

1	<b>EDUCATIONAL OR CONSTRUCTION UNITS OR KITS</b>	323.06	.....Piezoelectric element or electrode
300	<b>NON-DYNAMOELECTRIC</b>	323.07	.....Oval track
301	..Nuclear reaction	323.08	.....Armature
302	..Contact potential difference	323.09	.....Pressing means detail
303	..P-N semiconductor	323.11	.....Specific material or composition
304	..Secondary electron emission	323.12	.....Langevin or pencil type motor
305	..Direct charge particle emission	323.13	.....Output member detail
306	..Thermal or pyromagnetic	323.14	.....Roller or ball element
307	..With heat actuated bimetal element	323.15	.....Material or material property
308	..Charge accumulating	323.16	.....Elliptical motion at fixed point (i.e., walking) or Ratchet and Pawl motor
309	..Electrostatic	323.17	....Positions an object
310	..Friction	323.18	....Device performs work on an object (e.g., welding, cutting)
311	..Piezoelectric elements and devices	323.19	....Horn or transmission line
312	..Adding or subtracting mass	323.21	....Detector (e.g., sensor)
313 R	..Surface acoustic wave devices	324	...Diaphragm
313 A	..Orientation of piezoelectric material	325	...Sandwich or Langevin type
313 B	...Interdigitated electrodes	326	..Combined with damping structure
313 C	....Envelope or apodized	327	...On back of piezoelectric element
313 D	....Grating or reflector in wave path	328	..With mechanical energy coupling means
314	..Electrical systems	329	...Including inertia type operator
315	...Temperature compensation circuits	330	...Bending type
316.01	...Input circuit for simultaneous electrical and mechanical output from piezoelectric element	331	....Plural elements
316.02	....Traveling wave motor	332	....Multimorph
316.03	....Charging and discharging	333	...Shear or torsional type
317	...Input circuit for mechanical output from piezoelectric element	334	...Acoustic wave type generator or receiver
318	...Input circuit for electrical output from piezoelectric element	335	....With lens or reflector
319	...Electrical output circuit	336	....Nondestructive testing type
320	..Piezoelectric slab having different resonant frequencies at different areas	337	....Underwater type
321	..Combined with resonant structure	338	...Force or pressure measuring type
322	..Acoustic wave type generator or receiver	339	...Voltage, spark or current generator
323.01	...Direct mechanical coupling	340	..Encapsulated or coated
323.02	....Motor producing continual motion	341	..With temperature modifier and/ or gas or vapor atmosphere control
323.03	.....Traveling wave motor	342	...For plural piezoelectric elements
323.04	.....Stator	343	...With heating element
323.05	.....Support	344	...Sealed unit
		345	..Supported by elastic material

346	..With temperature compensating structure	29	...Pivoted or flat-spring armature
347	...Compensated air gap	30	...Solenoid and core
348	..With mounting or support means	31	..Self-actuated interrupter
349	...Air gap	32	...Pivoted or flat-spring armature
350	....Adjustable		
351	...Suspended by thin member	33	....Plural armatures
352	....Point contact on major surface only	34	...Solenoid and core
353	....Contact at edges only	35	....Successively energized solenoid coils
354	...Clamped	36	.Oscillating
355	....Spring bias	37	..With motion-converting mechanism
356	....90 degrees to major surface and margin clamped only	38	..Direct-connected
357	..Orientation of piezoelectric polarization	39	..With interrupter
358	...Ceramic composition (e.g., barium titanate)	12.01	.Linear
359	....More than one poling direction (e.g., Rosen transformer)	12.02	..Having structure to facilitate assembly
360	..Rotation of crystal axis (e.g., cut angle)	12.03	..Micromachine (e.g., MEMS device, nanotechnology)
361	...Quartz	12.04	..Specific use device
362	...Rochelle salt	12.05	...X-Y positioner
363	..Electrode materials	12.06	....Precision type (e.g., for integrated circuit manufacture)
364	...Multilayer	12.07	...Projector (e.g., rail gun)
365	..Electrode arrangement	12.08	...Disk drive head motor
366	...More than two	12.09	...Rail vehicle (e.g., train, trolley)
367	..Piezoelectric element shape	12.11	...Conveyor or elevator motor
368	...Rectangular plate	12.12	...Generator
369	...Circular disc, ring, or cylinder	12.13	..Plural dynamoelectric machines (e.g., motors, generators)
370	... "U" or "tuning fork" shape	12.14	..Motor having both linear and rotary movement
371	...Sphere or hemisphere	12.15	..Plural stators or movable elements
10	<b>DYNAMOELECTRIC</b>	13	..Fixed and movable wound element type
11	.Conducting fluid	14	..Solenoid and core type
15	.Reciprocating	12.16	..Voice coil type
16	..With cooling or temperature modification	12.17	..Stepping or linear pulse type
17	..With other elements	12.18	..Synchronous type (e.g., variable reluctance)
19	...Speed control or time delay	12.19	..Having structure to facilitate control (e.g., position detector)
20	...Motion-converting mechanism		
21	....Pivoted or flat-spring armature	12.21	..Coil structure
22	....Plural armatures	12.22	...Shape or spacing (e.g., multiple phase winding)
23	....Solenoid and core type		
24	....Plural cores	12.23	...Coating
25	..Reed type	12.24	..Magnet or pole structure
26	..Magnetostrictive		
27	..Fixed and movable wound elements		
28	..Direct-connected		

12.25	...Size, spacing or orientation (e.g., tilted)	49.21	....Having a single axially concentric coil
12.26	...Shape	49.22	....Axially thin type (e.g., disk-shaped motor, planer)
12.27	..Mechanical element	49.23	....Having a particular stator feature
12.28	...Commutation	49.24	.....Asymmetric stator pole spacing
12.29	...Cooling	49.25	.....Inner and outer notches
12.31	...Support for movable element (e.g., bearing)	49.26	.....Stator pole having inner notch
12.32	...Connection to load	49.27	.....Having integral poles
12.33	...Enclosure	49.28	.....Permanent magnet on stator
40 R	..Rotary	49.29	.....Plural separate stator core sections facing rotor
40.5	..Self-rotating or moving (e.g., oscillating fan, etc.)	49.31	.....Two sections
41	..With mechanical starters	49.32	...Permanent magnet rotor with axially directed flux path
43	..Molded plastic	49.33	....Having stepping function related to a particular stator winding arrangement
44	..Powdered metal	49.34	....Having particular stator pole feature
45	..Impregnated or coated	49.35	.....Shifted or skewed stator pole
46	..Magnetic motors	49.36	.....Magnet in pole tooth
47	...Portable or hand tool (e.g., dry shavers)	49.37	....Having particular stator- pole to rotor-pole relationship
48	...With other elements	49.38	....Having plural rotor cores of different lengths
49.01	...Stepping	49.39	....Plural rotor sections (e.g., segmented rotor)
49.02	....Having a coil axially concentric to rotor axis (e.g., toroid coil)	49.41	.....Separated by non-magnetic spacer or air gap
49.03	.....With bias magnet to position rotor (e.g., parking magnet, auxiliary flux)	49.42	...Having dual axial air gaps
49.04	.....Bias magnet positioned between two axially concentric coils	49.43	...Reluctance type
49.05	.....Axially adjacent to rotor end	49.44	....Having a particular stator pole to rotor pole relationship
49.06	.....Plural coil and rotor combinations	49.45	....Having a stepping function related to a particular stator winding arrangement
49.07	.....Coil axially adjacent to each end of a rotor	49.46	....Having stator with winding and permanent magnet
49.08	....Having poles extending to opposite radial sides of rotor	49.47	...Gearing defines stepping effect
49.09	....Having poles extending to opposite axial ends of rotor	49.48	....Positioned in magnetic air gap
49.11	....Having particular flux plate or yoke	49.49	.....Pawl and ratchet type
49.12	.....With alignment mechanism	49.51	...Plural stators define stepping effect
49.13	.....Having coil bobbin	49.52	...Commutator defines stepping effect
49.14	.....Integral with pole or flux plate		
49.15	....Having interfitting poles		
49.16	.....Having a particular dimension		
49.17	.....Having a particular shape		
49.18	....With rotary to linear conversion		
49.19	....Having plural axially concentric coils		

49.53	....Permanent magnet defines stepping effect	78	....Clutch
49.54	....Windings define stepping effect	79	....Shaft and armature timing or phasing connection
49.55	....Start or stop locating feature (e.g., parking magnet, detent)	80	....Motion conversion
50	..Portable or hand tool	81	.....Unbalanced weight (e.g., vibrators)
51	..Vibration or noise suppression	82	.....Swash plate
52	..Cooling or fluid contact	83	.....Gearing
53	..With control means	84	.....Impulse coupling
54	..Liquid coolant	75 A	....Spring or gravity drive
55	..Nonatmospheric gas	75 B	....Hand- or foot-operated
56	..With gas purification or treating	75 C	....Rim drive (e.g., bicycle generator drive by wheel, rim, or tire)
57	..Intermediate confined coolant	75 D	....Flexible shaft or coupling and hollow shaft drive
58	..Circulation	85	..Mechanical shields or protectors
59	....Plural units or plural paths	86	....Shield in air gap
60 R	....Self-forced	87	....Submersible
61	.....Rotor passage	88	....Dirt, moisture or explosion proof
62	.....Suction pump or fan	89	....Housings, windows or covers
63	.....Pressure pump or fan	90	..Bearing or air-gap adjustment or bearing lubrication
60 A	.....Hollow passages	90.5	....Magnetic bearing
64	....Heat-exchange structure	91	..Supports
65	.....Spacers (e.g., laminae, coils, etc.)	92	..Torque-transmitting clutches or brakes
66	..With other elements	93	..Brake type
67 R	..Inbuilt or incorporated unit	94	..Automatic control
67 A	....Bicycle-hub generators	95	....By speed
68 R	..Electric circuit elements	96	..With other drive mechanism
69	....Shaft-driven switch (e.g., blasting generators)	97	....Output bias or resistance device
70 R	.....Distributor or timer (e.g., ignition magnetos)	98	....Drive motor
70 A	.....Ignition systems	99	....Gearing
71	....Connectors, terminals or lead-ins	100	....Mechanical clutch
72	....Impedance devices	101	..Plural units
73	....Illuminating devices	102 R	..Generator-motor type
68 A	....Manually operable (e.g., switches, rheostats, etc.)	102 A	....Homopolar clutches
68 B	....Condition responsive (e.g., position, torque, etc.)	103	....Magnetic field type
68 C	....Temperature, current-responsive, i.e., protectors	104	....With air-gap shield
68 D	....Conversion elements, (e.g., transformers, rectifiers, etc.)	105	....Induced or eddy current type
68 E	....Motion responsive (e.g., centrifugal switches)	106	.....Magnetic reluctance feature
74	..Inertia or fly-wheel device	107	.....With collection means for induced current
75 R	..Drive mechanism	108	.....Delivery to external device
76	....Brake and clutch	109	.....Electric motor
77	....Brake	110	.....Impedance
		111	..Generated wave-form modification
		112	..Plural units, structurally united

113	...Motor-generator sets	154.06	.....Plural sets of magnets
114	..Plural rotary elements	154.07	.....Adhesive
115	...Field and armature both rotate	154.08	.....Mounted to magnet yoke
116	....Limited movement	154.09	.....Split housing/yoke
117	.....Mechanical bias	154.11	.....Embedded in core or pole
118	....With interconnecting drive mechanism	154.12	.....Cylindrical sleeve holder
119	.....Fluid-drive mechanism	154.13	.....Holder with pocket for magnet
120	.....Friction-drive mechanism	154.14	.....Spring clip
121	.....Mechanically controlled element	154.15	.....Clip secured to housing
122	.....By additional dynamoelectric machine	154.16	.....Axially pressing on magnets
123	.....Friction brake	154.17	.....Wedging between
124	...Plural short-circuited rotary elements	154.18	.....With a magnetic wedge
125	....Squirrel cage type	154.19	.....With an integral wedge
126	...Plural armatures in common field	154.21	...Permanent magnet characterized by the shape of the magnet
127	..Plural collector-type machines	154.22	....With specific dimension
128	...Commutator and slip-ring type	154.23	....Horseshoe
129	...Synchronous or rotary converter	154.24	....Bar, square or rectangular
130	.....For plural wire D.C. system	154.25	....Disk, ring, or cylinder
131	....Different armature circuits	154.26	...With means to prevent or reduce demagnetization (i.e., auxiliary magnetic poles)
132	....Polyphase armature winding	154.27	....With an auxiliary pole extending between stator magnet and rotor
133	....Common armature winding	154.28	....Specific magnetization
134	....With plural field windings	154.29	.....Specific position or shape
135	....Commutator in field circuit	154.31	....Single pole pair
136	...Plural commutator type	154.32	.....Permanent magnet extends along an axis
137	....Double current D. C. machines	154.33	.....Plural rotors
138	.....Dynamotor type	154.34	.....With adjustable magnetic structure
139	.....Hetero-axial excitation	154.35	....With specific pole pieces or pole shoes
140	....Plural armature windings	154.36	.....Circumferentially spaced poles and magnets
141	.....Plural field windings	154.37	.....Poles extending axially from magnets
142	....Plural field windings	154.38	.....Pole shoe shape
143	...Plural slip-ring sets	154.39	.....Different size
144	....Plural armature windings	154.41	.....Laminated
145	.....Plural sets of poles	154.42	.....Induced flux return pole
146	.....Polyphase windings	154.43	...Additional permanent magnets
147	.....Slip rings in field circuit	154.44	...Additional shield or coating (non-magnetic)
148	...Plural sets of brushes	154.45	...Multiple pole pairs
149	....Plural field windings	154.46	....With specific pole shoe pieces
150	.....Polyphase arrangement	154.47	....Magnet extending between two poles
151	....Short circuiting conductor between brushes	154.48	.....Induce flux return pole
152	..Permanent magnet machines		
153	...Inbuilt with flywheel (magneto)		
154.01	...Permanent magnet stator		
154.02	....Combined with generating coil		
154.03	....Means for securing magnet		
154.04	.....Cantilevered		
154.05	.....Axial		

154.49	.....Adjustable	156.37	.....With single stator and plural sets of rotating magnets
155	....Inductor type	156.38	....Specific shape
156.01	...Permanent magnet rotor	156.39	.....Horseshoe
156.02	....Transverse flux	156.41	.....Triangular
156.03	....With a hysteresis ring	156.42	.....Star
156.04	....Separate portion of the rotor magnet used as a thrust bearing	156.43	.....Specific magnetization
156.05	....Separate portion of the rotor magnet used as a magnet for sensing (i.e., for position or frequency)	156.44	.....Different pole width
156.06	....Combined with flux for sensing	156.45	.....Specific dimensions
156.07	....Additional flux directing magnets	156.46	.....Shaped to vary air
156.08	....Mounting (such as on a surface of a shaft)	156.47	.....Skewed
156.09	.....Keyed to shaft	156.48	....Pole shoes/pole pieces
156.11	.....Magnets in shaft	156.49	....Radial flux path and radially positioned pole shoes
156.12	.....Mounted on a sleeve/hub	156.51	.....Laminated pole shoes with multiple pole pairs
156.13	.....Keyed to a sleeve/hub	156.52	.....Laminated pole shoes with single pole pair
156.14	.....Knurl between the sleeve/hub and a shaft	156.53	.....Embedded in a core
156.15	.....Induced flux pole on sleeve/hub	156.54	.....Induced flux return poles
156.16	.....Spring mounted	156.55	....Circumferential flux path and circumferential pole shoes
156.17	.....Spring mounted flux shunt	156.56	.....Embedded
156.18	....With a threaded fastener	156.57	.....With slots or holes to guide flux
156.19	....With a wedge	156.58	.....Different size pole shoes
156.21	....With an adhesive	156.59	.....Pole shoes fixed to hub or shaft
156.22	....With an axial end clamp	156.61	.....Pole shoes fixed with end plates
156.23	....With casting material around the magnet	156.62	....Axially magnetized with poles shoes at one end
156.24	....Including a spring mount to adjust a flux	156.63	.....Laminated pole shoes
156.25	....Axially offset and radially magnetized magnets	156.64	....Axially magnetized with pole shoes at both ends
156.26	....Mounted on a bell shape hub	156.65	.....Laminated pole shoes
156.27	....Including thermal compensation	156.66	....Claw poles/interfitting poles/lundel
156.28	.....Sleeve covering magnet face	156.67	....Laminated pole shoes
156.29	.....Sleeve parallel to magnetic face	156.68	....Poles formed by magnet
156.31	.....Banding around magnet	156.69	....Plural sets of claw poles
156.32	....Including an axial air gap	156.71	....Claw poles extend in the same axial direction
156.33	....With pole shoes	156.72	....Additional support for magnet
156.34	....With a stator between a rotating flux return plate and rotor magnet	156.73	....Additional support for claw pole tips
156.35	....With single rotor magnet and plural stators	156.74	....Damping features
156.36	....With plural sets of rotating magnets	156.75	....Damper plate on magnetic face
		156.76	....Damper in pole pieces
		156.77	....Damper cage around magnet
		156.78	....Squirrel cage

156.79	.....Including laminated ring	195	...Armature or primary
156.81	.....Magnet positioned between squirrel cage and stator	196	....Corona-prevention
156.82	.....Axially magnetized magnets or axially positioned magnets	197	....With short-circuited winding or conductor
156.83	.....Including a flux barrier	198	....Plural windings
156.84	.....Flux barrier is a magnet	199	.....Combined stationary and rotary
157	..Vertically disposed	200	....Variable length or tapped windings
158	..Universal (A.C. or D.C.)	201	....Bar windings
159	..A.C.	202	....Open windings
160	...Frequency converters	203	....Closed windings
161	...Phase-shifter type	204	.....Equalizers
162	...Synchronous	205	.....Multiplex
163	....Reaction type	206	.....Lap
164	.....Toroidal coil	207	.....Wave
165	....D.C. excited	208	....Coils
166	...Induction	209	....Adjustable magnetic structure
167	....With repulsion-starting	210	...Secondary windings or conductors
168	....Inductor-type generators (variable reluctance)	211	....Squirrel cage
169	.....High frequency	212	.....Inherently variable impedance (double squirrel cage)
170	.....Multifrequency	213	...Antiparasitic conductors (imbricated)
171	...Induction generators	214	...Coil retainers or slot closers
172	....Shifting field (e.g., shading pole)	215	...Slot liners
173	...Commutated	216.001	...Core
174	....Single phase	216.002	....Pole-less core (i.e., slotless, toothless)
175	.....Conduction operation	216.003	....Wire core
176	.....Transformer operation	216.004	....Laminated core
177	..D.C.	216.005	.....Having winding lead accommodation structure
178	..Homopolar	216.006	.....Having particular grain orientation
179	..Windings and core structure	216.007	.....Plural laminated segments radially united
180	...Field or excitation windings or structure	216.008	.....Plural axially laminated segments circumferentially united
181	....Combined permanent and electromagnet	216.009	.....Having particular mating joint structure
182	....With short-circuited winding or conductor	216.011	.....Circumferentially offset laminations
183	.....Damper winding	216.012	.....Offset pole teeth
184	....Plural field windings	216.013	.....Having axially extended spirally-laminated core
185	.....Plural sets of poles	216.014	.....Offset cooling fins
186	.....Interpole, compensating or neutralizing poles	216.015	.....Plural diverse elements
187	.....Slotted or divided pole	216.016	.....Diverse laminations
188	.....Differentially related	216.017	.....Magnetic and nonmagnetic laminations
189	....Variable length or tapped winding		
190	...Magnetic shunts for shifting field flux		
191	....Adjustable magnetic structure		
192	....Nonmagnetic inserts or air gaps		
193	....Nonuniform core cross section		
194	....Coil supports and spools		

- 216.018 .....Different thicknesses
- 216.019 .....Having diverse shapes to accommodate coil contour
- 216.021 .....E-shaped
- 216.022 .....Having winding on center leg and magnetically coupled poles
- 216.023 .....C- or U-shaped core
- 216.024 .....Plural cores unified by magnetic coupling between poles, with a winding around the middle bend of each core
- 216.025 .....Two cores
- 216.026 .....Two cores unified by magnetic coupling between poles, with a winding on each side leg of each core
- 216.027 .....Two cores unified by structurally coupled poles, with a winding around the middle bend of each core
- 216.028 .....Having centrally-supported arcuate pole and a winding around each end of pole
- 216.029 .....Plural unified cores having a pole winding
- 216.031 .....Two cores
- 216.032 .....Two cores unified by a joint spring coupling between poles
- 216.033 .....Having winding around middle bend of core
- 216.034 .....Having magnetically coupled poles
- 216.035 .....Double-section core
- 216.036 .....Having winding around core side leg
- 216.037 .....Winding around each side leg
- 216.038 .....Core side legs extend along rotor axis
- 216.039 .....Core middle bend extends along rotor axis
- 216.041 .....Having axially extended spiral lamination
- 216.042 .....Having machined poles
- 216.043 .....Having bending notch
- 216.044 .....Having inter-layer mating projection and recess
- 216.045 .....Radially stacked
- 216.046 .....Spirally wound
- 216.047 .....Having axially-extended spiral-wound pole
- 216.048 .....Having interlamina mating structure on lamina face
- 216.049 .....Having a lamination including a radially extending mounting projection (e.g., mounting ear)
- 216.051 .....Dovetail projection
- 216.052 .....Provided only on partial number of laminations
- 216.053 .....Having integral spider (e.g., spokes)
- 216.054 .....Non-planar lamination (e.g., wavy)
- 216.055 .....Having a particular outer peripheral shape
- 216.056 .....Cooling fin
- 216.057 .....Laminated pole
- 216.058 .....Securing means
- 216.059 .....Alternating laminations
- 216.061 .....Circumferentially stacked
- 216.062 .....Radially stacked
- 216.063 .....Wound lamination
- 216.064 .....Laminated pole tip (e.g., shoe)
- 216.065 .....Adhesively bonded laminations
- 216.066 .....Homogeneous core or yoke (e.g., solid core)
- 216.067 .....Molded magnetic powder resin
- 216.068 .....Reshaped magnetic element (e.g., bent sheet)
- 216.069 .....Having slot of particular shape
- 216.071 .....Plural diverse slot shapes
- 216.072 .....With plural diverse pole widths
- 216.073 .....With plural diverse pole shapes
- 216.074 .....Pole structure
- 216.075 .....Particular to switch reluctant machine
- 216.076 .....Having integral flux shunt
- 216.077 .....Via hole
- 216.078 .....Pivotally mounted (e.g., hinged)
- 216.079 .....Removable pole
- 216.081 .....Having intermediate spacer
- 216.082 .....Having wedge between pole and core
- 216.083 .....Having threaded fastener (e.g., screw)
- 216.084 .....With mating female threaded fastener element (e.g., bolt)
- 216.085 .....Fastened through pole flange
- 216.086 .....Dovetail connection

216.087	.....Having auxiliary bias force element	216.131	.....Secured by axially directed clamping means (e.g., spring clip)
216.088	.....Split pole	216.132	.....Positioned in core slot
216.089	.....Crimped connection	216.133	.....Positioned in axial through hole
216.091	.....Pole tip (e.g., shoe)	216.134	.....Integral with supporting element
216.092	.....Defining non-uniform air gap	216.135	.....Secured by circumferential clip
216.093	.....Tapered tip	216.136	.....Secured by weld
216.094	.....Via tip slot	216.137	.....Secured by bonding agent
216.095	.....With electrical conductor in slot (i.e., winding)	219	..Current collectors
216.096	.....Asymmetrically shaped	220	...Spark-reduction
216.097	.....Having a particular dimension	221	....Arc extinguishers
216.098	.....Removable tip	222	....Spark-neutralizing current
216.099	.....Magnetic inter-pole bridging structure	223	....Flux compensators
216.101	.....Cylindrical bridging structure	224	.....Commutating poles or windings
216.102	.....Integral with radially extending poles	225	.....Short-circuited coil circuit
216.103	.....Bridge defines distinct pole tip common to two adjacent poles	226	.....Field-distortion
216.104	.....With nonmagnetic inter-pole tip support	227	...With cooling
216.105	.....Insulated	228	...With cleaning, lubricating, resurfacing or repairing
216.106	...Having flux guide	229	..Brush-traversing
216.107	...For reluctant rotor core	230	..Circumferential brush shifting on reversal
216.108	...Having flux shield	231	...Rotary structure
216.109	...Spaced-segment core	232	....Slip rings
216.111	...Core having a particular dimension	233	....Commutators
216.112	.....Specific pole pitch	234	.....Winding connectors
216.113	...Having a particular binding or supporting means	235	.....Molded support
216.114	.....End ring or plate	236	.....Cylindrical or drum
216.115	.....Insulated	237	.....Disc
216.116	.....Secured to shaft	238	...Fixed structure
216.117	.....With balancing weight	239	....Brush holders or rigging
216.118	.....Secured to frame	240	.....Brush-lifting
216.119	.....Having a cooling channel	241	.....Circumferential adjustment
216.121	.....Secured to shaft	242	....Brush engagements or guides
216.122	.....Two axial end shafts	243	....Fluid pressure-operated
216.123	.....Keyed to shaft	244	....Brush affixed to pivoted arm
216.124	.....Resilient securing means	245	.....Slidable brush
216.125	.....Secured by wedge	246	.....Pressure arm
216.126	.....Fastened wedge	247	.....Axial spring
216.127	.....Secured by threaded fastener (e.g., screw)	248	....Brushes
216.128	.....Insulated fastener	249	....With electrical connector
216.129	.....Secured by axially extending bar	251	.....Structure (e.g., composite material)
		252	.....With composition feature
		253	.....Carbonaceous
		400	..End shield
		401	...Having legs for supporting a bearing (e.g., spokes)

- |       |   |       |                                      |
|-------|---|-------|--------------------------------------|
| 402   | ...Having particular frame- or core-mating feature (e.g., keyed, projection/recess) | 261.1 | ..Miscellaneous rotor structure      |
| 403   | ....Threaded mating surface   | 262   | ...High-speed rotor type             |
| 404   | ....Folded rim  | 263   | ...Interfitting or claw tooth rotors |
| 405   | ...Recessed into frame or core  | 264   | ...Armatures                         |
| 406   | ...Cup-shaped end shield connected to another end shield                            | 265   | ....Drum                             |
| 407   | ....Two cup-shaped end shields  | 266   | ....Hollow (e.g., double air gap)    |
| 408   | ....Having distinct connecting frame  | 267   | ....Ring                             |
| 409   | ....Having overlapped open ends (e.g., telescoped open ends)                        | 268   | ....Disc                             |
| 410   | ...Having frame between two end shields   | 269   | ....Salient pole                     |
| 411   | ...Particularly adapted to be secured to a core end ring                            | 270   | ...End turn supports                 |
| 412   | ...Particularly adapted for use with impregnated core                               | 271   | ...Bandings                          |
| 413   | ...Having particular mounting fastener detail                                       | 272   | ..Elements                           |
| 414   | ....Core fastener with insulated bushing  | 273   | ..Miscellaneous                      |
| 415   | ....Plural distinct mounting fasteners  | 40 MM | ..Miniature motors                   |
| 416   | ...Having coil lead retainer  |       |                                      |
| 417   | ...Having ventilation hole  |       |                                      |
| 418   | ..Frame   |       |                                      |
| 419   | ...Adjustable   |       |                                      |
| 420   | ...Shaft mounted spider (e.g., spokes)  |       |                                      |
| 421   | ....Having particular spoke   |       |                                      |
| 422   | ....Having particular core securing means   |       |                                      |
| 423   | ....Resilient   |       |                                      |
| 424   | ....Having a particular hub   |       |                                      |
| 425   | ...Base with bearing support  |       |                                      |
| 426   | ...Leg-supported from base  |       |                                      |
| 427   | ...Supported by axial bar   |       |                                      |
| 428   | ...Axially split frame  |       |                                      |
| 429   | ....Having air gap  |       |                                      |
| 430   | ....Welded sections   |       |                                      |
| 431   | ...Having resilient core attachment means   |       |                                      |
| 432   | ...Having axial tie bar for attaching core  |       |                                      |
| 433   | ....Dovetailed to core  |       |                                      |
| 254.1 | ..Miscellaneous stator structure  |       |                                      |
| 255   | ...For railway-type machines  |       |                                      |
| 256   | ...Stray field flux loss prevention   |       |                                      |
| 257   | ...Interfitting or claw-tooth stators   |       |                                      |
| 260   | ...End turn supports  |       |                                      |

**CROSS-REFERENCE ART COLLECTIONS**

800      **PIEZOELECTRIC POLYMERS (E.G., PVDF)**

**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.

FOR 100    **PERMANENT MAGNET STATOR (310/154)**

FOR 101    **PERMANENT MAGNET ROTOR (310/156)**

FOR 102    .Linear (310/12)

FOR 103    ..With assembling, metal casting or machining feature (310/42)

FOR 104    ...Step-by-step (310/49R)

FOR 105    ...Core features (310/216)

FOR 106    ....Securing laminae (310/217)

FOR 107    ....Pole assembly and securing means (310/218)

FOR 108    ..Stator structure (310/254)

FOR 109    ...Frame and core type (310/258)

FOR 110    ....Core assembly (310/259)

FOR 111 ..Rotor structure (310/261)

**DIGESTS**

DIG 2    **HYSTERESIS ROTORS AND MOTORS**

DIG 3    **HALL EFFECT GENERATORS AND  
          CONVERTERS**

DIG 6    **PRINTED-CIRCUIT MOTORS AND  
          COMPONENTS**

