

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE

CLASSIFICATION ORDER 1915

FEBRUARY 7, 2012

PROJECT M-C192

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:	192	45	3655	OS0001
Established:	192	45.001-45.009, 45.01, 45.011- 45.019, 45.02	3655	OS0001

The following classes are also impacted by this order.

188

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 1915

FEBRUARY 7, 2012

PROJECT M-C192

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3.21	VORTEX-FLOW DRIVE AND CLUTCH	219.1	...Hill-holder
3.22	.With means to effect torque reversal	219.2One-way brake
3.23	.With brake	219.3	.....Ball or roller
3.24	..Alternatively operative clutch and brake	219.4	...Emergency or parking brake
3.25	.With additional drive or clutch	219.5	....Parking pawl
3.26	..Simultaneously operative clutches	219.6	....With separate manual operator
3.27	..Alternatively operative clutches	219.7	.....Foot operated
3.28	.Including drive-lockup clutch	220	..Brake control affects transmission change
3.29	..Having fluid-pressure operator	220.1	...Brake application neutralizes transmission
3.3	...With auxiliary source of pressure	220.2	...Park-lock device
3.31	..Having speed-responsive operator	220.3	....Floor-mounted shift lever
3.32	..Alternatively operative drive and clutch	220.4	.....Solenoid operated lock
3.33	..Fluid-pressure operator for engaging clutch	220.5	.....Rotary bushing
3.34	VORTEX-FLOW DRIVE AND BRAKE	220.6	.....Override
3.51	TRANSMISSION CONTROL AND CLUTCH CONTROL	220.7	.....Override
3.52	..Planetary transmission and coaxial clutch	221	..Fluid operated
3.53	..Including separate, reversing pedal	221.1	...Brake and gearing at axle end
3.54	.Common control	222	..Electromagnetic
3.55	..Power-operated clutch	223	.Torque-responsive brake
3.56	...Electromagnetically operated	223.1	..Transversely engaged positive brake
3.57	...Fluid-press operated	223.2	..Ball or roller type brake
3.58	....Electrically triggered	223.3	..With cam mechanism for axially moving brake member
3.59	....Vacuum operated	223.4	..Wrap-spring brake
3.61	..Stepped ratio transmission	224	.Belt or chain transmission
3.62	..With control lever	224.1	..Belt tensioner affects brake operation
3.63	.Interrelated (e.g., with interlock)	224.2	..Belt failure operates brake
215	TRANSMISSION AND BRAKE	224.3	..Belt shipper affects brake operation
216	.Internal resistance brake	225	.Fluid operated
217	.Velocipede	226	.Electromagnetic
217.1	..Back-pedaling brake (e.g., coaster brake)	12 R	CLUTCH AND BRAKE
217.2	...Rotatable crank axle	13 R	.Vehicle type
217.3	...Wheel hub	13 A	..Clutch-released brake holder
217.4	....With change-speed transmission	14	.Same member
217.5	.....Plural sprockets	15	.Automatic check and release
217.6	....With screw operator	16	..Clutch and brake same member
217.7	....Multidisc brake	17 R	.Peripheral brake
218	.Motor vehicle	17 A	..Fluid operator
219	..Transmission control affects brake	17 C	..Electric
		17 D	..Coil
		18 R	.Sliding operation
		18 A	..Fluid operator
		18 B	..Electric and magnetic
		19	.Crank control
		12 A	.Internal resistance
		12 B	.One-way engaging
		12 BA	..Coil spring type
		12 C	.Fluid operator

12 D	.Electric	45.011	.....Including bearing block between clutch races and between balls or rollers
20	CLUTCH AND GEAR		
21	.Reversing		
21.5	FIELD RESPONSIVE FRICTIONAL MEDIA TYPE	45.012	.....Spring integrally formed with cage
22	LATCH OPERATED	45.013	.....Plural integral springs separate from cage
23	.Corn-planter type	45.014	.....Spring and multipart cage
24	.Longitudinally moving transmission member	45.015	.....Spring mounted on projection on cage
25	..Pin	45.016	.....Serpentine spring
26	.Transversely moving transmission member	45.017	....Including separating means on clutch race
27	..Ball or roller	45.018	.....Spring biased ball or roller
28	..Positive	45.019	.....By other than circular helical spring
29	...Rotating key	45.02	.....Including separate force transmitting element between spring and ball, roller, or race
30 R	CLUTCHES	45.1	...Wedging pawl or block
31	.Automatic	45.2	...Two-point gripper
32	..Manual control	46	...Positive
33 R	...Definite-position release	47	...Manual control
33 C	....Coil	41 S	...Spring
34	...Shaft thrust	41 A	...Sprags
35	...Pilot mechanism	48.1	.Plural clutch-assembly
36	...Brake band	48.2	..Including electrically actuated clutch assembly
37	...Transversely moving	48.3	..Diverse clutch-assemblies
38	....Ball or roller	48.4	...Including three or more assemblies
39	....Positive	48.5	...Including one clutch-assembly having interdigitated clutch-elements
40	...Electric	48.6	....And another clutch-assembly having unirotationally engaging clutch elements
41 R	..One-way engaging	48.601	..Having fluid pressure operator
42	...Free-engine type	48.602	...Operator rotatable relative to its clutch-assembly
43	...Reversible	48.603	....Operator coaxial with its clutch-assembly
43.1	....Pivoted pawls	48.604	....Common or interconnected operator(s)
43.2	....Slidable pawls	48.605	.....Operator between clutch-assemblies
44	....Ball or roller	48.606	....Axially spaced coaxial clutch-assemblies
45.001	...Ball or roller	48.607	...Axially spaced coaxial clutch-assemblies
45.002	....Roller has non-spherical, non-cylindrical force transmitting surface		
45.003	....Plural ball or roller sizes or shapes		
45.004	....Plural balls or rollers of same shape and size		
45.005	....Received in recesses in each of two cooperating clutch races		
45.006	....Including cage		
45.007	.....Including axle for ball or roller		
45.008	.....Balls or rollers spring biased toward engaged state		
45.009	.....Including speed-responsive biasing mechanism		
45.01	.....Biased cage		

48.608	....Plural fluid pressure operators forming nested pistons	53.331	.....Blocker on axially extending stepped pin
48.609	...Axially spaced coaxial clutch-assemblages	53.332	.....Resilient detent pin
48.61	....Plural fluid pressure operators forming nested pistons	53.34	....Outward tooth or lug on friction member
48.611	....Operator coaxial with its clutch-assemblage	53.341	.....With thrust member
48.612	.....Common or interconnected operator(s)	53.342	.....Resilient thrust bar
48.613	.....Operator between clutch-assemblages	53.343	.....Resilient expander ring
48.614	.....Operator between clutch-assemblages	53.35	....Inward tooth or lug on friction member
48.615	....Radially acting operator	53.36	....Radially movable blocker
48.616	...Plural fluid pressure operators forming nested pistons	53.361	....Detent acts as blocker
48.617	....At least one operator coaxial with its clutch-assemblage	53.362	.....Rocker lever actuates friction clutch
48.618	...Operator coaxial with its clutch-assemblage	53.363	....Radially movable friction element acts as blocker
48.619	....Radially spaced coaxial clutch-assemblages	53.364	.....Resilient friction element
48.7	..With means to actuate or deactuate clutch-assemblages sequentially	53.4	...Lock for positive clutch
48.8	..Associated with three or more shafts	53.5	...Axially projecting positive clutch
48.9	...Alternatively operative assemblages	53.51	....Cylindrical pin
48.91	....Having common clutch-element support	53.6	...Transversely moving positive clutch
48.92	..Including unirotationally engaging clutch-elements	54.1	..Torque responsive
49	..Parallel vehicle wheels	54.2	..Hub clutch
50	...Free wheel	54.5	..Cam operated
51	..Reversing	54.51	...Screw operated
52.1	..Progressive engagement	54.52	...Ball or roller type
52.2	..Surface area	55.1	..With overload release coupling
52.3	...Yielding	55.2	..With flexible shaft coupling permitting limited relative rotation
52.4	..Variable force	55.3	...Separate resilient member between clutch element and its shaft
52.5	...Initial engagement causes increase in applied force	55.4	....Fluid damper
52.6	..Yielding	55.5	....Coil spring coaxial with rotation axis
53.1	..Frictional and positive	55.51	.....Radially overlapping convolutions
53.2	..Magnetic or electromagnetic operated friction clutch	55.6	....Plural resilient members
53.3	...With blocker	55.61	.....Coil springs with center line spaced from rotational axis
53.31	....Self-energizing	55.62	.....Center line of coil springs parallel to rotational axis
53.32	....Interposed friction members	55.7	....Coil spring with center line spaced from rotational axis
53.33	....Member extending axially between friction surfaces	56.1	..Overload release
		56.2	...Coil
		56.3	...Fluid-operated clutch
		56.31	....Axially engaged
		56.32	.....Positive
		56.33	.....Ball or roller
		56.4	...Magnetic or electromagnetic

56.41	....Axially engaged	64	.Velocipede free wheel
56.42	.....Positive	65	.Axially and transversely engaging
56.43	.....Ball or roller		
56.5	...Clutch elements remain disengaged after overload corrected	66.1	.Axially engaging
56.51	....Having separate latch to hold clutch elements disengaged	66.2	..Conical or frustoconical
56.52	.....Axially engaged	66.21	...Plural radially spaced surfaces
56.53	.....Positive	66.22	...Spring engaged
56.54	.....Ball or roller	66.23	...Spring released
56.55	....Axially engaged	66.3	..Planar radially extending
56.56	.....Positive	66.31	...Spring engaged
56.57	.....Ball or roller	66.32	...Spring released
56.6	...Axially engaged	69	..Positive
56.61	....Positive	69.1	...Pivoting positive clutch element
56.62	.....Ball or roller	69.2	...Plunger disconnect
54.3	..Fluid operated	69.3	...Pilot pawl
54.4	..Magnetic or electromagnetic	69.4	...Wheel hub clutched to axle
57	..Fluent material and mechanical	69.41	....Fluid pressure
58.1	..Fluent material	69.42	....Electromagnetic
58.2	..Fluid	69.43	....Manual
58.3	...Vane clutch	69.5	...Ball or roller
58.4	...Viscous shear	69.6	...Cylindrical pin
58.41	....Multiple plate	69.61	....Axial pin on only one member
58.42	.....Variable gap or volume	69.62	.....Pin engages aperture in other member
58.43	....Variable gap or volume	69.63	....Radial pin
58.5	....Separate reservoir	69.7	...Axial-radial
58.6	.....Automatic regulation	69.71	...Axially extending projection engages aperture
58.61	.....Magnetic or electric	69.8	...Axial-axial
58.62	.....Temperature and speed	69.81	....Sawtooth
58.63	.....Temperature	69.82	....Square tooth
58.64	.....Coolant and clutching medium	69.83	.....With lead-in
58.65	.....Ambient and clutching medium	69.9	...Radial-radial
58.66	.....Ambient and coolant	69.91	...Outward projection on movable member
58.67	.....Clutching medium	70	..Spreading
58.68	.....Ambient	70.11	..Interposed, mating clutch-elements
58.681	.....Bi-metallic	70.12	...With means to cool or lubricate clutch parts
58.682	.....Spiral	70.13	...With removable or replaceable or interchangeable clutch parts
58.683	.....Resilient or adjustable mounting feature	70.14	...Including surface characteristics of clutch-element
58.684	.....Mounting feature	70.15	....Axially tapered mating surfaces
58.7	....Pump-out feature	70.16	...With torque connection between clutch-element and its shaft
58.8	....Specific valve	70.17	...Resilient torque connection (e.g., for damping vibration)
58.9	...Radial vane		
58.91	....Vaness on inner member		
58.92	.....Spring-biased		
59	..Axially movable piston		
60	..Transversely movable piston		
61	..Gear-pump type		
62	..Plow-lifting type		
63	..Free-engine type		

70.18	.....Including chordally disposed connection	84.6	...Rotary electric motor is clutch actuator
70.19	....Axially slidable connection	84.7	...Mechanical force increasing means
70.2	.....Spline connection for multiple clutch-elements	84.8	...Operator for transversely engaging elements
70.21	...With means to move multiple clutch-elements axially and sequentially	84.81	....Coil spring
70.22	...With means to move clutch-element axially and latch into engaged or disengaged position	84.9	...Operator for axially engaging elements
70.23	..With cam or wedge contacting clutch-element or pressure plate for axial movement thereof	84.91	....Interposed friction elements
70.24	....By cam surface on bell-crank	84.92	....Positively engaging elements
70.251	...With adjustable means to move clutch-element axially (e.g., to compensate for wear)	84.93	....Magnetic flux path spaced from engaging elements
70.252	....Automatic	84.94	....Specified torque transmitting spring
70.26	....Including plural adjusting screws (e.g., to equalize pressure angularly)	84.941	.....Nonmetallic
70.27	...With spring means to move clutch-element axially	84.95	....With slip rings
70.28	....To separate engaged clutch-elements	84.951	.....With pulley or gear
70.29	....And actuator lever pivoted on pressure plate	84.96	....Fixed concentric coil
70.3	..With actuator lever pivoted on pressure plate or back plate to move clutch-element axially	84.961	.....With pulley or gear
71	..Positive	85.01	..Fluid pressure
72	..Interior and exterior	85.02	...Operator force derived from clutch input or output
73	...Opposing	85.03	...Elastic (e.g., diaphragm, pneumatic tube)
74	..Interior	85.04	...Rotating with clutch input or output
75	...Expanding	85.05	....And causing purely axial movement
76	....Radial	85.06	.....Including flexible friction discs
77	....Split ring	85.07	.....Plural oppositely acting elastic operators
78	....Cam operated	85.08	.....Clutch has flat friction surfaces
79	..Exterior	85.09	.....More than two friction elements
80	...Strap	85.1	.....Plate or diaphragm spring release
81 R	....Multiple folds	85.11	.....Clutch has positively engaging clutch members
81 C	....Coil	85.12	....And causing purely radial movement
82 R	..Operators	85.13	.....Elastic operator integral with radially outer clutch member
83	..Multiple for same clutch	85.14	...Rotatable relative to clutch input and output
84.1	..Electric or magnetic	85.15	....And causing purely axial movement
84.2	...Plural coils	85.16	....And causing purely radial movement
84.21	....Plural armatures	85.17	...Piston and cylinder operator rotating with clutch input or output
84.3	...Including permanent magnet		
84.31	....And electromagnet		
84.4	...Electrostatic		
84.5	...Air gap adjustment		
84.51	....Automatic		

85.18	....Positive clutch	85.47	....Having radially displaceable friction surface
85.19	....Friction clutch	85.48	...Operator rotatable relative to clutch input and output
85.2	.....Having friction elements movable axially only	85.49	....And aligned with clutch axis of rotation
85.21	.....Having conical or frustoconical friction surfaces (e.g., cone clutch)	85.5	....Operator acts on clutch through push rod extending coaxially through input or output shaft
85.22	.....Plural radially spaced frustoconical surfaces	85.51	....Operator acts on clutch via diaphragm spring or lever
85.23	.....Having flat friction surfaces	85.52	.....Pull-to-release type clutch
85.24	.....More than two friction elements	85.53	....Details of fluid operator
85.25	.....Including balance chamber	85.54	.....Having particular seal
85.26	.....Cam mechanism between piston and friction element	85.55	....Details of master cylinder
85.27	.....Auxiliary exhaust or relief passage from piston chamber	85.56	...Operator spaced from and parallel to clutch axis of rotation
85.28	.....Fluid escape from piston chamber by rotation-induced pressure	85.57	....Fluid released clutch
85.29	.....In piston	85.58	....By vacuum
85.3	.....Valve in passage	85.59	....Details of fluid operator
85.31	.....Valve in passage	85.6	....Details of master cylinder
85.32	.....Variable fluid contacting piston area	85.61	...Cooling or lubricating
85.33	.....Axially stationary piston, moving cylinder	85.62	...Having wear compensator
85.34	.....Cushioning element between piston and friction element	85.63	...Including fluid pressure control
85.35	.....Operator acts on friction elements via diaphragm spring or lever	89.1	..Weight operated
85.36	.....Electric or magnetic release	89.2	..Spring engaged
85.37	.....Fluid released clutch	90	...Electric release
85.38	.....And fluid pressure engaged	89.21	...Cam release
85.39	.....Spring released clutch	89.22	...Belleville disc spring
85.4	.....Release spring between discs	89.23	....Push-type
85.41	.....Coil spring	89.24	....Pull-type
85.42	.....Encircling clutch axis of rotation	89.25	....Geometric configuration
85.43	.....Having particular friction element structure	89.26	...Plural coil springs spaced from clutch axis
85.44	.....Having particular piston seal	89.27	...Coil spring coaxial to clutch axis
85.45	.....Piston has interrupted engagement face	89.28	....Transversely engaged
85.46	.....Piston has non-planar engagement face	89.29	...Quick throw spring
		92	..One-direction apply and release
		93 R	..Cam
		93 A	...Axially thrusting cams rotatable about clutch axis
		93 B	...Axially moving cam acting on pivoted lever
		93 C	...Axially moving cam acting on transversely moving wedge or clutch member
		94	..Screw
		95	..Handwheel
		96	..Central pin
		97	...Screw operated
		98	..Shipper saddles

99 R	..Lever systems	103 FA	...Fluid pressure engaged with centrifugal valve
99 A	...Levers mounted on axially engaging clutch	82 P	..Rack and pinion operator
99 B	...Levers mounted on transversely engaging clutch	82 T	..Temperature operator
99 S	...Stationary levers	30 W	.Warning, indicating, and signal devices
100	..Follow-up	30 V	.Vibration dampers
101	..Releasing		ELEMENTS
102	..Check of driven member	200	.Clutch element resiliently carried on hub
103 R	..Speed responsive	201	..Speed-responsive
104 R	...Fixed-speed release	202	..Manually adjustable
104 B	...Transversely engaged-interior	203	..Coil spring detail
104 C	...Transversely engaged-exterior	204	..Specified bushing
104 F	...Fluid clutches and operators	205	..Separate seat detail
105 R	...Fixed-speed engagement	206	..Relatively axially movable hub sections
105 A	...Centrifugal (fluid or powder) nonpivoted weights (radially movably or slidable) i.e., mercury clutch	207	..Circumferential resilience
105 B	...Axially engaged with nonpivoted weights-weights movable radially or slidable	208	...With fluid damping
105 BA	...Transversely engaged with nonpivoted weights	209	...Nonmetallic
105 BB	...Transversely engaged positive with nonpivoted weights	210	...Interposed friction element
105 C	...Axially engaged with pivoted weights	210.1	....Biasing means
105 CP	...Weights pivoted on axis parallel to clutch axis-axially engaged	211	....And coil spring
105 CS	...Single pair clutching elements axially engaged with pivoted weights	212	...Coil spring
105 CD	...Transversely expanding clutch with pivoted weights	213	...Plural helical coil spring damping stages
105 CE	...Transversely engaged-pivoted weights and clutching elements movable separately	213.1	....Plural axially spaced springs
105 CF	...Transversely contracting	213.11	.....Interposed friction element
105 F	...Fluid controls for centrifugal clutches	213.12	.....Biasing means
106 R	...Release	213.2	....Plural radially spaced springs in a common radial plane
106 F	...Devices to prevent fluid clutches from being operated by centrifugal forces acting on fluid	213.21	.....Interposed friction element
103 A	...Centrifugal operated, axially engaged	213.22	.....Biasing means
103 B	...Centrifugal operator transversely engaged	213.3	....Interposed friction element
103 C	...Acceleration and inertia responsive	213.31	.....Biasing means
103 F	...Fluid operated	214	....Interposed friction element
		214.1	....Biasing means
		107 R	.Engaging surfaces
		108	..Positive
		107 M	..Material
		107 T	..Transversely engaging
		107 C	..Clutch plate axially compressible
		109 R	.Thrust members, retarders, and stops
		109 A	..Resilient operators and pressure plates
		109 B	..Resilient backing plates
		109 F	..Cushioning devices for fluid operators
		109 D	..Dashpot

- | | | | |
|--------|--|--------|---|
| 110 R | .Shafts, bearings, and adjusting devices | 113.35 | ...With change of coolant flow during disengagement |
| 110 B | ..Bearings | 113.36 | ...Grooved surfaces |
| 110 S | ..Shafts for removable clutches or discs | 113.4 | ..Thermal insulating |
| 111.1 | ..Wear compensators | 113.5 | ..Lubrication of ancillary clutch parts |
| 111.11 | ..Compensator in actuating mechanism outside of the clutch (EPO) | 114 R | .Locks |
| 111.12 | ...Automatic | 114 T | ..Interlocking clutch teeth or splines |
| 111.13 | ..Compensator in or near release bearing (EPO) | 115 | .Supports |
| 111.14 | ...Automatic | 116.5 | STOP MECHANISM |
| 111.15 | ..Compensator on or inside clutch cover (e.g., acting on diaphragm or pressure plate) (EPO) | 125 R | .Material control |
| 111.16 | ...Automatic | 126 | ..Sheet material |
| 111.17 | ...Worm mechanism | 127 | ...Electrical |
| 111.18 | ...Relatively rotatable cam rings | 128 | ...Pneumatic |
| 111.19 |Between cover and diaphragm spring | 125 A | ..Power stop-material control-electrical |
| 111.2 |Between diaphragm spring and pressure plate | 125 B | ..Mechanical |
| 111.3 |Having clearance sensor bridging gap between clutch members and moveable only during engagement | 125 C | ..Pneumatic |
| 111.4 |Having clearance sensor bridging gap between clutch members and moveable only during engagement | 125 D | ..Granular material |
| 111.5 | ...Relatively rotatable cam rings | 125 E | ..Work start |
| 111.6 | ...Threaded element centered on clutch axis | 125 F | ..Length of material stop |
| 111.7 | ...Threaded in clutch cover | 129 R | .Safety device |
| 112 | .Casings | 130 | ..Hand protector |
| 113.1 | ..Lubricating, insulating, or cooling | 131 R | ...Two hand |
| 113.2 | ..Air cooling | 131 H | ...Hand and foot |
| 113.21 | ...Heat radiating structure | 132 | ...Delayed action drive |
| 113.22 | ...Grooved surfaces | 133 | ..Automatic guard |
| 113.23 | ...Air directing structure | 134 | ...Punch-press type |
| 113.24 | ...Rotating cover | 135 | ...Cover |
| 113.25 | ...Spring | 136 | ...Centrifugal-machine type |
| 113.26 | ...Clutch plate | 137 | ...Disabled transmission |
| 113.3 | ..Liquid cooled or lubricated clutch surfaces | 129 A | ..Electrical |
| 113.31 | ...Entire coolant path is spaced from clutch surfaces | 129 B | ..Pneumatic |
| 113.32 | ...Overrunning clutch | 138 | .Limit stop |
| 113.33 | ...Positive | 139 | ..Rotary-member control |
| 113.34 | ...Lubricant or coolant between engaging surfaces | 140 | ...Speed responsive |
| | | 141 | ...Screw |
| | | 142 R | ...Electrical |
| | | 142 A | ...Radio tuner type |
| | | 143 | ..Reciprocating-member control |
| | | 144 | .Drive release and brake |
| | | 145 | ..Multiple clutch |
| | | 146 | ..Change speed |
| | | 147 | ..Speed responsive |
| | | 148 | ..Positive stop |
| | | 149 | ...Cushioned |
| | | 150 | .Overload release |

FOREIGN ART COLLECTIONS

FOR 000 CLASS-RELATED FOREIGN DOCUMENTS

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

CLUTCHES (192/30)

- .Operators (192/82 R)
- FOR 100 ..Electric (192/84 R)
- FOR 101 **TRANSMISSION CONTROL AND BRAKE (192/4 R)**
- FOR 102 ..Back-pedaling brake (192/5)
- FOR 103 ..Hub brake (192/6 R)
- FOR 104 ...With change speed transmission (192/6 A)
- FOR 105 ...Rotatable axle (192/6 B)
- FOR 106 ..Automatic brake (192/7)
- FOR 107 ..Responsive to drive release (192/8/R)
- FOR 108 ...Cable (192/8 A)
- FOR 109 ...Coil brake (192/8 C)
- FOR 110 ..Electric control (192/9)
- FOR 111 ..Belt shipper (192/10)
- FOR 112 ..Belt tightener (192/11)
- FOR 113 ..Automatic type (192/4 A)
- FOR 114 ..Internal resistance brake (192/4 B)
- FOR 115 ..Forward and reverse gearing (192/4 C)

CLUTCHES (192/30)

- .Axially engaging (192/66.1)
- ..Interposed, mating clutch-elements (192/70.11)
- FOR 116 ...With adjustable means to move clutch-element axially (e.g., to compensate for wear) (192/70.25)

ELEMENTS

- FOR 117 ..Wear compensators (192/111)

CLUTCHES (192/30)

- .Operators (192/82 R)
- FOR 118 ..Fluid pressure (192/85 R)
- FOR 119 ...Double acting (192/86)
- FOR 120 ...Multiple clutches (192/87.1)
- FOR 121Having independent operators (192/87.11)
- FOR 122Responsive to rotational speed of clutch-element (192/87.12)

- FOR 123With selective distributor for fluid pressure (192/87.13)
- FOR 124Alternatively operative clutches (192/87.14)
- FOR 125Clutches coaxial with operators (192/87.15)
- FOR 126Common or interconnected operator(s) (192/87.16)
- FOR 127Operator between clutches (192/87.17)
- FOR 128With selective distributor for fluid pressure (192/87.18)
- FOR 129Having neutral position (192/87.19)
- FOR 130 ...Flexible motor (192/88 R)
- FOR 131Flexible fluid motor-axially engaged (192/88 A)
- FOR 132 ...Radially engaged (192/88 B)
- FOR 133 ...Axially engaging-rotating motor and clutch (192/85 A)
- FOR 134 ...Axially engaging clamping rotating motor and clutch (192/85 AA)
- FOR 135 ...Axially engaging spreading rotating motor and clutch (192/85 AB)
- FOR 136 ...Transversely engaging rotating motor and clutch (192/85 AT)
- FOR 137 ...Clutch and nonrotating motor (192/85 C)
- FOR 138 ...Clutch and nonrotating motor (192/85 CA)
- FOR 139 ...Centrifugal fluid clutches (192/85 F)
- FOR 140 ...Vacuum clutches and operators (192/85 V)
- FOR 141 ...Fluid release (192/91R)
- FOR 142Motor concentric with clutch shaft (192/91 A)
- ..Automatic (192/31)
- ..One-way engaging (192/41 R)
- FOR 143 ...Ball or roller (192/45)

DIGESTS

- DIG 1 **REMOVABLE MEMBERS**
- DIG 2 **UNIVERSAL JOINT**

FEBRUARY 7, 2012

PROJECT M-C192

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>
192/105 CE	1	192/45	490
192/41 A	1	192/45	490
192/41 R	1	192/45	490
192/45.001	9	192/45	490
192/45.002	14	192/45	490
192/45.003	18	192/45	490
192/45.004	17	192/45	490
192/45.005	36	192/45	490
192/45.006	46	192/45	490
192/45.007	16	192/45	490
192/45.008	41	192/45	490
192/45.009	4	192/45	490
192/45.01	35	192/45	490
192/45.011	13	192/45	490
192/45.012	18	192/45	490
192/45.013	4	192/45	490
192/45.014	22	192/45	490
192/45.015	12	192/45	490
192/45.016	37	192/45	490
192/45.017	53	192/45	490
192/45.018	31	192/45	490
192/45.019	38	192/45	490
192/45.02	21	192/45	490
192/45.1	1	192/45	490
192/46	1	192/45	490

CLASSIFICATION ORDER 1915

FEBRUARY 7, 2012

PROJECT M-C192

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>
192/45	490	192/45.019	38
		192/45.016	37
		192/46	1
		192/105 CE	1
		192/45.008	41
		192/45.003	18
		192/45.005	36
		192/45.007	16
		192/45.02	21
		192/45.009	4
		192/45.006	46
		192/45.013	4
		192/45.017	53
		192/45.001	9
		192/45.1	1
		192/45.018	31
		192/45.01	35
		192/45.014	22
		192/41 R	1
		192/45.015	12
		192/41 A	1
		192/45.004	17
		192/45.011	13
		192/45.012	18
		192/45.002	14

FEBRUARY 7, 2012

PROJECT M-C192

C. CHANGES TO THE USPC-TO-IPC CONCORDANCE

<u>Class</u>	<u>USPC</u> Subclass	<u>IPC</u> Subclass	<u>Notation</u>
192	45.001-45.003	F16D	41/064
			41/061
			15/00
	45.004	F16D	43/00
			41/066
			41/061
	45.005	F16D	15/00
			43/00
			41/064
	45.006-45.008	F16D	41/061
			15/00
			43/00
	45.009	F16D	41/067
			41/061
43/04			
45.01-45.016	F16D	15/00	
		41/067	
		41/061	
45.017-45.02	F16D	15/00	
		43/00	
		41/066	
			41/061
			15/00
			43/00

FEBRUARY 7, 2012

PROJECT M-C192

D. CHANGES TO THE DEFINITIONS

CLASS 188 – BRAKES

Definitions Modified

Subclass 82.84:

Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 192

Insert:

192, Clutches and Power-Stop Control, subclass 45.001 for one-way engaging automatic clutches in which the engaging element is a ball or roller and see the notes thereto for other ball and roller engaging clutches.

FEBRUARY 7, 2012

PROJECT M-C192

D. CHANGES TO THE DEFINITIONS

CLASS 192 – CLUTCHES AND POWER-STOP CONTROL

Definitions Abolished

Subclasses

45

Definitions Modified

Subclass 27:

Under SEE OR SEARCH THIS CLASS, SUBCLASS:

Delete

The reference to subclass 45

Insert

45.001, for ball and roller one-way engaging automatic clutches and see the notes thereto for other ball and roller clutches.

Subclass 38:

Under SEE OR SEARCH THIS CLASS, SUBCLASS:

Delete

The reference to subclass 45

Insert

45.001, for one-way engaging automatic clutches in which the engaging element is a ball or roller and see the notes thereto for other ball or roller clutches.

Subclass 44:

Under SEE OR SEARCH THIS CLASS, SUBCLASS:

Delete

The reference to subclass 45

FEBRUARY 7, 2012

PROJECT M-C192

D. CHANGES TO THE DEFINITIONSInsert

45.001, for ball or roller one-way engaging clutches and see the notes thereto for other clutches with a ball or roller engaging element.

Definitions Established**45.001 Ball or roller:**

This subclass is indented under subclass 41. Subject matter including a rolling element that provides the driving continuity between the driving and driven parts when the power-transmitting device is engaged.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 27, for latch-operated clutches in which the transmitting member is a ball or roller.
- 38, for one-way automatic manually controlled clutches in which the clutching element is a ball or roller.
- 44, for reversible one-way clutches in which the clutching element is a ball or roller.

SEE OR SEARCH CLASS:

- 74, Machine Element or Mechanism, subclasses 162 through 169 for intermittent grip devices.
- 188, Brakes, subclass 82.84 for one-way brakes in which the engaging element rolls into jamming position between converging surfaces, one of which is the rotating element to exert a braking force.

45.002 Roller has non-spherical, non-cylindrical force transmitting surface:

This subclass is indented under subclass 45.001. Subject matter in which the rolling element has a rolling surface that is other than spherical and cylindrical.

45.003 Plural ball or roller sizes or shapes:

This subclass is indented under subclass 45.001. Subject matter in which the rolling element is one of a plurality of rolling elements that provide the driving continuity and in which at least two of the rolling elements differ in geometry.

45.004 Plural balls or rollers of same shape and size:

This subclass is indented under subclass 45.001. Subject matter in which the rolling element is one of a plurality of substantially identical rolling elements that provide the driving continuity.

FEBRUARY 7, 2012

PROJECT M-C192

D. CHANGES TO THE DEFINITIONS**45.005 Received in recesses in each of two cooperating clutch races:**

This subclass is indented under subclass 45.004. Subject matter in which the power-transmitting device includes two rolling surface elements (i.e., races) on which the rolling elements roll connected in power transmitting relationship with the driving and driven parts, the rolling surface elements being rotatable relative to each other when the power-transmitting device is disengaged and each rolling surface element having a recess for receiving one of the rolling elements.

45.006 Including cage:

This subclass is indented under subclass 45.004. Subject matter including a spacing device (i.e., cage) that limits relative movement between the rolling elements, the spacing device being separate from (i.e., not integrally formed with) rolling surface elements (i.e., races) on which the rolling elements roll connected in power transmitting relationship with the driving and driven parts, the spacing device being arranged outside the force path between the rolling surface elements and rolling elements when there is driving continuity between the driving and driven parts.

- (1) Note. The spacing device (i.e., cage) may restrict relative circumferential movement, for example, by having portions extending between successive rolling elements or the spacing device and the rolling elements may have recesses and cooperating projections forming axles received in the recesses. A retaining ring that merely restricts displacement of rolling elements axially of the rolling surface elements is not considered a spacing device for this subclass.

45.007 Including axle for ball or roller:

This subclass is indented under subclass 45.006. Subject matter in which the rolling elements have projections engageable by the spacing device or in which the spacing device has projections received in central recesses in the rolling elements so as to restrict movement of the rolling elements relative to the spacing device.

45.008 Balls or rollers spring biased toward engaged state:

This subclass is indented under subclass 45.006. Subject matter including a spring that urges at least one of the rolling elements into a position in which the power-transmitting device is engaged.

- (1) Note. The rolling element may be biased by direct engagement with the spring or may be indirectly biased, e.g., by engagement with a spring biased spacing device, etc.

FEBRUARY 7, 2012

PROJECT M-C192

D. CHANGES TO THE DEFINITIONS**45.009 Including speed-responsive biasing mechanism:**

This subclass is indented under subclass 45.008. Subject matter including a mechanism in addition to the spring that applies a force to one or more of the rolling elements that is dependent upon speed of rotation of the power-transmitting device.

- (1) Note. This subclass includes devices that utilize forces that are dependent upon rotation of the power transmitting device to cause or ensure clutch engagement or to compensate for the effect of rotation-dependent forces on the rolling elements.

SEE OR SEARCH THIS CLASS, SUBCLASS:

103+, for a speed responsive clutch operator.

45.01 Biased cage:

This subclass is indented under subclass 45.008. Subject matter in which the spring acts on the rolling element(s) urged thereby through the spacing device by biasing the spacing device relative to one of the rolling surface elements.

45.011 Including bearing block between clutch races and between balls or rollers:

This subclass is indented under subclass 45.008. Subject matter including a bearing structure located between the rolling surface elements and circumferentially between at least two of the rolling elements, the bearing structure including a bearing surface supporting a load applied by one of the rolling surface elements toward the other.

- (1) Note. Included in this subclass are bearing structures that maintain spacing between the rolling surface elements (i.e., races).

45.012 Spring integrally formed with cage:

This subclass is indented under subclass 45.008. Subject matter in which the spring is integrally formed with the spacing device.

45.013 Plural integral springs separate from cage:

This subclass is indented under subclass 45.008. Subject matter in which the spring is one of a plurality of integrally formed springs that are separate from the spacing device.

45.014 Spring and multipart cage:

This subclass is indented under subclass 45.008. Subject matter in which the spacing device includes a plurality of members that are not integrally formed with each other.

45.015 Spring mounted on projection on cage:

This subclass is indented under subclass 45.008. Subject matter including a protrusion on the spacing device which provides support for the spring.

45.016 Serpentine spring:

This subclass is indented under subclass 45.008. Subject matter in which the spring is sinuous or wave-like in shape.

FEBRUARY 7, 2012

PROJECT M-C192

D. CHANGES TO THE DEFINITIONS**45.017 Including separating means on clutch race:**

This subclass is indented under subclass 45.004. Subject matter in which a confining structure is formed integrally with a rolling surface element (i.e., race) on which the rolling elements roll connected in power transmitting relationship with the driving or driven part, the confining structure limiting movement of the rolling elements relative to the rolling surface element and preventing contact between at least two of the rolling elements.

45.018 Spring biased ball or roller:

This subclass is indented under subclass 45.017. Subject matter including a spring that urges at least one of the rolling elements into a position in which the power-transmitting device is engaged.

45.019 By other than circular helical spring:

This subclass is indented under subclass 45.018. Subject matter in which the spring has a form that differs from a helix or spiral coil lying on an imaginary cylindrical surface.

45.02 Including separate force transmitting element between spring and ball, roller, or race:

This subclass is indented under subclass 45.018. Subject matter including an intermediate element arranged in the force transmission path between the spring and the rolling surface element or between the spring and the rolling element(s) urged by the spring.

FOREIGN ART COLLECTIONS**FOR 143 Ball or Roller (192/45):**

This foreign art collection is indented under unnumbered placeholder 192/41. Foreign art collection for clutches in which the engaging element is a ball or roller.