rotating element for frictionally engaging and driving a wheel	250	...Manually operated type of lockout means
222	...And means for steering that wheel	251	.Including longitudinally extending, endless element for transmitting drive to wheels
223	...Including steerable and driven wheel	252	HAVING AT LEAST ONE WHEEL BOTH DRIVEN AND STEERABLE
224	...Both wheels motor driven	253	.Steerable wheel has exclusive axis of pivot (i.e., stub-axle type)
225	...Having frame element or fender constituting also exhaust or fuel passageway or fuel reservoir	254	..Including flexible, axially rotatable means having one portion fixed to vehicle and another portion pivotable with wheel for transmitting drive thereto
226	...Including longitudinally extending shaft for transmitting drive to wheel		
227	...Including resilient means for mounting driven wheel		
228	...Including resilient means for mounting motor		
229	...With means for cooling motor		
230	...With change-speed means between motor and driven wheel		
231	...Including endless element for transmitting drive and means for adjusting tension of element		
36	STEAM TRACTION ENGINES		
37	.Driven steering wheel type		
38	..Four wheels driven		
39	.With boiler leveler		
40	.Spring mounted on axle		
232	WITH MEANS FOR (1) PROTECTING MOTOR FROM IMPACT OF COLLISION, (2) UTILIZING MASS OF MOTOR TO ABSORB FORCE THEREOF, OR (3) PROTECTING OCCUPANT REGION OF VEHICLE FROM IMPACT-INDUCED SHIFTING OF MOTOR		
41	WITH LEVELING DEVICE		
233	HAVING FOUR WHEELS DRIVEN		
234	.With means for steering all driven wheels		

Title Change
* Newly Established Subclass

@ Indent Change
& Position Change

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	HAVING AT LEAST ONE WHEEL BOTH DRIVEN AND STEERABLE		not qualified mentally or physically to do so
	.Steerable wheel has exclusive axis of pivot (i.e., stub-axle type)	273	..Utilizing weight, or lack thereof, of operator on seat or other support to determine presence or absence
	..Including flexible, axially rotatable means having one portion fixed to vehicle and another portion pivotable with wheel for transmitting drive thereto	274	..Responsive to engagement of portion of perimeter of vehicle with external object
255	...Pivotable portion of means has additional structure of gearlike nature in driving engagement with corresponding structure on wheel	275	..And causing application of vehicle brake
	...Means comprises rotatable shaft containing plural universal joints	276	...Brake comprises or includes element moved or deformed into engagement with ground
256	...Having at least one joint located on each side of axis of pivot	277	...And also interruption of at least one operational system of the vehicle or its motor
257	...Pivotable portion of means includes ball or socket element of ball-and socket type universal joint	278	...System comprises clutch
258	....Joint includes intermediate ball, floating in groove, for positively engaging ball with socket	279	..And causing interruption of an electrical system of the vehicle or its motor
259	...Pivotable portion of means includes gear element of intermeshing gear type universal joint	280	..And causing operation of vehicle steering system
260	....Joint includes at least one gear element rotatable on axis of pivot and intermeshing with gear element on pivotable portion	281	..Comprising either movable closure member or fastening device therefor responsive to forward or rearward movement, or variations therein, of vehicle
261	.....Joint also includes gear element on fixed portion engaging gear element on axis of pivot and vertically offset from gear element on pivotable portion	282	..Responsive to sensing of acceleration, deceleration, or tilt of vehicle
262	...Having axis of pivot disposed between parallel planes defined by opposite sides of wheel	283	..And causing interruption of ignition circuit
264	.With driven axle, mounting two or more wheels, swingable about axis of pivot, and motor mounted to swing therewith	284	...And also impeding flow of fuel
265	..Having axle offset longitudinally from axis of pivot	285	..And causing disruption of drive train between motor and wheels
266	.With driven axle, mounting two or more wheels, swingable about axis of pivot, and swingable also about a horizontal axis	286	..Comprising vehicle system or component responsive either to position of movable closure member or to status of fastening device therefor
267	.With driven axle, mounting two or more wheels, swingable about axis of pivot, and shaft for transmitting drive coincident with axis	287	..By preventing unauthorized or unintended access or use
268	WITH BELT OR HARNESS FOR RESTRAINING OCCUPANT, AND MEANS WHEREBY THE BELT OR HARNESS CONTROLS, OR IS CONTROLLED BY, THE FUNCTIONING OF A VEHICLE SYSTEM OR COMPONENT	288	..Reponsive to failure of taxicab operator to activate fare meter upon boarding of passenger
269	.System comprises transmission or element thereof	289	..Comprising device, mechanism, or system for either repositioning a movable or removable closure member or operating a fastening device therefor
270	.System comprises ignition circuit or starter circuit or element of one or other	290	..Responsive to weight of cargo load transported by vehicle
271	WITH MEANS FOR PROMOTING SAFETY OF VEHICLE, ITS OCCUPANT OR LOAD, OR AN EXTERNAL OBJECT	53.1	MOTOR AS SOURCE OF POWER FOR OTHER MACHINE
272	.Responsive to absence or inattention of operator, or negatively reactive to attempt to operate vehicle by person	53.2	..Other machine is creeper drive on motor vehicle
		53.3	..Other machine is mounted by three point hitch (i.e., Ford-Ferguson hitch)
		53.4	..Hydraulic drive to other machine
		53.5	..Electric drive to other machine

Title Change
* Newly Established Subclass

@ Indent Change
& Position Change

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	MOTOR AS SOURCE OF POWER FOR OTHER MACHINE	* 65.27	...Control of external device in conjunction with specific hybrid function
53.6	.Drive to other machine by power take-off (PTO) driven by wheel or axle of motor vehicle	* 65.275	...Control of individual subunit specific to hybrid operation
53.61	..PTO mounted directly on or engaging drive wheel to rotate therewith	* 65.28	....Control of engine specific to hybrid operation
53.62	..PTO constantly driven with wheel selectively driven	* 65.285	....Control of motor or generator specific to hybrid operation
53.7	.Drive to other machine by power take-off (PTO) at front end of vehicle	* 65.29	....Control of battery specific to hybrid operation
53.8	.Other machine is vehicle accessory	* 65.31	..With means on vehicle for generating power for the electric motor
54.1	POWER	* 65.51	..With motor in or moveable with wheel
54.2	.With spring powered motor	65.6	..With gearing between electric motor and drive wheel
55	.On lower running gear	65.7	..Gearing is a changeable ratio gearing
56	..Rear axle and body	65.8	..With electronic devices (logic gates, semi-conductors, vacuum tubes, etc.) in control circuit
57	...Longitudinal shaft	301	.Including traction motor of turbine type driven by fluid product of combustion
58	..Frame	302	.Including traction motor of kind driven by expansible fluid from source external of motor
59	...Pivoted support on axle	303	..Gas is product of treatment of a volatile fluid (e.g., gas is steam)
60	...Electric	304	...With means to condense gas discharged from motor
61	..Pivoted support on axle	305	.Including traction motor of kind driven by noncompressible fluid received under pressure from a pump
62	..Rear axle	306	..Vehicle includes another system operated by same fluid
63	.Motor moved by axle	307	..Having variable displacement type motor or pump
291	.Having specific motor-to-body-frame relationship	308	..Having separate motor for each driven, surface-engaging member
292	..Including change-speed gearing, or clutch, mounted in common with motor	309	.With means for handling motor exhaust
293	...With member or mechanism for controlling gearing or clutch, and means for minimizing transfer of movement, caused by operation of motor, to member or mechanism	310	.With means to generate steam for a propulsion purpose
294	...With means enabling repositioning of motor and gearing or clutch	68.1	.With means to guide and/or control air for power plant cooling
295	...With wheeled auxiliary frame, resiliently joined to body frame, for supporting motor and gearing or clutch	68.2	..With further means to utilize power plant cooling air for other purposes
296	..Including means on body frame or motor for handling exhaust	68.3	.With means to guide and/or control combustion air for power plant
297	..Having motor shaft parallel to rotational axis of driven wheel	68.4	.Radiators and condensers, mounting
298	..Including means enabling repositioning of motor	68.6	..With protector for the radiator or condenser
299	..Including auxiliary frame for motor and resilient means for connecting auxiliary frame to body frame	68.5	.Battery mountings and holders
300	..Including means of nonsupporting nature for minimizing operation-induced movement of motor	69.2	.Hoods
65.1	.Electric	69.21	..Pivoted about horizontal axis extending transversely of vehicle (e.g., alligator type or front end pivot)
* 65.21	..Hybrid vehicle (IPC)	69.22	..With noise suppression means
* 65.22	...Specific vehicle architecture (IPC)	69.23	...Noise suppression means prevents hood from vibrating (i.e., anti rattlers)
* 65.225	....Series and parallel (IPC)	69.24	..With access openings having moveable or removeable closures
* 65.23	.....Switching type (IPC)	69.25	..Water deflectors
* 65.235	.....Differential gearing type (IPC)		
* 65.24	.....Electrical distribution type (IPC)		
* 65.245	....Series (IPC)		
* 65.25	....Parallel (IPC)		
* 65.26	.....Motor assist (IPC)		
* 65.265	...Control of multiple systems specific to hybrid operation		

Title Change
* Newly Established Subclass

@ Indent Change
& Position Change

	POWER	383	.With particular drive coupling
	.Hoods	384	..Relative axial movement
69.25	..Water deflectors	385	..Drive connection to wheel
69.3	.With means to increase idle speed of internal combustion engine to compensate for accessory load	76	COMPENSATING DEVICES
		314	WITH PLURAL FUEL TANKS
69.4	.With fuel supply for internal combustion engine	315	MANUALLY ACTUATED CONTROLLING DEVICES
		316	.By other than hand or foot of operator
69.5	..Engine uses gaseous fuel	317	.On mine car vehicle
69.6	.Vehicle has plural power plants	318	.On delivery-type vehicle
69.1	.Underpans	319	.With rein means
337	TRANSMISSION MECHANISM	320	.With vehicle control extension
338	.Condition responsive (e.g., responsive to speed, load, etc.)	321	.With plural control stations
		322	..Side-by-side
339	.With temperature control, lubrication or sealing	323	..For single control means
		324	..With tool or equipment control
340	.With laterally movable wheel	325	..Braking controllable by passenger
341	.Wheel drives parallel wheel	326	.With movable control station or seat position
342	.Tire directly driven		..Movable cab
343	..With particular gear structure	327	...Tilting
344	.Assembly feature	328	..Simultaneously movable seat and control
345	.Traction aid	329	..Seat on seat portion movable to alternate position
346	.With protective guard or casing	330	...With tool or equipment control
347	.Mechanical movement transmission		.With tiller-type handle
348	.Final drive axle movable	331	.Multiple vehicle functions controllable by single device
349	..Rigid axle	332	.With adjustable operator engageable control
350	...Belt or chain drive	333	.With fuel or air throttle control
351	...With tensioning means	334	.With transmission control
352	...With lateral support between the differential or axle housing and the vehicle frame	335	.Steering shaft
		336	STERING GEAR
353	...With sprung differential	78	.Steering by terrestrial guide
354	...And differential support feature	400	.No mechanical connection between steering shaft and steering gear
355	...And final gear drive	401	..Hydraulic
356	...And final gear drive	402	.Power assist alarms or disablers
357	..Belt or chain drive	403	.With alternate emergency power means (e.g., pump, gearing, etc.)
358	..Swinging axle, single pivot	404	..With fluid backup
359	..With sprung differential	405	..With electrical backup
360	...And differential support feature	406	.Each wheel steerable
361	...And final gear drive	407	..Occupant steered
362	...And transverse leaf spring suspension	408	...With condition modulated steering
363	..And final gear drive	409	..Independently controlled steerable wheels
364	.Variable speed or direction	410	..With electric power assist
365	..Plural	411	...With electric power assist to all wheels
366	..Belt or chain	412	..With fluid power assist
367	..Fluid drive	413	...With electrical control
368	..Friction drive	414	..With mechanical power assist
369	..Planetary	415	.With fluid power assist
370	.With brake	416	..Between articulated wheeled vehicle sections
371	.Final gear drive at each of two parallel wheels	417	...Combined with another steering mode
		418	...Reciprocating power assist
372	..Planetary	419	..With condition modulated steering
373	..Belt or chain	420	
374	.Gear transmission relationship to frame or axle	421	
375	..Transmission is differential		
376	.Shaft relationship to frame or shaft		
377	.Transmission support		
378	..Differential or axle housing		
379	..Shaft		
380	...With propeller shaft casing, (e.g., torque tube)		
381	...Vibration damping		
382	..Flexible support		

Title Change
* Newly Established Subclass

@ Indent Change
& Position Change

JANUARY 2009

	STEERING GEAR		*****
	.With fluid power assist	900	ARGICULTURAL-TYPE TRACTORS
424	..With swinging axle	901	DEVICES FOR TRAVERSING VERTICAL SURFACES
425	..Including flexible power transmitting means	902	SHOCK OR VIBRATION ABSORBING OR TRANSMITTING MEANS BETWEEN WHEEL SUSPENSION AND MOTOR
426	..Steering column supported		
427	...Including rack gear means	903	AIRSTREAM REACTIVE VEHICLE OR VEHICLE STRUCTURE
428	..With rack and pinion gearing intermediate steering shaft and power assist	904	TRACTION DOLLIES FOR AIRCRAFT (Cross Reference Art Collection created in companion project)
429	..Having rotary working member		
430	..Having flexible working member	905	AXLES
431	..Steering linkage includes interengaging gear means	906	ADJUSTABLE AXLES
		907	MOTORIZED WHEELCHAIRS
432	..With plural working members	908	MOTOR VEHICLES WITH SHORT WHEELBASE
433	...Working member movement traverses vehicle path		*****
434	..Working member movement traverses vehicle path		FOREIGN ART COLLECTIONS

435	...Moves separate rod for each wheel steering arm	FOR 000	CLASS-RELATED FOREIGN DOCUMENTS
436	...Working member part engages wheel steering arm		
437	...Working member part engages tie rod		
438	..Movable working member engages wheel steering arm		
439	..Movable working member is a moving cylinder		
440	..With linkage intermediate working member and wheel steering arm		
441	..Device to control pressure (e.g., valve)	*	POWER (180/54.1)
442	..Hydraulic circuit	*	.Electric (180/65.1)
443	..With electric power assist	* FOR 100	..Combined with nonelectric drive means (180/65.2)
444	..Specific mechanical feature	* FOR 101	...Generating means is driven by a prime mover (180/65.4)
445	..Controlling rear wheels		
446	..Condition modulated		
447	..With mechanical power assist		
448	..Swinging axle		
449	..Bogie truck having more than one axle		
84	DUST GUARDS		
89.1	BODIES		
89.11	.With passenger compartment having article receiving or removing means		
89.12	.Tractor and similar vehicle cabs		
89.13	.Movable cab or operator's station		
89.14	..Tilting		
89.15	...Via power or power enhancing means		
89.16	..Overmotor cab		
89.17	.Movable body portion facilitating engine access		
89.18	..Cab portion		
89.19	.Overmotor cab		
89.2	.With means for handling exhaust of a motor		
90	.Dashboards		
90.6	.Footboards and pedal guards		
311	FRAME		
312	.With structure adapted to receive or support a motor, change-speed gearing, or other power train element		
313	MISCELLANEOUS		

	CROSS-REFERENCE ART COLLECTIONS		

Any foreign patents or nonpatent literature from subclasses that have been reclassified have been transferred directly to the FOR Collections 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.

Title Change
* Newly Established Subclass

@ Indent Change
& Position Change

CLASS 903 HYBRID ELECTRIC VEHICLES (HEVS)

JANUARY 2009

CROSS-REFERENCE ART COLLECTIONS

- 902 PRIME MOVERS COMPRISING ELECTRICAL AND
INTERNAL COMBUSTION MOTORS (EPO/JPO)
- 903 .Having energy storing means (e.g.,
battery, capacitor) (EPO/JPO)
- 904 ..Component specially adapted for HEV
(EPO/JPO)
- 905 ...Combustion engine (EPO/JPO)
- 906 ...Motor or generator (EPO/JPO)
- 907 ...Electricity storage (e.g., battery,
capacitor) (EPO/JPO)
- 908 ...Fuel cell (EPO/JPO)
- 909 ...Gearing (EPO/JPO)
- 910Orbital (e.g., planetary gears)
(EPO/JPO)
- 911With two or more gear sets
(EPO/JPO)
- 912 ...Drive line clutch (EPO/JPO)
- 913One way (EPO/JPO)
- 914 ...Actuated (e.g., engaged or
disengaged by electrical,
hydraulic or mechanical means)
(EPO/JPO)
- 915 ...Specific drive or transmission
adapted for HEV (EPO/JPO)
- 916With plurality of drive axles
(EPO/JPO)
- 917With transmission for changing gear
ratio (EPO/JPO)
- 918Continuously variable (EPO/JPO)
- 919Stepped shift (EPO/JPO)
- 930 ..Conjoint control of different elements
(EPO/JPO)
- # 944 ..Characterized by control of fuel cell
(EPO/JPO)
- # 945 ..Characterized by control of gearing
(e.g., control of transmission
ratio) (EPO)
- # 946 ..Characterized by control of driveline
clutch (EPO/JPO)
- # 947 ..Characterized by control of braking
(e.g., blending of regeneration,
friction braking) (EPO/JPO)
- 951 ..Assembly or relative location of
components (EPO/JPO)
- 952 ..Housing details (EPO/JPO)
- 960 ..Having chargeable mechanical
accumulator (EPO/JPO)

Title Change
* Newly Established Subclass

@ Indent Change
& Position Change

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

Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
180/303	1	180/65.2	410
180/6.5	1	180/65.2	410
180/65.1	1	180/65.4	84
	2	180/65.2	410
180/65.21	1	180/65.4	84
	3	180/65.3	139
	18	180/65.2	410
180/65.22	1	180/65.4	84
	15	180/65.2	410
	15	180/65.3	139
180/65.225	3	180/65.3	139
	3	180/65.4	84
	14	180/65.2	410
180/65.23	2	180/65.3	139
	5	180/65.4	84
	36	180/65.2	410
180/65.235	2	180/65.4	84
	9	180/65.3	139
	47	180/65.2	410
180/65.24	6	180/65.2	410
180/65.245	19	180/65.3	139
	39	180/65.2	410
	48	180/65.4	84
180/65.25	1	180/65.5	121
	9	180/65.3	139
	9	180/65.4	84
	123	180/65.2	410
180/65.26	5	180/65.4	84
	8	180/65.3	139
	33	180/65.2	410
180/65.265	2	180/65.4	84
	16	180/65.2	410
180/65.27	4	180/65.2	410
180/65.275	5	180/65.2	410
180/65.28	3	180/65.4	84
	23	180/65.2	410
180/65.285	15	180/65.2	410
180/65.29	1	180/65.3	139
	4	180/65.2	410
180/65.31	3	180/65.4	84
	4	180/65.2	410
	48	180/65.3	139

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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>
180/65.51	1	180/65.4	84
	118	180/65.5	121
180/65.6	3	180/65.2	410
180/65.8	1	180/65.3	139
180/69.4	1	180/65.3	139
237/12.3B	1	180/65.2	410
310/11	1	180/65.3	139
429/13	19	180/65.3	139

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PROJECT M-A180

DISPOSITION CLASSIFICATION(S) OF PATENTS
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>Source</u> <u>Classification</u>	<u>Number</u> <u>of ORs</u>	<u>New</u> <u>Classification</u>	<u>Number</u> <u>of ORs</u>
180/65.2	410	180/303	1
		180/6.5	1
		180/65.1	2
		180/65.6	3
		180/65.21	18
		180/65.22	15
		180/65.23	36
		180/65.24	6
		180/65.25	123
		180/65.26	33
		180/65.27	4
		180/65.28	23
		180/65.29	4
		180/65.31	4
		180/65.225	14
		180/65.235	47
		180/65.245	39
		180/65.265	16
		180/65.275	5
		180/65.285	15
		237/12.3 B	1
180/65.3	139	180/65.8	1
		180/69.4	1
		180/65.21	3
		180/65.22	15
		180/65.23	2
		180/65.25	9
		180/65.26	8
		180/65.29	1
		180/65.31	48
		180/65.225	3
		180/65.235	9
		180/65.245	19
		310/11	1
		429/13	19
180/65.4	84	180/65.1	1
		180/65.21	1
		180/65.22	1
		180/65.23	5
		180/65.25	9
		180/65.26	5
		180/65.28	3
		180/65.31	3

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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>
180/65.4	84	180/65.51	1
		180/65.225	3
		180/65.235	2
		180/65.245	48
		180/65.265	2
180/65.5	121	180/65.25	1
		180/65.51	118

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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>Notation</u>
180	65.21	B60K	6/20
	65.22	B60K	6/42
	65.225	B60K	6/44
	65.23	B60K	6/442
	65.235	B60K	6/445
	65.24	B60K	6/448
	65.245	B60K	6/46
	65.25	B60K	6/48
	65.26	B60K	6/485
	65.265	B60W	20/00
			10/00
	65.27	B60W	20/00
			10/30
	65.275	B60W	20/00
	65.28	B60W	20/00
			10/06
	65.285	B60W	20/00
			10/04
	65.29	B60W	20/00
			10/24
	65.31	B60K	1/00
			16/00
		B60L	8/00
	65.51	B60K	1/00

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D. CHANGES TO THE DEFINITIONS

CLASS 180 – MOTOR VEHICLES

Definitions Abolished:

Subclasses

65.2 through 65.5

Definitions Modified:

Subclass 205: Under SEE OR SEARCH THIS CLASS, SUBCLASS

Delete:

The reference to subclasses 65.1+

Insert:

65.1, through 65.8, for a motor vehicle, generally, provided with an electric motor for driving it; and particularly subclass 65.21, for a motor vehicle having other than a special wheel base and provided with both electric and nonelectric means for driving it.

Definitions established:**65.21 Hybrid vehicle (IPC):**

This subclass is indented under subclass 65.1. Subject matter wherein an electric motor in the body or on the body-frame drives the vehicle, combined with a prime mover, other than another electric motor, for generating power for the electric motor or for driving the vehicle.

- (1) Note. The electric motor and the prime mover may act on the same or different wheels of the vehicle and may be usable alternately or jointly, but both remain on the vehicle at all times.

65.22 Specific vehicle architecture (IPC):

This subclass is indented under subclass 65.21. Subject matter having a specific or particular functional arrangement of or interconnection between two or more major components (e.g. wheel, motor/generator, engine, etc.) of a drive train.

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D. CHANGES TO THE DEFINITIONS**65.225 Series and parallel (IPC):**

This subclass is indented under subclass 65.22. Subject matter having a functional arrangement which allows operation in both a first mode wherein the electric motor is supplied with electric power generated by a generating means carried on the vehicle, the generating means being driven by a prime mover other than another electric motor which does not directly drive the wheels; and a second mode wherein the electric motor, generator and prime mover are mechanically interconnected with the drive wheels for driving the vehicle.

65.23 Switching type (IPC):

This subclass is indented under subclass 65.225. Subject matter wherein a series or parallel drive mode can be either selected by a user or is changed automatically.

65.235 Differential gearing type (IPC):

This subclass is indented under subclass 65.225. Subject matter wherein a differential gear (e.g. planetary differential gear, etc.) is used for power distribution, in both a series and parallel drive mode.

65.24 Electrical distribution type (IPC):

This subclass is indented under subclass 65.225. Subject matter wherein an electric motor which can operate differentially is provided for power distribution, in both series and parallel drive mode.

65.245 Series (IPC):

This subclass is indented under subclass 65.22. Subject matter wherein the electric motor is supplied with electric power generated by a generating means carried on the vehicle, the generating means being driven by a prime mover other than another electric motor, the prime mover not directly driving the wheels.

65.25 Parallel (IPC):

This subclass is indented under subclass 65.22. Subject matter wherein the electric motor and prime mover are mechanically interconnected with the drive wheels for driving the vehicle.

65.26 Motor assist (IPC):

This subclass is indented under subclass 65.25. Subject matter wherein the electric motor provides an assist force for driving the vehicle (i.e., it is not capable of driving the vehicle alone).

65.265 Control of multiple systems specific to hybrid operation:

This subclass is indented under subclass 65.21. Subject matter provided with a control arrangement of multiple subunits (e.g. engine, battery, motor, etc.) of a hybrid propulsion power train.

- (1) Note. A control arrangement lacking a recitation of vehicle structure, or including only broad recitation of a vehicle, or of such parts as are necessarily involved in the definition of a vehicle, would not be placed in this subclass.

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D. CHANGES TO THE DEFINITIONS**65.27 Control of external device in conjunction with specific hybrid function:**

This subclass is indented under subclass 65.21. Subject matter including vehicle having a control arrangement specific to the operation of a device external to the hybrid power train relative to hybrid operation, or the control of a portion of a hybrid power train in relation to an external device.

- (1) Note. A control arrangement lacking a recitation of vehicle structure, or including only broad recitation of a vehicle, or of such parts as are necessarily involved in the definition of a vehicle, would not be placed in this subclass.

65.275 Control of individual subunit specific to hybrid operation:

This subclass is indented under subclass 65.21. Subject matter including vehicle having an arrangement for control of an individual subunit of a hybrid electric power train (e.g. control of fuel cell, etc.).

- (1) Note. A control arrangement lacking a recitation of vehicle structure, or including only broad recitation of a vehicle, or of such parts as are necessarily involved in the definition of a vehicle, would not be placed in this subclass.

65.28 Control of engine specific to hybrid operation:

This subclass is indented under 65.275. Subject matter including vehicle having a control arrangement specific to the operation of the prime mover.

- (1) Note. A control arrangement lacking a recitation of vehicle structure, or including only broad recitation of a vehicle, or of such parts as are necessarily involved in the definition of a vehicle, would not be placed in this subclass.

65.285 Control of motor or generator specific to hybrid operation:

This subclass is indented under 65.275. Subject matter including vehicle having a control arrangement specific to the operation of a motor or generator.

- (1) Note. A control arrangement lacking a recitation of vehicle structure, or including only broad recitation of a vehicle, or of such parts as are necessarily involved in the definition of a vehicle, would not be placed in this subclass.

65.29 Control of battery specific to hybrid operation:

This subclass is indented under 65.275. Subject matter including vehicle having a control arrangement specific to the operation of the battery.

- (1) Note. A control arrangement lacking a recitation of vehicle structure, or including only broad recitation of a vehicle, or of such parts as are necessarily involved in the definition of a vehicle, would not be placed in this subclass.

65.31 With means on vehicle for generating power for the electric motor:

This subclass is indented under subclass 65.1. Subject matter including vehicle wherein the electric motor is supplied with electric power generated by means carried on the vehicle.

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D. CHANGES TO THE DEFINITIONS

- (1) Note. The generating means may be a generator driven by a prime mover or the running gear of the vehicle including the drive wheels, the drive axle, drive shaft, or shock absorbing means. The drive may be direct or indirect through an energy conversion mechanism. Although the systems in this and the indented subclass may include batteries, for purposes of this subclass, a storage battery is not considered to be means for generating electric power.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 2.2, for generating means on a vehicle driven by a wind motor or in the form of a solar cell.

65.51 With motor in or moveable with wheel:

This subclass is indented under subclass 65.1. Subject matter including vehicle wherein the electric motor is mounted in the wheel to form part of the wheel or is mounted on the wheel to move with the wheel as the wheel moves relative to the vehicle body or frame.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 55, for wheel mounted motors other than electric or hydraulic.
308, for hydraulically driven motors mounted in or on the wheels.

SEE OR SEARCH CLASS:

- 310, Electrical Generator or Motor Structure, subclass 67 for electric motors combined with wheels.

FOREIGN ART COLLECTIONS

The definitions below correspond to the abolished subclasses from which these collections were formed. See the Foreign Art Collection schedule of this class for specific correspondences. [Note: The titles and definitions for indented art collections include all the details of the one(s) that are hierarchically superior.]

FOR 100 Combined with nonelectric drive means:

Foreign art collections including vehicles wherein the electric motor is combined with a prime mover, other than another electric motor, for driving the vehicle.

- (1) Note. The electric motor and the prime mover may act on the same or different wheels of the vehicle and may be usable alternately or jointly but both remain on the vehicle at all times.

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D. CHANGES TO THE DEFINITIONS

- (2) Note. This subclass is intended to include a prime-mover-generator-electric motor drive train provided they are all mechanically interconnected with the drive wheels. Such an apparatus is known as a hybrid drive vehicle.

FOR 101 Generating means is driven by a prime mover:

Foreign art collections including vehicles wherein the means for generating power for the electric motor is driven by a prime mover other than another electric motor.

- (1) Note. The prime mover is usually a gasoline or diesel engine and the drive system is usually referred to as a gas-electric or diesel-electric drive.

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D. CHANGES TO THE DEFINITIONS

CLASS 903 – HYBRID ELECTRIC VEHICLES (HEVS)

Definitions Abolished:

Subclasses

920-927, 940-943, and 948

Definitions Modified:

Class Definition: Section I

Delete:

The entire class definition.

Insert:

This class includes arrangement or mounting of plural prime movers for mutual or common propulsion of a vehicle. This Class includes specific HEV topologies, components, and arrangements of components specially adapted for HEVs, as well as controls of components specially adapted for HEVs.

This class was initially established as a result of a joint reclassification project of HEV technology completed by the Japanese Patent Office (JPO) and the European Patent Office (EPO). At the time of introduction, all U.S. documents in these subclasses were either classified directly by the EPO or JPO, or through family member processing of classified documents. The subclasses also contain foreign documents classified directly by these countries.

Since Class 903 was established, many of the related IPC subclasses were abolished. Additionally, some of the subclasses that had been in Class 903 when it was established were transferred to Class 180 in January 2009. The U.S. patents are updated with classifications assigned by U.S. examiners. Foreign patents for subclasses existing in the IPC are updated on a regular basis from the EPO and JPO databases.

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D. CHANGES TO THE DEFINITIONS

Subclass 902: In the title:

Delete:

The current title.

Insert:

**PRIME MOVERS COMPRISING ELECTRICAL AND INTERNAL
COMBUSTION MOTORS (EPO/JPO):**

Subclass 904: In the hierarchy line of the subclass definition:

Delete:

902

Insert:

903

Subclass 905: In the hierarchy line of the subclass definition:

Delete:

902

Insert:

904

Subclass 906: In the hierarchy line of the subclass definition:

Delete:

902

Insert:

904

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D. CHANGES TO THE DEFINITIONS

Subclass 907: In the hierarchy line of the subclass definition:

Delete:

902

Insert:

904

Subclass 908: In the hierarchy line of the subclass definition:

Delete:

902

Insert:

904

Subclass 909: In the hierarchy line of the subclass definition:

Delete:

902

Insert:

904

Subclass 910: In the hierarchy line of the subclass definition:

Delete:

902

Insert:

909

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D. CHANGES TO THE DEFINITIONS

Subclass 911: In the hierarchy line of the subclass definition:

Delete:

902

Insert:

910

Subclass 912: In the hierarchy line of the subclass definition:

Delete:

902

Insert:

904

Subclass 913: In the hierarchy line of the subclass definition:

Delete:

902

Insert:

912

Subclass 914: In the hierarchy line of the subclass definition:

Delete:

902

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Insert:

912

Subclass 915: In the hierarchy line of the subclass definition:

Delete:

902

Insert:

904

Subclass 916: In the hierarchy line of the subclass definition:

Delete:

902

Insert:

915

Subclass 917: In the hierarchy line of the subclass definition:

Delete:

902

Insert:

915

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D. CHANGES TO THE DEFINITIONS

Subclass 918: In the hierarchy line of the subclass definition:

Delete:

902

Insert:

917

Subclass 919: In the hierarchy line of the subclass definition:

Delete:

902

Insert:

917

Subclass 930: In the hierarchy line of the subclass definition:

Delete:

902

Insert:

903

Subclass 944: In the hierarchy line of the subclass definition:

Delete:

902

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D. CHANGES TO THE DEFINITIONS

Insert:

903

Delete:

The subclass title

Insert:

Characterized by control of fuel cell (EPO/JPO):

Subclass 945: In the hierarchy line of the subclass definition:

Delete:

902

Insert:

903

Delete:

The subclass title

Insert:

**Characterized by control of gearing (e.g. control of transmission ratio)
(EPO/JPO):**

Subclass 946: In the hierarchy line of the subclass definition:

Delete:

902

Insert:

903

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D. CHANGES TO THE DEFINITIONS

Delete:

The subclass title

Insert:

Characterized by control of driveline clutch (EPO/JPO):

Subclass 947: In the hierarchy line of the subclass definition:

Delete:

902

Insert:

903

Delete:

The subclass title

Insert:

Characterized by control of braking (e.g. blending of regeneration, friction braking) (EPO/JPO):

Subclass 951: In the hierarchy line of the subclass definition:

Delete:

902

Insert:

903

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D. CHANGES TO THE DEFINITIONS

Subclass 952: In the hierarchy line of the subclass definition:

Delete:

902

Insert:

903

Subclass 960: In the hierarchy line of the subclass definition:

Delete:

902

Insert:

903