U.S. DEPARTMENT OF COMMERCE
Patent and Trademark Office

CLASSIFICATION ORDER 1859

FEBRUARY 6, 2007

Project No. M-A192

The following classification changes will be effected by this order:

	Class	Subclass	Art Unit	Ex'r Search Room No.
Abolished:	192	70.25, 111	3681	Nor Applicable
Established:	192	70.251, 70.252, 111.1, 111.11 – 111.19, 111.2 - 111.7	3681	Nor Applicable

The following classes are impacted by this project:

188

This order includes the following:

A. CLASSIFICATION MANUAL CHANGES

B. LISTING OF PRINCIPAL SOURCE OF ESTABLISHED AND DISPOSITION OF ABOLISHED PAGES

C. CHANGES TO THE U.S. – I.P.C. CONCORDANCE

D. DEFINITION CHANGES

U.S. DEPARTMENT OF COMMERCE
Patent and Trademark Office

CLASSIFICATION ORDER 1859

FEBRUARY 6, 2007

Project No. M-A192

Project Leader(s):	Scott Haugland
Examiner(s):	Rodney Bonck, Richard Lorence, Saul Rodriguez
Editor:	Elma La Touche
Editorial Assistant:	Louise Bogans

CLASS 192 CLUTCHES AND POWER-STOP CONTROL

FEBRUARY 2007

3.21 VORTEX-FLOW DRIVE AND CLUTCH
3.22 .With means to effect torque reversal
3.23 .With brake
3.24 ..Alternatively operative clutch and brake
3.25 .With additional drive or clutch
3.26 ..Simultaneously operative clutches
3.27 ..Alternatively operative clutches
3.28 .Including drive-lockup clutch
3.29 ..Having fluid-pressure operator
3.3 ...With auxiliary source of pressure
3.31 ..Having speed-responsive operator
3.32 .Alternatively operative drive and clutch
3.33 .Fluid-pressure operator for engaging clutch
3.34 VORTEX-FLOW DRIVE AND BRAKE
3.51 TRANSMISSION CONTROL AND CLUTCH CONTROL
3.52 .Planetary transmission and coaxial clutch
3.53 ..Including separate, reversing pedal
3.54 .Common control
3.55 ..Power-operated clutch
3.56 ...Electromagnetically operated
3.57 ...Fluid-press operated
3.58 ....Electrically triggered
3.59 ....Vacuum operated
3.61 ..Stepped ratio transmission
3.62 ...With control lever
3.63 .Interrelated (e.g., with interlock)
215 TRANSMISSION AND BRAKE
216 .Internal resistance brake
217 .Velocipede
217.1 ..Back-pedaling brake (e.g., coaster brake)
217.2 ...Rotatable crank axle
217.3 ...Wheel hub
217.4 ....With change-speed transmission
217.5 .....Plural sprockets
217.6 ....With screw operator
217.7 ....Multidisc brake
218 .Motor vehicle
219 ..Transmission control affects brake
219.1 ...Hill-holder
219.2 ....One-way brake
219.3 .....Ball or roller
219.4 ...Emergency or parking brake
219.5 ....Parking pawl
219.6 ....With separate manual operator
219.7 .....Foot operated
220 ..Brake control affects transmission change
220.1 ...Brake application neutralizes transmission
220.2 ...Park-lock device
220.3 ....Floor-mounted shift lever
220.4 .....Solenoid operated lock
220.5 ......Rotary bushing
220.6 ....Override
220.7 ......Override
221 ..Fluid operated
221.1 ...Brake and gearing at axle end
222 ..Electromagnetic
223 .Torque-responsive brake
223.1 ..Transversely engaged positive brake
223.2 ..Ball or roller type brake
223.3 ..With cam mechanism for axially moving brake member
223.4 ..Wrap-spring brake
224 .Belt or chain transmission
224.1 ..Belt tensioner affects brake operation
224.2 ..Belt failure operates brake
224.3 ..Belt shipper affects brake operation
225 .Fluid operated
226 .Electromagetic
12 R CLUTCH AND BRAKE
13 R .Vehicle type
13 A ..Clutch-released brake holder
14 .Same member
15 .Automatic check and release
16 ..Clutch and brake same member
17 R .Peripheral brake
17 A ..Fluid operator
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
20 CLUTCH AND GEAR
21 .Reversing
21.5 FIELD RESPONSIVE FRICTIONAL MEDIA TYPE
22 LATCH OPERATED
23 .Corn-planter type
24 .Longitudinally moving transmission member
25 ..Pin
26 .Transversely moving transmission member
27 ..Ball or roller
28 ..Positive
29 ...Rotating key
30 R CLUTCHES
31 .Automatic
32 ..Manual control
33 R ...Definite-position release
33 C ....Coil
34 ...Shaft thrust
35 ...Pilot mechanism
36 ....Brake band
37 ...Transversely moving
38 ....Ball or roller
39 ....Positive
40 ...Electric
41 R ..One-way engaging
42 ...Free-engine type
43 ...Reversible
43.1 ....Pivoted pawls
43.2 ....Slidable pawls
44 ....Ball or roller

CLUTCHES
.Automatic
..One-way engaging
45 ...Ball or roller
45.1 ...Wedging pawl or block
45.2 ...Two-point gripper
46 ...Positive
47 ...Manual control
41 S ...Spring
41 A ...Sprags
48.1 .Plural clutch-assemblage
48.2 ..Including electrically actuated clutch assemblage
48.3 ..Diverse clutch-assemblages
48.4 ...Including three or more assemblages
48.5 ...Including one clutch-assemblage having interdigitated clutch-elements
48.6 ....And another clutch-assemblage having unirotationally engaging clutch elements
48.7 ..With means to actuate or deactuate clutch-assemblages sequentially
48.8 ..Associated with three or more shafts
48.9 ...Alternatively operative assemblages
48.91 ....Having common clutch-element support
48.92 ..Including unirotationally engaging clutch-elements
49 ..Parallel vehicle wheels
50 ...Free wheel
51 ..Reversing
52.1 .Progressive engagement
52.2 ..Surface area
52.3 ...Yielding
52.4 ..Variable force
52.5 ...Initial engagement causes increase in applied force
52.6 ..Yielding
53.1 ..Frictional and positive
53.2 ...Magnetic or electromagnetic operated friction clutch
53.3 ...With blocker
53.31 ....Self-energizing
53.32 ....Interposed friction members
53.33 ....Member extending axially between friction surfaces
53.331 .....Blocker on axially extending stepped pin
53.332 ......Resilient detent pin
53.34 ....Outward tooth or lug on friction member
53.341 .....With thrust member
53.342 ......Resilient thrust bar
53.343 ......Resilient expander ring
53.35 ....Inward tooth or lug on friction member
53.36 ....Radially movable blocker
53.361 .....Detent acts as blocker
53.362 ......Rocker lever actuates friction clutch
53.363 .....Radially movable friction element acts as blocker
53.364 ......Resilient friction element
53.4 ...Lock for positive clutch
53.5 ...Axially projecting positive clutch
53.51 ....Cylindrical pin
53.6 ...Transversely moving positive clutch
54.1 .Torque responsive
54.2 ..Hub clutch
54.5 ..Cam operated
54.51 ...Screw operated
54.52 ...Ball or roller type
55.1 ..With overload release coupling
55.2 ..With flexible shaft coupling permitting limited relative rotation
55.3 ...Separate resilient member between clutch element and its shaft
55.4 ....Fluid damper
55.5 ....Coil spring coaxial with rotation axis
55.51 .....Radially overlapping convolutions
55.6 ....Plural resilient members
55.61 .....Coil springs with center line spaced from rotational axis
55.62 ......Center line of coil springs parallel to rotational axis
55.7 ....Coil spring with center line spaced from rotational axis
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
56.42 .....Positive
56.43 ......Ball or roller
56.5 ...Clutch elements remain disengaged after overload corrected
56.51 ....Having separate latch to hold clutch elements disengaged
56.52 .....Axially engaged
56.53 ......Positive
56.54 ....Ball or roller
56.55 ....Axially engaged
56.56 .....Positive
56.57 ......Ball or roller
56.6 ...Axially engaged
56.61 ....Positive
56.62 .....Ball or roller
54.3 ..Fluid operated
54.4 ..Magnetic or electromagnetic
57 .Fluent material and mechanical
58.1 .Fluent material
58.2 ..Fluid
58.3 ...Vane clutch
58.4 ...Viscous shear
58.41 ....Multiple plate
58.42 .....Variable gap or volume
58.43 ....Variable gap or volume
58.5 ....Separate reservoir
58.6 .....Automatic regulation
58.61 ......Magnetic or electric
58.62 ......Temperature and speed

CLUTCHES
.Fluent material
..Fluid
...Viscous shear
....Separate reservoir
.....Automatic regulation
58.63 .....Temperature
58.64 .....Coolant and clutching medium
58.65 .....Ambient and clutching medium
58.66 .....Ambient and coolant
58.67 .....Clutching medium
58.68 .....Ambient
58.681 .....Bi-metallic
58.682 .....Spiral
58.683 .....Resilient or adjustable mounting feature
58.684 .....Mounting feature
58.7 .....Pump-out feature
58.8 .....Specific valve
58.9 ...Radial vane
58.91 ....Vanes 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
64 .Velocipede free wheel
65 .Axially and transversely engaging
66.1 .Axially engaging
66.2 ..Conical or frustoconical
66.21 ...Plural radially spaced surfaces
66.22 ...Spring engaged
66.23 ...Spring released
66.3 ..Planar radially extending
66.31 ...Spring engaged
66.32 ...Spring released
69 ..Positive
69.1 ...Pivoting positive clutch element
69.2 ...Plunger disconnect
69.3 ...Pilot pawl
69.4 ...Wheel hub clutched to axle
69.41 ....Fluid pressure
69.42 ....Electromagnetic
69.43 ....Manual
69.5 ...Ball or roller
69.6 ...Cylindrical pin
69.61 ....Axial pin on only one member
69.62 .....Pin engages aperture in other member
69.63 ....Radial pin
69.7 ...Axial-radial
69.71 ....Axially extending projection engages aperture
69.8 ...Axial-axial
69.81 ....Sawtooth
69.82 ....Square tooth
69.83 .....With lead-in
69.9 ...Radial-radial
69.91 ....Outward projection on movable member
70 ..Spreading
70.11 ..Interposed, mating clutch-elements
70.12 ...With means to cool or lubricate clutch parts
70.13 ...With removable or replaceable or interchangeable clutch parts
70.14 ...Including surface characteristics of clutch-element
70.15 ....Axially tapered mating surfaces
70.16 ...With torque connection between clutch-element and its shaft
70.17 ....Resilient torque connection (e.g., for damping vibration)
70.18 .....Including chordally disposed connection
70.19 ....Axially slidable connection
70.2 .....Spline connection for multiple clutch-elements
70.21 ...With means to move multiple clutch-elements axially and sequentially
70.22 ...With means to move clutch-element axially and latch into engaged or disengaged position
70.23 ...With cam or wedge contacting clutch-element or pressure plate for axial movement thereof
70.24 ....By cam surface on bell-crank
* 70.251 ...With adjustable means to move clutch-element axially (e.g., to compensate for wear)
* 70.252 ....Automatic
70.26 ....Including plural adjusting screws (e.g., to equalize pressure angularly)
70.27 ...With spring means to move clutch-element axially
70.28 ....To separate engaged clutch-elements
70.29 ....And actuator lever pivoted on pressure plate
70.3 ...With actuator lever pivoted on pressure plate or back plate to move clutch-element axially
.Transversely engaged
71 ..Positive
72 ..Interior and exterior
73 ...Opposing
74 ..Interior
75 ...Expanding
76 ....Radial
77 ....Split ring
78 .....Cam operated
79 ..Exterior
80 ...Strap
81 R ....Multiple folds
81 C .....Coil
82 R .Operators
83 ..Multiple for same clutch
84.1 ..Electric or magnetic
84.2 ...Plural coils
84.21 ....Plural armatures
84.3 ...Including permanent magnet
84.31 ....And electromagnet
84.4 ...Electrostatic
84.5 ...Air gap adjustment

CLUTCHES
.Operators
..Electric or magnetic
...Air gap adjustment
84.51 ....Automatic
84.6 ...Rotary electric motor is clutch actuator
84.7 ...Mechanical force increasing means
84.8 ...Operator for transversely engaging elements
84.81 ....Coil spring
84.9 ...Operator for axially engaging elements
84.91 ....Interposed friction elements
84.92 ....Positively engaging elements
84.93 ....Magnetic flux path spaced from engaging elements
84.94 ....Specified torque transmitting spring
84.941 .....Nonmetallic
84.95 ....With slip rings
84.951 .....With pulley or gear
84.96 ....Fixed concentric coil
84.961 .....With pulley or gear
85 R ..Fluid pressure
86 ...Double acting
87.1 ...Multiple clutches
87.11 ....Having independent operators
87.12 .....Responsive to rotational speed of clutch-element
87.13 .....With selective distributor for fluid pressure
87.14 ....Alternatively operative clutches
87.15 .....Clutches coaxial with operators
87.16 ......Common or interconnected operator(s)
87.17 ....Operator between clutches
87.18 .....With selective distributor for fluid pressure
87.19 ......Having neutral position
88 R ...Flexible motor
88 A ....Flexible fluid motor-axially engaged
88 B ....Radially engaged
85 A ...Axially engaging-rotating motor and clutch
85 AA ...Axially engaging clamping rotating motor and clutch
85 AB ...Axially engaging spreading rotating motor and clutch
85 AT ...Transversely engaging rotating motor and clutch
85 C ...Clutch and nonrotating motor
85 CA ...Clutch and nonrotating motor
85 F ...Centrifugal fluid clutches
85 V ...Vacuum clutches and operators
89.1 ..Weight operated
89.2 ..Spring engaged
90 ...Electric release
91 R ...Fluid release
91 A ....Motor concentric with clutch shaft
89.21 ...Cam release
89.22 ...Belleville disc spring
89.23 ....Push-type
89.24 ....Pull-type
89.25 ....Geometric configuration
89.26 ...Plural coil springs spaced from clutch axis
89.27 ...Coil spring coaxial to clutch axis
89.28 ....Transversely engaged
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
99 A ...Levers mounted on axially engaging clutch
99 B ...Levers mounted on transversely engaging clutch
99 S ...Stationary levers
100 ..Follow-up
101 ..Releasing
102 ..Check of driven member
103 R ..Speed responsive
104 R ...Fixed-speed release
104 B ....Transversely engaged-interior
104 C ....Transversely engaged-exterior
104 F ....Fluid clutches and operators
105 R ...Fixed-speed engagement
105 A ....Centrifugal (fluid or powder) nonpivoted weights (radially movably or slidable) i.e., mercury clutch
105 B ....Axially engaged with nonpivoted weights-weights movable radially or slidable
105 BA ....Transversely engaged with nonpivoted weights
105 BB ....Transversely engaged positive with nonpivoted weights
105 C ....Axially engaged with pivoted weights
105 CP ....Weights pivoted on axis parallel to clutch axis-axially engaged
105 CS ....Single pair clutching elements axially engaged with pivoted weights
105 CD ....Transversely expanding clutch with pivoted weights
105 CE ....Transversely engaged-pivoted weights and clutching elements movable separately
105 CF ....Transversely contracting
105 F ....Fluid controls for centrifugal clutches
106 R ...Release
106 F ....Devices to prevent fluid clutches from being operated by centrifugal forces acting on fluid

	CLUTCHES
	.Operators
	..Speed responsive
103 A	...Centrifugal operated, axially engaged
103 B	...Centrifugal operator transversely engaged
103 C	...Acceleration and inertia responsive
103 F	...Fluid operated
103 FA	...Fluid pressure engaged with centrifugal valve
82 P	..Rack and pinion operator
82 T	..Temperature operator
30 W	.Warning, indicating, and signal devices
30 V	.Vibration dampers
	ELEMENTS
200	.Clutch element resiliently carried on hub
201	..Speed-responsive
202	..Manually adjustable
203	..Coil spring detail
204	..Specified bushing
205	..Separate seat detail
206	..Relatively axially movable hub sections
207	..Circumferential resilience
208	...With fluid damping
209	...Nonmetallic
210	....Interposed friction element
210.1	.....Biasing means
211	....And coil spring
212	...Coil spring
213	....Plural helical coil spring damping stages
213.1	.....Plural axially spaced springs
213.11	......Interposed friction element
213.12	.......Biasing means
213.2	.....Plural radially spaced springs in a common radial plane
213.21	......Interposed friction element
213.22	.......Biasing means
213.3	.....Interposed friction element
213.31	......Biasing means
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
110 B	..Bearings
110 S	..Shafts for removable clutches or discs
* 111.1	.Wear compensators
* 111.11	..Compensator in actuating mechanism outside of the clutch (EPO)
* 111.12	...Automatic
* 111.13	..Compensator in or near release bearing (EPO)
* 111.14	...Automatic
* 111.15	..Compensator on or inside clutch cover (e.g., acting on diaphragm or pressure plate) (EPO)
* 111.16	...Automatic
* 111.17	....Worm mechanism
* 111.18	....Relatively rotatable cam rings
* 111.19	.....Between cover and diaphragm spring
* 111.2	.....Between diaphragm spring and pressure plate
* 111.3	.....Having clearance sensor bridging gap between clutch members and moveable only during engagement
* 111.4	....Having clearance sensor bridging gap between clutch members and moveable only during engagement
* 111.5	...Relatively rotatable cam rings
* 111.6	...Threaded element centered on clutch axis
* 111.7	....Threaded in clutch cover
112	.Casings
113.1	.Lubricating, insulating, or cooling
113.2	..Air cooling
113.21	...Heat radiating structure
113.22	...Grooved surfaces
113.23	...Air directing structure
113.24	....Rotating cover
113.25	....Spring
113.26	....Clutch plate
113.3	..Liquid cooled or lubricated clutch surfaces
113.31	...Entire coolant path is spaced from clutch surfaces
113.32	...Overrunning clutch
113.33	...Positive
113.34	...Lubricant or coolant between engaging surfaces
113.35	....With change of coolant flow during disengagement
113.36	....Grooved surfaces
113.4	..Thermal insulating
113.5	..Lubrication of ancillary clutch parts
114 R	.Locks
114 T	..Interlocking clutch teeth or splines
115	.Supports
116.5	STOP MECHANISM
125 R	.Material control
126	..Sheet material
127	...Electrical
128	...Pneumatic
125 A	..Power stop-material control-electrical
125 B	..Mechanical
125 C	..Pneumatic
125 D	..Granular material
125 E	..Work start
125 F	..Length of material stop
129 R	.Safety device
130	..Hand protector
131 R	...Two hand
131 H	....Hand and foot

STOP MECHANISM
.Safety device
..Hand protector
132 ...Delayed action drive
133 ..Automatic guard
134 ...Punch-press type
135 ...Cover
136 ....Centrifugal-machine type
137 ...Disabled transmission
129 A ..Electrical
129 B ..Pneumatic
138 .Limit stop
139 ..Rotary-member control
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
.Axially engaging
..Interposed, mating clutch-elements
* 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)

****
DIGESTS
****

DIG 1 REMOVABLE MEMBERS
DIG 2 UNIVERSAL JOINT

U.S. DEPARTMENT OF COMMERCE
Patent and Trademark Office

CLASSIFICATION ORDER 1859
February 6, 2007

Project No. M-A192

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

New Classification	Number Of ORs	Source Classification	Number Of ORs
192/111.1	10	192/111 A	138
	3	192/111 B	25
	4	192/111 R	22
	6	192/111 T	7
192/111.12	31	192/111 A	138
192/111.13	1	192/111 R	22
192/111.14	9	192/111 A	138
192/111.15	1	192/111 B	25
	1	192/111 T	7
192/111.16	1	192/111 A	138
	1	192/70.25	269
192/111.17	1	192/111 A	138
192/111.18	2	192/111 A	138
192/111.19	3	192/70.25	269
192/111.2	1	192/70.25	269
192/111.3	1	192/70.25	269
192/111.4	1	192/111 A	138
192/111.5	1	192/111 R	22
192/111.6	2	192/111 B	25
192/111.7	3	192/111 B	25
	3	192/70.25	269
192/58.41	1	192/111 B	25
192/70.251	13	192/111 B	25
	14	192/111 R	22
	85	192/70.25	269
192/70.252	83	192/111 A	138
	2	192/111 B	25
	2	192/111 R	22
	175	192/70.25	269

U.S. DEPARTMENT OF COMMERCE
Patent and Trademark Office

CLASSIFICATION ORDER 1859
February 6, 2007

Project No. M-A192

[This page was intentionally left blank]

U.S. DEPARTMENT OF COMMERCE
Patent and Trademark Office

CLASSIFICATION ORDER 1859
February 6, 2007

Project No. M-A192

DISPOSITION CLASSIFICATION(S) OF PATENTS FROM ABOLISHED SUBCLASSES REPORT

Source Classification	Number of ORs	New Classification	Number of ORs
192/111 A	138	192/111.1	10
		192/111.12	31
		192/111.14	9
		192/111.16	1
		192/111.17	1
		192/111.18	2
		192/111.4	1
		192/70.252	83
192/111 B	25	192/111.1	3
		192/111.15	1
		192/111.6	2
		192/111.7	3
		192/58.41	1
		192/70.251	13
		192/70.252	2
192/111 R	22	192/111.1	4
		192/111.13	1
		192/111.5	1
		192/70.251	14
		192/70.252	2
192/111 T	7	192/111.1	6
		192/111.15	1
192/70.25	269	192/111.16	1
		192/111.19	3
		192/111.2	1
		192/111.3	1
		192/111.7	3
		192/70.251	85
		192/70.252	175

U.S. DEPARTMENT OF COMMERCE
Patent and Trademark Office

CLASSIFICATION ORDER 1859
February 6, 2007

Project No. M-A192

[This page was intentionally left blank]

CLASSIFICATION ORDER 1859

FEBRUARY 6, 2007

Project No. M-A192

C. CHANGES TO THE U.S. - I.P.C. CONCORDANCE

U.S.		I.P.C.	
Class	Subclass	Subclass	Notation
192	70.251	F16D	13/75
	70.252		13/54
192	111.1-111.7	F16D	13/75

CLASSIFICATION ORDER 1859

FEBRUARY 6, 2007

Project No. M-A192

U.S. – ECLA CONCORDANCE

U.S. Class	Subclass	ECLA Subclass	Notation
192	70.251, 70.252	F16D	13/75 13/75B 13/75C 13/75D 13/54
192	111.1 111.11, 111.12 111.13, 111.14 111.15, 111.7	F16D	13/75 13/75B 13/75C 13/75D

D. CHANGES TO THE DEFINITIONS (Project No. M-A192)

CLASS 188 -- BRAKES

Definitions Modified (Place modifications in numerical sequence, where applicable):

Subclass 71.7: Under See or Search Class, in Class 192,

Delete:

subclass 70.25

Insert:

subclasses 70.251+

Delete:

subclass 111

Insert:

subclasses 111.1+

Subclass 79.51: Under See or Search Class, in Class 192,

Delete:

subclasses 70.25 and 111

Insert

subclasses 70.251+ and 111.1+

D. CHANGES TO THE DEFINITIONS (Project No. M-A192)

CLASS 192 – CLUTCHES AND POWER-STOP CONTROL

Definitions Abolished

Subclasses

70.25 and 111

Definitions Modified (Place modifications in numerical sequence, where applicable):

Subclass 70: In subclass 70

Delete

Clutches under subclasses 66.1+ in which two axially-moving members are spread to engage the companion members of the clutch.

Insert

Clutches under subclass 66.1 in which two axially moving members are spread to engage the companion members of the clutch.

Subclass 70.11: In subclass 70.11

Delete

Device under subclasses 66.1+ having an input (i.e., driving) shaft and an output (i.e., driven) shaft rotatable about a common axis and at least three members supported thereby in an array of adjacent members spaced along the axis and co-axial with the shafts, the outer of said members having surfaces facing opposite surfaces of one or more intermediate members; one of said members being constrained to rotate with one of the shafts, another of said members being constrained to rotate with the other of the shafts but being movable along the common axis, and a third of said members being movable along the common axis; the device also having means for moving said members toward one another for mutual engagement of the facing surfaces, whereby the input shaft transmits its rotation to the output shaft when the facing surfaces are mutually engaged.

Insert

Device under subclass 66.1 having an input (i.e., driving) shaft and an output (i.e., driven) shaft rotatable about a common axis and at least three members supported thereby in an array of adjacent members spaced along the axis and co-axial with the shafts, the outer of said members having surfaces facing opposite surfaces of one or more intermediate members; one of said members being constrained to rotate with one of the shafts, another of said members being constrained to rotate with the other of the shafts but being movable along the common axis, and a third of said members being movable along the common axis; the device also having means for moving said members toward one another for mutual engagement of the facing surfaces, whereby the input shaft transmits its rotation to the output shaft when the facing surfaces are mutually engaged.

Subclass 70.26: In subclass 70.26

Delete

This subclass is indented under subclass 70.25. Device provided with two or more of said additional means, each of which additional means comprises a bolt or threaded male member rotatable relative to a nut or threaded female member.

Insert

Device under subclass 70.251 provided with two or more of said additional means, each of which additional means comprises a bolt or threaded male member rotatable relative to a nut or threaded female member.

Subclass 84.5: Under See or Search This Class, Subclass,

Delete

subclasses 111+

Insert

subclasses 111.1+

Subclass 84.51: Under See or Search This Class, Subclass,

Delete

subclass 111

Insert

subclass 111.1+

Definitions Eatablished: (Place established subclasses in numerical sequence.):

70.251 With adjustable means to move clutch-element axially (e.g., to compensate for wear):

Device under subclass 70.11 provided with member-moving means for moving a first one of the members along said axis and with means ("additional means") additional to the member-moving means, which additional means is capable of axially changing the positional relationship between the first member and another of the members mating therewith, such change being additional to the movement effected by the member-moving means.

(1) Note. The structure described is for the purpose of offsetting the decrease in the axial dimension of the clutch-elements due to attrition of the surfaces of the elements that occurs as they are repeatedly engaged and disengaged under load.

SEE OR SEARCH THIS CLASS, SUBCLASS:

111.1+, for wear-compensators, per se.

70.252 Automatic:

Device under subclass 70.251 in which the additional means operates to change the positional relationship between the members without human assistance or intervention beyond that which occurs during normal use of the device.

111.1 Wear compensators:

Device under the class definition including an adjusting mechanism to compensate for the effect on the engagement of a clutch of dimensional changes in components of the clutch that occur with use.

SEE OR SEARCH THIS CLASS, SUBCLASS:

70.251+, for a clutch having three or more coaxial clutch members and means to compensate for wear of the clutch members.

SEE OR SEARCH CLASS:

188, Brakes, subclasses 79.5+ for wear compensators for transversely movable wheel brakes.

111.11 Compensator in actuating mechanism outside of the clutch:

Device under subclass 111.1 in which the adjusting mechanism is located in an assembly for operating the device that is not in the immediate vicinity of engaging members of the clutch.

SEE OR SEARCH CLASS:

74, Machine Element or Mechanism, subclasses 500.5+ for a control cable that may include an adjusting mechanism.

111.12 Automatic:

Device under subclass 111.11 in which the adjusting mechanism operates without human assistance or intervention beyond that which occurs during normal use of the clutch.

111.13 Compensator in or near release bearing:

Device under subclass 111.1 having a disengagement element to disengage the clutch and in which the adjusting mechanism is part of or located adjacent to and cooperates with the disengagement element.

SEE OR SEARCH THIS CLASS, SUBCLASS:

98, for a "shipper-saddle" type of clutch operating element.

111.14 Automatic:

Device under subclass 111.1 in which the adjusting mechanism operates without human assistance or intervention beyond that which occurs during normal use of the clutch.

111.15 Compensator on or inside clutch cover (e.g., acting on diaphragm or pressure plate):

Device under subclass 111.1 in which the clutch has engaging members and an enclosing structure integral with one of the engaging members and surrounding another of the engaging members, the adjusting mechanism being located on or inside the enclosing structure.

111.16 Automatic:

Device under subclass 111.15 in which the adjusting mechanism operates without human assistance or intervention beyond that which occurs during normal use of the clutch.

111.17 Worm mechanism:

Device under subclass 111.16 in which the adjusting mechanism includes a helical surface rotatable about its axis, the surface contacting and moving an element that is not coaxial with the helical surface to compensate for the dimensional changes of the clutch components.

111.18 Relatively rotatable cam rings:

Device subclass 111.16 in which the adjusting mechanism comprises a pair of annular members coaxial with each other and with input and output shafts of the clutch, the annular members having mutually engaging surfaces inclined relative to a plane

perpendicular to their axis, rotation of the annular members relative to each other causing an increase in the axial spacing of the annular members to compensate for the dimensional changes of the clutch components.

111.19 Between cover and diaphragm spring:

Device subclass 111.18 including an annular, radially slit spring (often referred to as a membrane spring or a diaphragm spring) for moving the engaging members toward one another, the adjusting mechanism being located between the spring and the enclosing structure and the adjusting mechanism transmitting a force between the spring and the enclosing structure to position a region of the spring at a distance from the enclosing structure determined by the relative rotational positions of the annular members.

111.2 Between diaphragm spring and pressure plate:

Device under subclass 111.18 including an annular, radially slit spring (often referred to as a membrane spring or a diaphragm spring) for moving the engaging members toward one another, the adjusting mechanism being located between the spring and the engaging members and the annular members transmitting a force between the spring and the engaging members tending to urge the engaging members toward one another.

111.3 Having clearance sensor bridging gap between clutch members and moveable only during engagement:

Device under subclass 111.2 including a wear sensor mounted on a first one of the engaging members, movable relative to it, extending from it toward a second one of the engaging members, passing through a plane containing a friction surface of the first engaging member, and engaging the second engaging member at a location on the opposite side of the plane from the first engaging member, the wear sensor being moved relative to the first engaging member only as the members approach rotation-transmitting mutual engagement, the position of the wear sensor relative to the first engaging member determining the amount of compensation that the adjusting mechanism provides.

(1) Note. The wear sensor need not be moved relative to the first engagement member every time the members approach rotation-transmitting mutual engagement. Movement of the wear sensor typically only occurs after a sufficient amount of wear (change of thickness) of the engaging members has occurred.

111.4 Having clearance sensor bridging gap between clutch members and moveable only during engagement:

Device under subclass 111.16 including a wear sensor mounted on a first one of the engaging members, movable relative to it, extending from it toward a second one of the engaging members, passing through a plane containing a friction surface of the first engaging member, and engaging the second engaging member at a location on the opposite side of the plane from the first engaging member, the wear sensor being moved relative to the first engaging member only as the members approach rotation-transmitting mutual engagement, the position of the wear sensor relative to the first engaging member determining the amount of compensation that the adjusting mechanism provides.

(1) Note. The wear sensor need not be moved relative to the first engagement member every time the members approach rotation-transmitting mutual

engagement. Movement of the wear sensor typically only occurs after a sufficient amount of wear (change of thickness) of the engaging members has occurred.

111.5 Relatively rotatable cam rings:

Device under subclass 111.15 in which the adjusting mechanism comprises a pair of annular members coaxial with each other and with input and output shafts of the clutch, the annular members having mutually engaging surfaces inclined relative to a plane perpendicular to their axis, rotation of the annular members relative to each other causing an increase in the axial spacing of the annular members to compensate for the dimensional changes of the clutch components.

111.6 Threaded element centered on clutch axis:

Device under subclass 111.15 in which the adjusting mechanism comprises an axially adjustable element threaded onto a cooperating structure and rotatable relative thereto about the axis of rotation of input and output shafts of the clutch such that the relative rotation compensates for the dimensional changes of the clutch components.

111.7 Threaded in clutch cover:

Device under subclass 111.6 in which the cooperating structure is the enclosing structure of the clutch.

FOREIGN ART COLLECTIONS

The definitions below correspond to 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 116 With adjustable means to move clutch-element axially (e.g., to compensate for wear):

Foreign art collection for device provided with means for moving a member along said axis and with means additional to the member-moving means, which additional means is capable of axially changing the positional relationship between one of the members and a member mating therewith, such change being additional to the movement effected by the member-moving means.

(1) Note. The structure described is for the purpose of offsetting the decrease in the axial dimension of the clutch-elements due to attrition of the surfaces of the elements that occurs as they are repeatedly engaged and disengaged under load.

FOR 117 Wear compensators:

Foreign art collections for devices under Elements including mechanism to compensate for wear in effecting the engagement of clutches.