### U.S. DEPARTMENT OF COMMERCE Patent and Trademark Office

### CLASSIFICATION ORDER 1845

JUNE 7, 2005

Project No. C-5875

### The following classification changes will be effected by this order:

	Class	<u>Subclass</u>	Art <u>Unit</u>	Ex'r Search Room No.
Abolished:	428	64.3, 65.3-65.7, 692-695	1773	REM-0A41
Established:	428	692.1, 693.1, 800, 810, 811, 811.1-811.5, 812-815, 815.1, 815.2, 816-819, 819.1-819.4, 820, 820.1-820.6, 821, 822, 822.1-822.5, 823, 823.1, 823.2, 824, 824.1-824.5, 825, 825.1, 826-828, 828.1, 829-831, 831.1, 831.2, 832, 832.1-832.4, 833, 833.1-833.6, 834, 835, 835.1-835.8, 836, 836.1-836.3, 837-839, 839.1-839.6, 840, 840.1-840.6, 841, 841.1-841.3, 842, 842.1-842.9, 843, 843.1-843.7, 844, 844.1-844.7, 844.71, 844.8, 844.9, 845, 845.1-845.7, 846, 846.1-846.9, 847, 847.1-847.8, 848, 848.1-848.9	1773	REM-0A41

#### **CLASSIFICATION ORDER 1845**

JUNE 7, 2005

#### The following classes were impacted by this order.

**Classes:** 29, 148, 242, 360, 369, 427

#### 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 U.S. I.P.C. CONCORDANCE,
- D. DEFINITION CHANGES.

#### **CLASSIFICATION ORDER 1845**

JUNE 7, 2005

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#### A. CLASSIFICATION MANUAL CHANGES

Additional and Modified Subclasses

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		•	JUNE 2005
1.1	LIQUID CRYSTAL OPTICAL DISPLAY HAVING LAYER OF SPECIFIED COMPOSITION	26	Of cloth, paper, or chemically plastic matter
1.2	.Alignment layer of specified	27	Framework with or therefor
	composition	28	FINIAL OR PENDANT TYPE ARTICLE
1.21	Alignment layer is inorganic	29	ARTICLE HAVING LATENT IMAGE OR
1.23	Silicon compound (i.e., organosilicon)		TRANSFORMATION
1.25	Polyamide	30	.Striated for iridescence
1.26	Polyimide	31	VEHICLE BODY ORNAMENT
1.27	Polyimidfluoride	* 800	MAGNETIC RECORDING COMPONENT OR STOCK
1.28	Polyimidmetalo	* 810	.Magnetic head
1.3	.With viewing layer of specified	* 811	.Magnetoresistive
	composition	* 811.1	Having tunnel junction effect
1.31	Polarizer or dye containing viewing layer	* 811.2	Multilayer
1.32	Silicon compound (e.g., glass, organosilicon, etc.)	* 811.3	Super lattice (e.g., giant magneto resistance (GMR) or colossal magneto resistance (CMR), etc.)
1.33	Ester (e.g., polycarbonate,	* 811.4	Single film
	polyacrylate, etc.)	* 811.5	With defined structural feature
1.4	.With charge transferring layer of	* 812	Magnetic layer composition
4 5	specified composition	* 813	Substrate composition
1.5	.With bonding or intermediate layer of specified composition (e.g.,	* 814	With protective film
	sealant, space, etc.)	* 815	With defined laminate structural detail
1.51	Inorganic layer	* 815.1	Head with slider structure
1.52	Silicon compound (i.e., organosilicon)	* 815.2	With head pole component
1.53	Epoxy	* 816	With interlaminar component (e.g.,
1.54	Ester		adhesion layer, etc.)
1.55	Unsaturated aliphatic polymer (e.g., vinyl, etc.)	* 817	.Magneto-optical media stock
1.6	.With substrate layer of specified composition	* 818	Multiple magnetic layers, at least one of which is magneto-optic
1.61	Releasable substrate layer to expose adhesive	* 819	Unit structure (i.e., three or more differing magnetic layers in
1.62	Inorganic substrate layer (e.g.,	* 010 1	series)
	ceramic, metallic, glass, etc.)	* 819.1 * 819.2	Reoccurring unit structure
3	RELIGIOUS ARTIFACT (E.G., CRUCIFORM, ETC.)		Only three adjacent magnetic layers form series
4	BOW, POMPOM OR ROSETTE	* 819.3	Only four or six adjacent magnetic layers form series
5	.Looped type	* 819.4	Magnetic layers and at least one
6	PLUME	. 019.4	intervening nonmagnetic layer
7	SPECIAL OCCASION ORNAMENT		(e.g., antiferromagnetic,
8	.Knockdown		dielectric, etc.)
9	.Collapsible	* 820	Only two magnetic layers, at least
10	.Wreath type		one of which is magneto-optic
11	.Ball, bell, or star-shaped	* 820.1	Magnetic layer pairs separated by
12	COLLAPSIBLE ARTICLE (E.G., JOINTED, ELASTIC, ETC.)		<pre>single nonmagnetic (e.g., antiferromagnetic, dielectric, etc.) layer</pre>
13	DISPLAY IN FRAME OR TRANSPARENT CASING;	* 820.2	Adjacent magnetic layers
	OR DIORAMA INCLUDING OR IMITATIVE OF A REAL OBJECT	* 820.3	Having in-plane orientated
14	.Peripheral enclosure or frame		magnetization
15	THREE DIMENSION IMITATION OR "TREATED" NATURAL PRODUCT	* 820.4	Magnetic layer composition specified
16	.Fauna	* 820.5	Specified performance related
17	.Flora		property (e.g., Kerr rotation,
18	Tree		etc.)
19	With article holder or ornament	* 820.6	Curie temperature
20	Knockdown	* 821	Single magneto-optic magnetic layer
21	Artificial fruit or garnishing leaf display strip	* 822	Magneto-optic magnetic layer contains transition metal
22	Including naturally occurring article		
23	Cluster or with holder		
24	Flower or flower petal		
25	Of filamentary or		
	filamentary-openwork type		

<sup>#</sup> Title Change
\* Newly Established Subclass

<sup>@</sup> Indent Change & Position Change

			JONE 2005
	MAGNETIC RECORDING COMPONENT OR STOCK	* 832.1	Co or Co-base magnetic layer
	.Magneto-optical media stock	* 832.2	Cr or Cr-base underlayer
	Single magneto-optic magnetic layer	* 832.3	Ni or Ni-base underlayer
	Magneto-optic magnetic layer contains	* 832.4	Polymeric underlayer (e.g., polymeric
* 822.1	transition metalMagnetic transition metal oxide in		adhesion layer, plasma polymerized carbon, etc.)
	magneto-optic layer	* 833	Single magnetic layer with plural
* 822.2	Having garnet crystal structure		overcoat layers
* 822.3	Rare-earth or lanthanum series element with iron or cobalt or	* 833.1	Inorganic overcoat layer
+ 022 4	nickel	* 833.2	Carbon overcoat (e.g., graphite, diamond like, doped carbon,
* 822.4	With additional element(s) other than rare-earth or lanthanum	+ 022 2	etc.)
	series element and iron, cobalt,	* 833.3 * 833.4	With lubricant over carbon layer
* 822.5	or nickelRare-earth or lanthanum series		Plural lubricant layers over carbon layer
022.5	element contained in separate	* 833.5	Having elemental nitrogen in carbon layer
	lattice phase (e.g., scandium or yttrium in separate phase from	* 833.6	With lubricant
+ 000	FeCoNi, etc.)	* 834	Single magnetic layer with single specified overcoat layer
* 823	With nonmagnetic metal (e.g., antiferromagnetic metal layer, Cu	* 835	Carbon overcoat (e.g., graphite,
	layer, etc.)	* 835.1	<pre>diamond like, doped carbon, etc.)Sputter-formed carbon overcoat</pre>
* 823.1	Metal reflecting layer (e.g.,	* 835.2	Plasma~formed carbon overcoat
+ 000 0	reflecting polarized beam, etc.)	* 835.3	Fullerene carbon
* 823.2	Al-, Ag-, Au-, or Cu-base reflecting layer	* 835.4	Containing elemental nitrogen in
* 824	With dielectric layer (e.g., SiO,		carbon overcoat
	AIN, ZnS, MgF <sub>2</sub> , etc.)	* 835.5	Textured surface overcoat
* 824.1	Plural dielectric layers or sections	* 835.6	Organic compound overcoat
* 824.2	Plural compounds in single	* 835.7	Fluorocarbon
	dielectric layer (e.g., mixed layer of TiN and TiC, etc.)	* 835.8	Perfluoropolyether
* 824.3	Dielectric layer having chalcogen	* 836	Single magnetic layer
UL4.J	(i.e., O, S, Se, or Te) compound	* 836.1	Metal or alloy magnetic layer
* 824.4	Dielectric layer having nitride or carbide compound (e.g., TiN, TiC,	* 836.2	<pre>Magnetic layer having oxygen (i.e., uncombined or oxide)</pre>
* 824.5	etc.)	* 836.3	Magnetic layer having inorganic compound of Si, N, P, B, H, or C
	Dielectric layer having refractive index specified	* 837	With nonmagnetic backcoat layer (e.g., inorganic particles in polymer,
* 825	With topcoat		carbon, etc.)
* 825.1	Lubricant	* 838	.Binder media
* 826	Thin film media	* 839	Multiple magnetic layers
* 827	Multiple magnetic layers	* 839.1	Magnetic layers only on single side
* 828	Magnetic layers separated by nonmagnetic (antiferromagnetic,	* 839.2	of substrateTwo magnetic layers on single side
* 828.1	Cu, dielectric, etc.) layer(s)Three or more magnetic layers on one	* 839.3	of substrateChemically specified magnetic
* 829	substrate sideDiffering compositions in plurality	* 839.4	material
	of magnetic layers (e.g., layer	* 839.5	Chemically specified binderWith chemically identified adjuvant
	compositions having differing	* 839.6	
	elemental components, different proportions of elements, etc.)		<pre>Specified property (e.g., density,     Tg, etc.)</pre>
* 830	Plural magnetic layers of same	* 840	Single magnetic layer with underlayer
	empirical composition, each with	* 840.1	Underlayer composition or structure
	<pre>different structure (e.g., differing crystalline lattice,</pre>	* 840.2	Nonmagnetic particles in underlayer $(e.g., Al_2O_3 particles, etc.)$
	atomic structure, etc.)	* 840.3	Carbon black particles
* 831	Single magnetic layer having two or more nonmagnetic underlayers (e.g.,	* 840.4	Lubricant in underlayer (e.g., perfluoether, etc.)
+ 021 1	seed layers, barrier layers, etc.)		•
* 831.1	Including NiP underlayer		
* 831.2	Specified physical structure of underlayer (e.g., texture, etc.)		
* 832	Single magnetic layer and single underlayer		

<sup>#</sup> Title Change
\* Newly Established Subclass

<sup>@</sup> Indent Change & Position Change

	MAGNETIC RECORDING COMPONENT OR STOCK .Binder media	* 845	Nonmagnetic backcoat layer (e.g., polysiloxane, etc.)
	Single magnetic layer with underlayerUnderlayer composition or structure	* 845.1	Nonmagnetic particles in backcoat layer (TiO <sub>2</sub> , ZnO, SiO <sub>2</sub> , etc.)
* 840.5	Chemically identified underlayer	* 845.2	Carbon black particles
* 840.6	binder	* 845.3	With additional nonmagnetic particles
	Magnetic layer chemical composition	* 845.4	With additive (e.g., lubricant, etc.)
* 841	Single magnetic layer with overcoat	* 845.5	
* 841.1	Two overcoat layers	. 043.3	<pre>Having specified property (e.g.,     average roughness (Ra) etc.)</pre>
* 841.2	Chemical composition of overcoat	* 845.6	For servo tracking
* 841.3	specified	* 845.7	Chemically specified polymeric binder
* 841.3	Lubricant in overcoat layer	* 846	
	Single magnetic layer	* 846.1	.Magnetic recording media substrate .Inorganic substrate
* 842.1	Having chemically specified magnetic particles (e.g., FeCo, CoNiPt,	* 846.2	
	etc.)		Composite or coated substrate (e.g., ceramic-epoxy composite, etc.)
* 842.2	Organic compound encapsulated or	* 846.3	Silicon compound coating
	coated magnetic particles (e.g., polystyrene encapsulated magnetic	* 846.4	Anodized or oxidized aluminum or aluminum-base alloy
* 842.3	particles, etc.)	* 846.5	Carbon substrate
	Ferromagnetic (elemental or alloy) particles	* 846.6	Metallic (i.e., elemental or alloy) substrate
* 842.4	Inorganic compound encapsulated or	* 846.7	Al or Al-base alloy substrate
	coated magnetic particles (e.g.,	* 846.8	Ti or Ti-base alloy substrate
	Co oxide coated Fe particles, etc.)	* 846.9	Glass or ceramic substrate
* 842.5	Magnetic metal oxide, nitride, or	* 847	Organic polymer substrate
* 842.6	carbide particles	* 847.1	Composite or coated nonesterfied substrate
042.0	Inorganic compound encapsulated or coated magnetic particles (e.g., Co coated Fe <sub>2</sub> O <sub>3</sub> , etc.)	* 847.2	Polyester substrate (e.g., polyethylene terephthalate, etc.)
* 842.7	Chromium oxide	* 847.3	Containing naphthalene ring (e.g.,
* 842.8	Hexagonal or plate lattice-shaped		polyethylenenaphthalate, etc.)
	oxides	* 847.4	Laminate of two or more layers
* 842.9 * 843	Magnetic metal nitride or carbideWith organic compound adjuvant in	* 847.5	Coated or surface treated layer (e.g., by corona discharge, etc.)
* 843.1	magnetic layerDispersant or surfactant	* 847.6	Containing particles (e.g., aluminum carbonate particles, calcium
* 843.2	Inhibitor		carbonate particles, etc.)
* 843.3	Lubricant	* 847.7	Having specific surface feature or
* 843.4	Ester		roughness (e.g., by added
* 843.5	Fluorine compound	+ 045 0	particles, etc.)
* 843.6	Silicon compound	* 847.8	Polymer containing specified ring structure
* 843.7	Acids, amines, amides, or salts	* 848	
	thereof	* 848.1	Circular shape (e.g., disk, etc.)
* 844	With nonmagnetic particles (e.g., hematite particles, polystyrene,	. 040.1	Having zones (e.g., landing zone or contact stop/start (CSS) zone, etc.)
* 844.1	and polyisoprene copolymer, etc.)Only single-type nonmagnetic	* 848.2	Specified texture or roughness (e.g., average roughness (Ra), etc.)
	particle	* 848.3	Uniform texture
* 844.2	Surface modified particle (e.g.,	* 848.4	Stretched surface
	<pre>aluminum oxide coated particles, etc.)</pre>	* 848.5	Having specified pits, tracks, or
* 844.3	Alumina particle (i.e., Al <sub>2</sub> O <sub>3</sub> )	* 848.6	indiciaEdge feature (e.g., chamfered edge,
* 844.4	Carbon black particle (e.g., lamp carbon, etc.)		etc.)
* 844.5	Chemically specified polymer binder	* 848.7	Disk in holder (e.g., disk in casing,
* 844.6	Radiation cured (i.e., cross linked) binder	•	etc.)
* 844.7	Plural chemically specified polymeric binders in single layer		•
* 844.71	Polyurethane binder with vinyl , chloride binder		
* 844.8	Polyurethane binder		
* 844.9	Vinyl chloride binder		

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<sup>@</sup> Indent Change & Position Change

			JUNE 2005
	MAGNETIC RECORDING COMPONENT OR STOCK .	579	Disk
	.Magnetic recording media substrate	580	Symmetrical
	Circular shape (e.g., disk, etc.)	581	Only one plane of symmetry
* 848.8	Disk property resulting from specified process (e.g., injection	582	Having outward flange, gripping means or interlocking feature
	<pre>molding, photolithography, sintering, etc.)</pre>	583	Having discrete fastener, marginal fastening, taper, or end structure
* 848.9	Magneto-optic media disc	584	Same structure at both ends of plural
544	ALL METAL OR WITH ADJACENT METALS		taper
545	.Component of composite having metal	585	Single taper (e.g., ingot, etc.)
	continuous phase interengaged with nonmetal continuous phase	586	.Workpiece with longitudinal passageway or stopweld material (e.g., for
546	Having metal particles		tubular stock, etc.)
547	Having composition or density gradient or differential porosity	587	.Workpiece mimicking finished stock having nonrectangular or noncircular
548	Composite; i.e., plural, adjacent,		cross section
5.40	<pre>spatially distinct metal components (e.g., layers, etc.)</pre>	588	<pre>.Workpiece of parallel, nonfastened components (e.g., fagot, pile, etc.)</pre>
549	Fiber, asbestos, or cellulose in or	589	Arranged to avoid lateral displacement
550	next to particulate component	590	Composite
551	Porous component	591	.With provision for limited relative
552	Nonmetal component		movement between components
553	Entirely inorganic	592	.Helical or with helical component
554	Nonparticulate metal componentPlural nonparticulate metal	593	.Honeycomb, or with grain orientation or
334	components		elongated elements in defined angular relationship in respective
555	Next to each other		components (e.g., parallel, inter-
556	Nonmetal in particulate component		secting, etc.)
557	Plural particulate metal components	594	.Plural layers discontinuously bonded
558	Nonparticulate component encloses particles		<pre>(e.g., spot-weld, mechanical fastener, etc.)</pre>
559	Particles discontinuous	595	.Nonplanar, uniform-thickness material
560	Separated by nonmetal matrix or		having symmetrical channel shape or
	binder (e.g., welding electrode,		reverse fold (e.g., making acute
	etc.)	596	angle, etc.)
561	Nonparticulate component has Ni-,	597	.Having aperture or cutStruck-out portion type
5.60	Cu-, or Zn-base	598	.Having member which crosses the plane
562	Nonparticulate component has Fe-base		of another member (e.g., T or X cross section, etc.)
563	Next to Fe-containing particles	599	.Defined configuration of both thickness
564	Nonmetal particles in particulate component		and nonthickness surface or angle therebetween (e.g., rounded corners,
565	Nonmetal particles in a component		etc.)
566	Interconnected void structure (e.g.,	600	.Having variation in thickness
E C 7	permeable, etc.)	601	Discontinuous surface component
567	Continuous interengaged phases of plural metals, or oriented fiber	602	Longitudinally smooth and symmetrical
	containing	603	.Nonplanar uniform thickness or
568	Nonmetal containing		nonlinear uniform diameter (e.g.,
569	Mo or W containing	504	L-shape)
570	.Composite powder (e.g., coated, etc.)	604	Intersecting corrugating or dimples
571	Having marginal feature for indexing or weakened portion for severing	605	<pre>not in a single line (e.g., waffle form, etc.)</pre>
572	For severing perpendicular to	606	.Mass of only fibers
	longitudinal dimension	607	.Foil or filament smaller than 6 milsComposite
573	.Width or thickness variation or	608	.Embodying fibers interengaged or
	marginal cuts repeating longitudinally	609	between layers (e.g., paper, etc.)
574	Variation in both width and thickness	000	.Macroscopically anomalous interface between layers
575	Marginal slots (i.e., deeper than wide)		realism Injers
576	-Shaped configuration for melting (e.g., package, etc.)		
577	<pre>.Intermediate article (e.g., blank,    etc.)</pre>		
578	Panel having nonrectangular perimeter		
	# Title Change		

<sup>#</sup> Title Change
\* Newly Established Subclass

<sup>@</sup> Indent Change & Position Change

#### . JUNE 2005

			, JUNE 2002
	ALL METAL OR WITH ADJACENT METALS	651	Next to refractory (Group IVB, VB, or
610	Having composition, density, or hardness gradient	652	VIB) metal-base component
611	.Having magnetic properties, or	032	Next to Group VIII or IB metal-base component
	preformed fiber orientation	653	Fe
	coordinate with shape	654	Next to Al-base component
612	.Microscopic interfacial wave or	655	Transition metal-base component
613	roughness .Porous (e.g., foamed, spongy, cracked,	656	Alternative base metals from diverse categories
	etc.)	657	Group IIB metal-base component
614	.Laterally noncoextensive components	658	Zn-base component
616	(e.g., embedded, etc.)	659	Next to Fe-base component (e.g.,
615	.Composite; i.e., plural, adjacent, spatially distinct metal components	660	galvanized)Refractory (Group IVB, VB, or VIB)
616	(e.g., layers, joint, etc.)Deflectable by temperature change		metal-base component
010	(e.g., thermostat element)	661	Diverse refractory group metal-base
617	More than two components		components: alternative to or
618	One component Cu-based		next to each other
619	Both components Fe-based with more	662	Group VB metal-base component
	than 10% Ni	663	Group VIB metal-base component
620	Semiconductor component	664	Alternative to or next to each
621	. With additional, spatially distinct		other
	nonmetal component	665	W-base component
622	More than one such component	666	Cr-base component
623	Adjacent to each other	667	Next to Co-, Fe-, or Ni-base
624	Organic component	660	component
625	Elastomer	668	Group VIII or IB metal-base component
626	Synthetic resin	669	Group IB metal-base component
627	Boride, carbide or nitride component		<pre>alternative to platinum group metal-base component (e.g.,</pre>
628	Component contains compound of		precious metal, etc.)
	adjacent metal	670	Platinum group metal-base component
629	Oxide	671	Cu-base component alternative to
630	Noncrystalline silica or		Ag-, Au-, or Ni-base component
	noncrystalline plural-oxide	672	Au-base component
	component (e.g., glass, etc.)	673	Ag-base component
631	Film (e.g., glaze, etc.)	674	Cu-base component
632	Oxide-containing component	675	Next to Co-, Cu-, or Ni-base
633	Plural oxides		component
634	Free carbon containing component	676	Next to Fe-base component
635	Four or more distinct components with alternate recurrence of each type	677 ·	Fe-base has 0.01-1.7% carbon (i.e., steel)
<b>63.6</b>	component	678	Co-, Fe-, or Ni-base components,
636 ·	Adjacent, identical composition,		alternative to each other
627	components	679	Co- or Ni-base component next to
637	Group VIII or IB metal-base		Fe-base component
638	Fe, containing 0.01-1.7% carbon (i.e., steel)	680	Ni-base component
639		681	Fe-base component
033	0, S, or organic compound in metal component	682	Next to Fe-base component
640	Oxide of transition metal or Al	683	Both containing 0.01-1.7% carbon
641	Ge- or Si-base component		(i.e., steel)
642	Ga-, In-, Tl- or Group VA metal-base component	684	Containing 0.01-1.7% carbon (i.e., steel)
643		685	Containing more than 10%
043	<pre>Pb- and Sn-base components:     alternative to or next to each     other</pre>		<pre>nonferrous elements (e.g., high alloy, stainless)</pre>
644		686	Adjacent functionally defined
645	And next to Cu- or Fe-base component		components
646	. Pb-base component	687	.Surface feature (e.g., rough, mirror)
647	Sn-base component	2	COMPACTED TRASH OR REFUSE BUNDLE
648	Next to Group IBI metal-base component		
•	Next to Group VIII metal-base component		
649	Group IIA metal-base component		•
650	Al-base component		

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<sup>@</sup> Indent Change & Position Change

32	ARTICLE HAVING ORNAMENTAL WOUND OR WOVEN STRANDS	32.64	<pre>Specialized heat source contacting layer (i.e., back layer) on support</pre>
32.1	INK JET STOCK FOR PRINTING (I.E., STOCK BEFORE PRINTING)	32.65	Having electrical resistance specified
32.11	.Having property to receive other media	32.66	Having heat resistance and lubricity specified
	in addition to ink jet composition	32.67	Having lubricity specified
32.12	.Retransferable	32.68	. Having heat resistance specified
32.13	.Image viewable from either side (e.g.,	32.69	.Particles in transfer layer
	OHP, projectable image, etc.)	32.7	Meltable particles
32.14	Single recording layer	32.71	Glass or ceramic particles
32.15	Particles in recording layer	32.72	
32.16	.Cloth or textile support	32.72	Resin particles
32.17	.Microporous synthetic resin support		Microcapsule particle
	(e.g., microcracked, microembossed,	32.74	Metal particles
32.18	etc.) .Physical properties (e.g., dimensions,	32.75	<pre>.Multiple colors transferable (e.g.,     stacked, etc.)</pre>
	optical, smoothness, etc.) of	32.76	Lateral diverse colors
	support specified	32.77	.Multiple layers transfer
32.19	Optical property of support specified	32.78	Separate adhesive layer transfers
	(e.g., opacity, brightness, etc.)	32.79	Adhesive outermost layer
32.2	Smoothness or freeness specified	32.8	.Specialized non-transferable layer on
32.21	.Paper support composition specified		support
32.22	.Specified property (e.g., antistatic,	32.81	Release enhancing layer
	anticurl, adhesive, antifriction,	32.82	Wax in releasing layer
	etc.) of backing layer	32.83	.Wax in transfer layer
32.23	.Terpolymer ink receptive layer	32.84	. Wax and resin in transfer layer
32.24	Plural ink receptive layers	32.85	
32.25	Particle (e.g., pigment, etc.)	32.86	.Copolymer in transfer layer
33.23	containing layer	32.87	Multiple resins in transfer layer
32.26	.Hardened, cured, or cross-linked ink receptive layer	. 32.87	Physical property (e.g., melting point, softening point, glass transition point, etc.) specified
32.27	Gelatin ink receptive layer	33	PLURAL PARTS WITH EDGES OR TEMPORARY
32.28	.Modified polyvinyl alcohol ink receptive layer		JOINING MEANS EACH COMPLEMENTARY TO OTHER
32.29	<ul> <li>Quaternary ammonium compound ink receptive layer</li> </ul>	34	LIGHT TRANSMISSIVE SHEETS, WITH GAS SPACE THEREBETWEEN AND EDGE SEALED
32.3	.Dye-fixing agent in ink receptive layer		(E.G., DOUBLE GLAZED STORM WINDOW,
32.31	.Physical property of ink receptive		ETC.)
	layer specified	34.1	HOLLOW OR CONTAINER TYPE ARTICLE (E.G.,
32.32	Pore size or volume	,	TUBE, VASE, ETC.)
32.33	Gloss specified	34.2	.Paper containing (e.g., paperboard,
32.34	.Particles (e.g., pigment, etc.) present in ink receptive layer	34.3	cardboard, fiberboard, etc.) .Bag or tubular film (e.g., pouch,
32.35	Particle size distribution		flexible food casing, envelope,
32.36		•	etc.)
32.30	<pre>Surface of particle is modified (e.g., coated, charged, etc.)</pre>	34.4	.Glass, ceramic, or sintered, fused,
32.37	<pre>. Property of particle specified (e.g.,</pre>		fired, or calcined metal oxide or metal carbide containing (e.g., porcelain, brick, cement, etc.)
	pore size, etc.)	34.5	Contains fabric, fiber particle, or
32.38	.Multiple polymers in ink-receptive layer		filament made of glass, ceramic, or sintered, fused, fired, or calcined
32.39	RECEIVER FOR THERMAL TRANSFER INK		metal oxide, or metal carbide or
32.5	.Particles in receiving media		other inorganic compound (e.g.,
32.51	.Retransferable (i.e., receiving layer		fiber glass, mineral fiber, sand,
	utilizable as ink transferable		etc.)
	donor)	34.6	Multilayer (continuous layer)
32.52	.Thermal transfer donor attached	34.7	Polymer or resin containing (i.e.,
32.6	THERMAL TRANSFER DONOR (E.G., RIBBON, SHEETS, ETC.)	34.8	natural or synthetic) .Flexible food casing (e.g., sausage
32.61	.Multiple printing (i.e., reusable)		type, etc.)
32.62	Porous layer containing transferable material (e.g., ink, etc.)	34.9	<pre>.Shrinkable or shrunk (e.g., due to heat, solvent, volatile agent,</pre>
32.63	Support properties specified (e.g., shrikability, thermal conductivity,		restraint removal, etc.)

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etc.)

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	HOLLOW OR CONTAINER TYPE ARTICLE (E.G., TUBE, VASE, ETC.)	40.2	.Capsule or particulate matter containing (e.g., sphere, flake,
	.Shrinkable or shrunk (e.g., due to		microballon, etc.)
	heat, solvent, volatile agent,	40.3	Bituminous
35.1	restraint removal, etc.)	40.4	.Ceramic, glass, glasslike, vitreous
35.2	Single layer (continuous layer)	40.5	.Wax containing
35.2	.Nonself-supporting tubular film or bag	40.6	.Halogen containing compound
	<pre>(e.g., pouch, envelope, packet, etc.)</pre>	40.7	Fluorine
35.3	Elemental metal containing	40.8	Coloring agent containing
35.4		40.9	.Metal containing
33.4	.Contains vapor or gas barrier, polymer derived from vinyl chloride or	41.1	Aluminum
	vinylidene chloride, or polymer	41.2	Coloring agent containing
	containing a vinyl alcohol unit	41.3	.Polymer derived only from ethylenically
35.5	Single layer (continuous layer)		unsaturated monomer
35.6	.Cellular material derived from plant or	41.4	Silicon
. 55.0	animal source (e.g., wood, cotton,	41.5	.Polymer derived from material having at
	wool, leather, etc.)		least one acrylic or alkacrylic
35.7	.Polymer or resin containing (i.e., natural or synthetic)		group or the nitrile or amide derivative thereof (e.g.,
35.8	Elemental metal containing (e.g.,		acrylamide, acrylate ester, etc.)
	substrate, foil, film, coating,	41.6	.Coloring agent
	etc.)	41.7	.Protective layer
35.9	Three or more layers (continuous	41.8	.Release layer
	layer)	41.9	.Dissimilar adhesives
36.1	<pre>Textile, fabric, cloth, or pile containing (e.g., web, net, woven,</pre>	42.1	Ornamental, decorative, pattern, or indicia
	knitted, mesh, nonwoven, matted,	42.2	.Sectional layer removable
	etc.)	42.3	Adhesive is on removable layer
36.2	Textile, fabric, cloth, or pile is sandwiched between two distinct	43	SHEET, WEB, OR LAYER WEAKENED TO PERMIT SEPARATION THROUGH THICKNESS
	layers of material unlike the	44	TWO DIMENSIONALLY SECTIONAL LAYER
	textile, fabric, cloth, or pile	45	.With frame, casing, or perimeter
36.3	layer		structure
30.3	Fiber or fibers wound around each other or into a self-sustaining shape (e.g., yarn, braid, fibers	46	Transparent or translucent layer or section
	shaped around a core, etc.)	47	.Next to unitary web or sheet of equal
36.4	Randomly noninterengaged or randomly		or greater extent
33.1	contacting fibers, filaments,	48	Continuous two dimensionally sectional
	particles, or flakes		layer
36.5	Foam or porous material containing	49	Glass, ceramic, or metal sections
36.6	Contains vapor or gas barrier, polymer derived from vinyl chloride or	50	(e.g., floor or wall tile, etc.)Cellulosic sections (e.g., parquet
	vinylidene chloride, or polymer		floor, etc.)
	containing a vinyl alcohol unit	51	Nonrectangular
36.7	Vapor or gas barrier, polymer derived	52	Sections connected flexibly with
	from vinyl chloride or vinylidene		external fastener
	chloride, or polymer containing a vinyl alcohol unit is sandwiched	53	THREE OR MORE COPLANAR INTERFITTED SECTIONS WITH SECURING MEANS
	between layers (continuous layer)	54	LONGITUDINALLY SECTIONAL LAYER OF THREE
36.8	Natural or synthetic rubber or		OR MORE SECTIONS
36.9	rubber-like compound containingOpen-ended, self-supporting conduit,	55	.Next to unitary sheet of equal or
	cylinder, or tube-type article	F.C	greater extent
36.91	Multilayer (continuous layer)	56	. Continuous sectional layer .
36.92	Single layer (continuous layer)	57	SHEETS OR WEBS EDGE SPLICED OR JOINED
37	SPIRALLY FLAT-WOUND STRAND OR STRIP	58	.Sheets or webs coplanar
38	(E.G., BRAIDED RUG, ETC.)	59	Double faced corrugated sheets or webs connected
20	MASS TRANSMISSIVE OF LIGHT THROUGH ALL	60	Beveled, stepped, or skived in
	LAYERS AND HAVING OPAQUE BORDER		thickness
	(E.G., STAINED GLASS, WIRED GLASS, ETC.)	61	With noncoplanar reinforcement
39	COLLAGE REPRESENTATIVE OF REAL OBJECT	62	Pile or nap surface sheets connected
40.1	LAYER OR COMPONENT REMOVABLE TO EXPOSE	63	PATCHED HOLE OR DEPRESSION

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			OONE 2003
64.1 64.2	CIRCULAR SHEET OR CIRCULAR BLANK	95	.Particular backing structure or
64.2	Recording medium or carrier	96	composition
64.5	<pre>Optical recording medium or carrierTellurium containing</pre>	90 97	With coating, impregnation, or bond
64.6	Protective layer	98	.Composition of pile or adhesive STRUCTURALLY DEFINED WEB OR SHEET (E.G.,
64.7	Polycarbonate containing	70	OVERALL DIMENSION, ETC.)
64.8	Coloring agent containing	99	.Including fastener for attaching to
64.9	Thickness specified		external surface
65.1	Polymer derived from material having	100	Hook or barb
, , _	at least one acrylic or alkacrylic group or the nitrile or amide	101	<ul> <li>Superposed movable attached layers or components</li> </ul>
	<pre>derivative thereof (e.g., acrylamide, acrylate ester, etc.)</pre>	102	.Including stitching and discrete fastener(s), coating or bond
65.2	Adhesive containing	103	Discontinuous or differential coating,
65.8	.Lubricant containing		impregnation, or bond
65.9	Fibrous material containing	104	Coating, impregnation, or bond in stitching zone only
66.1	.Gear	105	.Including grain, strips, or filamentary
66.2	Frictional	103	elements in respective layers or
66.3 66.4	End closure		components in angular relation
66.5	Seal, gasket, or packing	106	Wood grain
00.5	.Ornamental, decorative, pattern, or indicia	107	Strand or strand-portions
66.6	Aperture containing	108	Nonlinear strands or strand-portions
66.7	Edge structure	109	With additional layer(s)
67	NONPARTICULATE ELEMENT EMBEDDED OR	110	On each side of strands or
• ,	INLAID IN SUBSTRATE AND VISIBLE		strand-portions
68 ·	SHEET INCLUDING COVER OR CASING	111	Including mechanically interengaged
<b>69</b> .	.Filled with gas other than air; or under vacuum	112	strands, strand-portions or strand-like strips
70	Encased layer derived from inorganic	113	Oblique to direction of web Fibers
71	settable ingredient	114	.Including grain, strips, or filamentary
72	.Foamed or expanded material encased .Including elements cooperating to form cells		elements in different layers or components parallel
73	Honeycomb type cells extend	115	.Including fringe
	perpendicularly to nonthickness	116	.Honeycomb-like
74	layer .Noninterengaged fibered material	117	Filled honeycomb cells (e.g., solid substance in cavities, etc.)
	encased (e.g., mat, batt, etc.) ~	118	Hexagonally shaped cavities
75	Metal cover or casing	119	.Including sheet or component
76	.Complete cover or casing		perpendicular to plane of web or sheet
<b>7</b> 7	SHEET FACING AND LONGITUDINALLY	120	
	NONCOEXTENSIVE WITH WEB OR OTHER	121	Inward from edge of web or sheet
90	SHEET	122	<pre>.Fold at edgeChannel-shaped edge component (e.g.,</pre>
78 79	.Sheet smaller in both length and width		binding, etc.)
80	Smaller sheet has decorative outline	123	With strand(s) or strand-portion(s)
81	NONRECTANGULAR SHEET PERIMETER OR CORNER STRUCTURE OF SHEET		<pre>between layers (e.g., upholstery trim, etc.)</pre>
82	(EXCLUDING MERE RECTANGULAR)  Pile or nap type surface	124	Acute or reverse fold of exterior
83	.Channel or U-shaped perimeter	125	component
84	.Paper sheet	125	Embedded in body of web
85	PILE OR NAP TYPE SURFACE OR COMPONENT	127	At opposed marginal edges
86	.Interlaminar	127	Annular cover
87	.With particles	129	One piece
88	.Edge feature or configured or discontinuous surface	130	Abutted or lapped seamParticular fold structure (e.g.,
89	Differential pile length or surface	131	beveled, etc.)
90	.Flock surface	131	.Including aperture
91	.Nap type surface	132	Struck out portion type
92	.Particular shape or structure of pile	. 133	Embedded or interlocked
93	U-, V-, or W-shaped or continuous strand, filamentary material		
94	Continuous strand with adhesive bond to backing		

<sup>#</sup> Title Change
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to backing

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	STRUCTURALLY DEFINED WEB OR SHEET (E.G.,	181	Pleats or otherwise parallel adjacent
•	OVERALL DIMENSION, ETC.)	100	folds
124	Including aperture	182	Parallel corrugations
134	Noncircular aperture (e.g., slit,	183	With locally deformed crests or
125	diamond, rectangular, etc.)		intersecting series of corrugations
135	Diamond or hexagonal	184	Plural corrugated components
136	Slit or elongated	185	With corrugations of respective
137	Composite web or sheet	103	components intersecting in plane
138	Including nonapertured component	<b>¬</b> ·	projection
139	Keyed	186	With planar component
140	From both sides	187	Ornamental design or indicia
141	.Continuous and nonuniform or irregular	188	.Longitudinal or transverse tubular
	surface on layer or component (e.g.,	100	cavity or cell
1.40	roofing, etc.)	189	Laterally noncoextensive components
142	.With transparent or protective coating	190	Fabric, cloth or textile component
143	Particulate matter	191	Cellulosic
144	Coated	192	.Edge feature
145	Silicon containing coating	193	.Including layer embodying mechanically
146	Carbohydrate	193	interengaged strands, strand
147	Polymer or resin (e.g., natural or		portions or strand-like strips
	synthetic rubber, etc.)		(e.g., weave, knit, etc.)
148	Metal or metal compound	194	Comprising discontinuous or
149 .	Silicon containing	134	differential impregnation or bond
150 ·	Sand, clay, or crushed rock or slate	195.1	.Discontinuous or differential coating,
151	Artificial wood or leather grain	133.1	impregnation or bond (e.g., artwork,
	surface		printing, retouched photograph,
152	Wrinkled, creased, crinkled or creped		etc.)
153	Paper	196	Including layer of mechanically
154	Plural paper components		interengaged strands,
155	Crackled, crazed or slit		strand-portions or strand-like
156	.Including variation in thickness		strips
157	Differential nonuniformity at margin	197	Knitted, with particular or
158	. Foamed or cellular component		differential bond sites or
159	Component comprises a polymer (e.g.,		intersections
237	rubber, etc.)	198	Spot bonds connect components
160	Polyurethane	199	Including developable image or soluble
161	With component conforming to contour	•	portion in coating or impregnation
	of nonplanar surface	200	(e.g., safety paper, etc.)
162	And conforming component on an	200	With heat sealable or heat releasable adhesive laver
	opposite nonplanar surface	201	Intermediate layer is discontinuous or
163	Parallel ribs and/or grooves	201	differential
164	Containing metal or metal compound	202	With outer strippable or release
165	Including cellulosic or natural	202	layer
	rubber component	203	Translucent outer layer
166	Interlaminar spaces	204	Intermediate layer contains
167	Parallel ribs and/or grooves	204	particulate material (e.g.,
168	With particulate matter		pigment, etc.)
169	Oblique to longitudinal axis of web	205	Translucent layer comprises natural
200	or sheet		oil, wax, resin, gum, glue,
170	And varying density		gelatin
171	Fiber containing component	206	Including particulate material
172	Composite web or sheet	207	Including coloring matter
173	With partial filling of valleys on	208	Free metal or mineral containing
173	outer surface	209	Including metal layer
174	.Nonplanar uniform thickness material	210	Including ceramic, glass, porcelain or
175	Embodying mechanically interengaged	210	quartz layer
173	strand(s), strand-portion(s) or	211.1	Including paper layer
	strand-like strip(s) (e.g., weave,	211.1	.Including components having same
	kmit, etc.)	212	physical characteristic in differing
176	With folds in parallel planes		degree
177	Differential nonplanarity at margin	213	Thickness (relative or absolute)
178	Forming, or cooperating to form cells		
179	Aligned or parallel nonplanarities		
180	Waffle-form		·
100	· · · MGTTTC-TOTM		

<sup>#</sup> Title Change
\* Newly Established Subclass

<sup>@</sup> Indent Change & Position Change

·	STRUCTURALLY DEFINED WEB OR SHEET (E.G., OVERALL DIMENSION, ETC.)	298.4	<pre>Fiber is nonlinear (e.g., crimped,</pre>
	.Including components having same	298.7	Fiber is precoated
	physical characteristic in differing	299.1	Carbon or carbonaceous fiber
•	degree	299.4	Glass fiber
	Thickness (relative or absolute)	299.7	Polymeric fiber
214	Of adhesive layers	300.1	Fiber is precoated
215	Absolute thicknesses specified	300.4	Two or more chemically different
216	No layer or component greater than 5 mils thick	-	fibers
217	Hardness	300.7	Two or more layers
217	narunessDensity or compression of components	301.1	Including a free metal or alloy constituent
219	.Weight per unit area specified	301.4	At least one thermosetting synthetic
220	.Physical dimension specified	201.4	polymeric material layer
221	WEB OR SHEET CONTAINING STRUCTURALLY	304.4	.Composite having voids in a component
201	DEFINED ELEMENT OR COMPONENT		(e.g., porous, cellular, etc.)
222	<pre>.Embodying intertwined or helical component(s)</pre>	305.5	With chemically effective material or specified gas other than air, N, or
223	.Including interlaminar mechanical fastener		carbon dioxide in void-containing component
		306.6	Void-containing component partially
	42 is an integral part of this		impregnated with adjacent component
	lass 428), as shown by the posi-	307.3	Void-containing component is
	this box, and follows the sched- carchy of this Class, retaining		inorganic
	ctinent definitions and Class	307.7	Inorganic impregnant
	this class.	308.4	Void-containing component is synthetic resin or natural rubbers
292.1	.Noninterengaged fiber-containing paper-free web or sheet which is not	308.8	Void-containing component is wood or paper
	of specified porosity	309.9	. With internal element bridging layers,
292.4	<pre>Fiber-containing wood product (e.g.,     hardboard, lumber, or wood board,     etc.)</pre>		nonplanar interface between layers, or intermediate layer of commingled adjacent foam layers
292.7	Including paper layer	310.5	With gradual property change within a
293.1	Fiber embedded in a metal matrix		component
293.4	Fiber embedded in a ceramic, glass, or	311.11	Void-containing component has a
293.7	carbon matrixFibers are aligned substantially		<pre>continuous matrix of fibers only (e.g., porous paper, etc.)</pre>
273.1	parallel	311.31	And a force disintegratable component
294.1	Fiber is precoated		(e.g., stencil sheet, etc.)
294.4	Free metal or alloy fiber	311.51	Fibers of defined composition
294.7	Fiber embedded in a layer derived from	311.71	Cellulosic
23211	a water-settable material (e.g.,	311.91	Plural cellulosic components
	cement, gypsum, etc.)	312.2	Inorganic matrix in void-containing
295.1	Fiber embedded in or on the surface of		component
•	a natural or synthetic rubber	312.4	Of hydraulic-setting material
	matrix	312.6	Of silicon-containing material (e.g.,
295.4	Fibers are aligned substantially		glass, etc.)
	parallel	312.8	Of metal-containing material
295.7	Fiber is nonlinear (e.g., crimped,	313.3	Preformed hollow element-containing
	sinusoidal, etc.)	313.5	Resin or rubber element
296.1	Fiber is precoated	313.7	Mineral element
296.4	Fiber is precoated	313.9	Metal- or silicon-containing element
296.7	Composite or conjugate fiber (e.g., fiber contains more than one	314.2	Void shape specified (e.g., crushed, flat, round, etc.)
	<pre>chemically different material in monofilament or multifilament form, etc.)</pre>	314.4	Voids specified as closed
297.1	Two or more layers		
297.4	Fiber embedded in or on the surface of		
	a polymeric matrix		
297.7	Fiber is on the surface of a polymeric matrix having no	•	
	embedded portion	•	
298.1	Fibers are aligned substantially		
	parallel		

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			00112 2003
	WEB OR SHEET CONTAINING STRUCTURALLY DEFINED ELEMENT OR COMPONENT	333	In terms of molecular thickness or light wave length
	.Composite having voids in a component (e.g., porous, cellular, etc.)	334	Coating layer not in excess of 5 mils thick or equivalent
	Voids specified as closed	335	Up to 3 mils
314.8	Specified thickness of	336	1 mil or less
	void-containing component	337	Of base or substrate
	<pre>(absolute or relative), numerical cell dimension or density</pre>	338	Monolayer with structurally defined element
315.5	Voids specified as micro	339 7	Including synthetic resin or polymer
315.7	Specified thickness of void-containing component		layer or component
	(absolute or relative) or numerical cell dimension	340	<pre>.Weight per unit area specified (e.g.,    gms/sq cm, lbs/sq ft, etc.)</pre>
315.9	Composite has more than two layers	341	. Of coating
316.6	Plural void-containing components	342	Cellulosic substrate
317.1	With component specified as adhesive	343	.Adhesive outermost layer
317.1	or bonding agent	344	Next to metal
317.3	As outermost component	345	Including irradiated or wave energy
317.5	Adhesive or bonding component	2.4.0	treated component
• • • • • • • • • • • • • • • • • • • •	contains voids	346	Heat or solvent activated or sealable
317.7	Composition of adhesive or bonding	347	Heat sealable
	component specified	348	Wax containing
317.9	Void-containing component contains	349	Synthetic resin or polymer
	also a solid fiber or solid	350	Water activated
318.4	particle .With nonvoid component of specified	351	Including moisture or waterproof component
	composition	352	With release or antistick coating
318.6	Of about the same composition as, and	353	Including a primer layer
	adjacent to, the void-containing	354	Three or more layers
	component	355 R	Adhesive compositions
318.8	Integrally formed skin	356	Including metal or compound thereof
319.1	Inorganic		or natural rubber
319.3	Synthetic resin or natural rubbers	355 RA	Having readily strippable combined
319.7	Linear or thermoplastic		with readily readhearable
319.9	Hydrocarbon polymer		<pre>properties (e.g., stick-ons, etc.)</pre>
320.2	.Composite having a component wherein a constituent is liquid or is contained within preformed walls (e.g., impregnant-filled, previously	355 CP	Including monomer or polymer of carbohydrate (e.g., starch, dextrin, etc.) or protein (e.g., casein, animal protein, etc.) or
	void containing component, etc.)		derivative thereof
321.1	Constituent is in liquid form	355 EP	Including epoxy group or epoxy
321.3	Ink in pores		polymer
321.5	Encapsulated liquid	355 AK	Including aldehyde or ketone
322.2	Indefinite plurality of similar impregnated thin sheets (e.g.,		<pre>condensation polymer (e.g., urea formaldehyde polymer, melamine formaldehyde polymer, etc.)</pre>
322.7	"decorative laminate" type, etc.)Differentially filled foam, filled	355 EN	Including addition polymer from
322.7	plural layers, or filled layer with coat of filling material	355 BL	unsaturated monomerIncluding addition polymer of diene
323	.Including a second component containing		monomer (e.g., SBR, SIS, etc.)
	structurally defined particles	355 CN	Including nitrogen containing polymer (e.g., polyacrylonitrile,
324 325	Mica		polymethacrylonitrile, etc.)
323	<pre>Glass or ceramic (i.e., fired or   glazed clay, cement, etc.) (porcelain, quartz, etc.)</pre>	355 · AC	Including addition polymer from alpha-beta unsaturated carboxylic
326	Cellulosic (e.g., wood, paper, cork, rayon, etc.)		<pre>acid (e.g., acrylic acid, methacrylic acid, etc.) or derivative thereof</pre>
327	Polymeric or resinous material		
328	Heavy metal or aluminum or compound thereof		
329	Iron oxide or aluminum oxide		:
330	.Alkali metal or alkaline earth metal or compound thereof		
331	Silicic material		
332	.Physical dimension specified		·

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			56NE 2005
	WEB OR SHEET CONTAINING STRUCTURALLY DEFINED ELEMENT OR COMPONENT	389 390	Metal or metal compound in coatingRubber, cellulosic or silicic
•	.Adhesive outermost layer	390	material in coating
	Adhesive compositions	391	Silane, silicone or siloxane in
355 N	Including nitrogen containing condensation polymer (e.g.,	392	coatingArtificial fiber or filament
	polyurethane, polyisocyanate,	393	Cellulosic
	etc.)	394	Synthetic resin or polymer
357	COATED OR STRUCTUALLY DEFINED FLAKE,	395	Polyamide, polyimide or polyester
	PARTICLE, CELL, STRAND, STRAND	396	Impregnation
	PORTION, ROD, FILAMENT, MACROSCOPIC	397	Particular cross section
250	FIBER OR MASS THEREOF	398	Tubular or cellular
358	.Channel shape	399	Longitudinally varying
359 360	.Staple length fiber	400	Surface characteristic
. 000	Plural and with bonded intersections only	401	Physical dimension
361	With coating or impregnation	402	.Particulate matter (e.g., sphere,
362	Nonlinear (e.g., crimped, coiled,		flake, etc.)
	etc.)	402.2	Microcapsule with fluid core (includes liposome)
363	.Mica flake	402.21	Solid-walled microcapsule from
364	.Rod, strand, filament or fiber	,	synthetic polymer
365	Including textile, cloth or fabric	402.22	Addition polymer from unsaturated
366	Including boron or compound thereof (not as steel)	402.24	monomers only
367	Including free carbon or carbide or therewith (not as steel)		Microcapsule with solid core (includes liposome)
368	In coating or impregnation	403	Coated
369	Nonlinear (e.g., crimped, coiled,	404	Silicic or refractory material
	etc.)		<pre>containing (e.g., tungsten oxide, glass, cement, etc.)</pre>
370	Composite	405	Silane, siloxane or silicone coating
371	Helical or coiled	406	Glass particles or spheres
372	Including structurally defined	407	Including synthetic resin or polymer
	particulate matter	408	SELF-SUSTAINING CARBON MASS OR LAYER
373	Bicomponent, conjugate, composite or		WITH IMPREGNANT OR OTHER LAYER
	<pre>collateral fibers or filaments (i.e., coextruded sheath-core or side-by-side type)</pre>	409	SURFACE PROPERTY OR CHARACTERISTIC OF WEB, SHEET OR BLOCK
374	Fibers or filaments nonconcentric	410	.Surface modified glass (e.g., tempered,
0.1	(e.g., side-by-side or eccentric,		strengthened, etc.)
	etc.)	411.1	COMPOSITE (NONSTRUCTURAL LAMINATE)
375	Coated or with bond, impregnation or	412	.Of polycarbonate
	core	413	.Of epoxy ether
376	Discontinuous or tubular or cellular	414	As intermediate layer
	core	415	Next to glass or quartz
377	Wound or wrapped core or coating	416	Next to metal
378	(i.e., spiral or helical)	417	Next to glass or quartz
370	Coating on discrete and individual rods, strands or filaments	418	Next to metal
379	Including metal or compound thereof	419	.Of polythioether
	(excluding glass, ceramic and	420	.Including interfacial reaction product of adjacent layers
	asbestos)	421	Of fluorinated addition polymer from
380	Plural coatings	421	unsaturated monomers
381	Free metal in coating	422	Addition polymer is perhalogenated
382	Natural rubber in coating	422.8	.Of polyisocyanurate
383	Synthetic resin or polymer in	423.1	.Of polyamidoester (polyurethane,
	plural coatings, each of different type		polyisocyanate, polycarbamate, etc.)
384	Glass, ceramic or metal oxide in	423.3	Next to second layer of polyamidoester
	coating	423.4	.Next to animal skin or membrane
385	Metal with weld modifying or	423.5	Next to polyamide (nylon, etc.)
	stabilizing coating (e.g., flux,		
200	slag, producer, etc.)		
386	Titanium compound in coating		
387	Silicic material in coating		
388	Glass or silicic fiber or filament with metal coating		

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	COMPOSITE (NONSTRUCTURAL LAMINATE)	453 ·	Sodium silicate
	.Of polyamidoester (polyurethane,	454	Sand, clay or mica (silica excluded)
	polyisocyanate, polycarbamate, etc.)	455	.of cork
423.7	Next to polyester (polyethylene	456	. Including natural oil or gum or rosin
	terephthalate, etc.)	450	(e.g., linoleum, etc.)
423.9	Next to natural rubber	457	Of metal
424.2	Next to addition polymer of	458	Next to polyester, polyamide or
	ethylenically unsaturated monomer		polyimide (e.g., alkyd, glue, or
424.4	Ester monomer type (polyvinylacetate,		nylon, etc.)
124 6	etc.)	459 7	Natural source polyamide (e.g.,
424.6	Halide monomer type (polyvinyl chloride, etc.)	4.50	casein, gelatin, etc.)
424.7	Nitrile monomer type	460	Next to aldehyde or ketone condensation product
424.7	(polyacrylonitrile, etc.)	461	.Next to addition polymer from
424.8	Hydrocarbon polymer (polyethylene,	401	unsaturated monomers
	polybutadiene, etc.)	462	Including polyene monomers (e.g.,
425.1	Next to cellulosic		butadiene, etc.)
425.3	Next to aldehyde or ketone	463	Ester, halide or nitrile of addition
	condensation product		polymer
	(phenol-aldehyde, etc.)	464	Next to cellulosic
425.5	Next to silicon-containing (silicone,	465	Next to natural rubber
405 6	cement, etc.) layer	466	With natural rubber next to second
425.6	Quartz or glass		layer of natural rubber
425.8	Next to free metal	467	Next to natural gum, natural oil,
425.9	Particulate metal or metal		rosin, lac or wax
426	compound-containing .Of quartz or glass	468	Next to bituminous or tarry residue
427	Next to a boron containing layer	469	Next to metal salt or oxide
428	Next to a nother silicon containing	470	Organo-metallic salt
420	layer	471	Alkali or alkaline earth metal oxide
429	As silicone, silane or siloxane	472	Refractory metal salt or oxide
430	Next to polyester (e.g., alkyd)	472.1 472.2	Formed in situAluminum or iron salt or oxide formed
431	Cross-linked polyester (e.g.,	4/2.2	in situ
	glycerol maleate-styrene, etc.)	472.3	Phosphorus containing metal salt
432	Next to metal or compound thereof		formed in situ
433	Alloy or free metal	473	.Of animal membrane or skin
434	Noble metal containing	473.5	.Of polyimide
435	Next to polyamide or polyimide	474.4	.Of polyamide
436	Next to aldehyde or ketone	474.7	., Next to second layer of polyamide
	condensation product	474.9	At least one layer is nylon type
437	Next to acetal of polymerized	475.2	Next to polyester
	unsaturated alcohol (e.g., formal butyral, etc.)	475.5	.Nylon type
438	.Next to cellulosic	475.8	Next to addition polymer from
439	Cellulosic ester		unsaturated monomer(s)
440	Next to natural rubber, gum, oil,	476.1	Polymer of monoethylenically
	rosin, wax, bituminous or tarry	476.3	unsaturated hydrocarbon
	residue	476.3	Next to addition polymer from unsaturated monomer(s)
441	Next to addition polymer from	476.6	Natural source-type polyamide
	unsaturated monomers	476.9	Polymer of monoethylenically
442	Ester, halide or nitrile of addition	1,0.5	unsaturated hydrocarbon
4.45	polymer	477.4	Next to aldehyde or ketone
443	.Of asbestos		condensation product
444	With metal layer	477.7	Inorganic-containing or next to
445	.With cellulosic layer		inorganic-containing
446	.Of silicon containing (not as silicon alloy)	478.2	Natural source-type polyamide (e.g.,
447	•		casein, gelatin, etc.)
448	As siloxane, silicone or silaneAs intermediate layer	478.4	Next to cellulosic
449	<del>-</del>	478.8	Paper
450	Paper as both adjacent layersNext to metal	479.3	Next to cellulosic
451	. Next to metal . Next to addition polymer from	479.6	Paper or wood
*-/ *-	unsaturated monomers, or aldehyde		· · ·
	or ketone condensation product		
452	Next to cellulosic		•

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	COMPOSITE (NONSTRUCTURAL LAMINATE)	519	Including polyene monomers
480	.Of polyester (e.g., alkyd, etc.)	520	Ester, halide or nitrile of addition
481	Next to cellulosic		polymer
482	Of cross-linked polyester	521	Polyene monomer-containing
483	.Next to addition polymer from unsaturated monomers	522	. Ester, halide or nitrile of addition polymer
484.1	.Of wax or waxy material	523	Polymer of monoethylenically unsaturated hydrocarbon
485	Next to cellulosic	524	Of aldehyde or ketone condensation
486 487	Cellulosic is paper	. ~ "	product
	Glassine paper	525	Next to second aldehyde or ketone
488.11	With pigment or dye (e.g., carbon paper, hectograph paper, etc.)		condensation product
488.41	Having layer over transferable	526	Next to cellulosic
	material or on carrier opposite	527	Modified or regenerated cellulose
	transferable material layer	528	Wood
489	.Of bituminous or tarry residue	529	Phenoplast
490	Next to cellulosic	530	Paper
491	Paper	531	Phenoplast
492	.Of natural rubber	532	.Of carbohydrate
493 494	Next to second layer of natural rubber	533	0f cellulosic next to another carbohydrate
494	Next to aldehyde or ketone condensation product or addition	534	Cellulosic next to another cellulosic
	polymer from unsaturated monomers	535	Wood or paper
495	Including polyene monomers	536	Regenerated or modified
496	Next to cellulosic	537.1	Of wood
497	.Of natural gum, rosin, natural oil or	537.5	Of paper
	lac	537.7	Next to layer of metal salt (e.g.,
498	Next to cellulosic	55,	plasterboard, etc.)
499	Natural oil	688	.Of inorganic material
500	.Of addition polymer from unsaturated	689	Metal-compound-containing layer
	monomers	690	Fluroescent, phosphorescent, or
501	Next to an aldehyde or ketone	•	luminescent layer
	condensation product	691	Halogen-containing
502	Melamine-aldehyde	* 692.1	Defined magnetic layer
503	Impregnated or coated cellulosic material	* 693.1	Next to second metal compound-containing layer
504	Amide-aldehyde	696	Halogen-containing
505	Urea or modified urea-aldehyde	697	Layer contains compound(s) of plural
506	Phenol-aldehyde		metals
507	Next to cellulosic	698	Carbide-, nitride-, or
508	Regenerated or modified cellulose		sulfide-containing layer
509	Addition polymer of hydrocarbon(s) only	699	Next to second metal-compound-containing layer
510	Where addition polymer is an ester	700	Single crystal
	or halide	701	O-containing metal compound
511	Paper or wood	702	0-containing
512	Addition polymer of hydrocarbon(s) only	703	Water-settable material (e.g., gypsum, etc.)
513	Monoethylenically unsaturated	704	.Of B, N, P, S, or metal-containing
514	Ester, halide or nitrile of addition	E30 E	material
515	polymer  .Next to second addition polymer from	539.5	METAL CONTINUOUS PHASE INTERENGAGED WITH NONMETAL CONTINUOUS PHASE
	unsaturated monomers	540	IMPREGNATED NATURALLY SOLID PRODUCT
516	Monoolefin polymer	,	(E.G., LEATHER, STONE, ETC.)
517	Next to polyene polymer	541	.Wood timber product (e.g., piling,
518	Next to vinyl or vinylidene chloride polymer	542.2	post, veneer, etc.) DECORATIVE ARTICLE
	•		•

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			JUNE 2005
542.4	.Trophy or memento (e.g., preserved	934	Electrical process
	artifact, etc.)	935	Electroplating
542.6	.Constructed from filamentary or flat sheet material	936	Chemical deposition (e.g., electroless plating, etc.)
542.8	ARTICLE OF INTERMEDIATE SHAPE (E.G.,	937	Sprayed metal
	BLANK, PARISON, PREFORM, ETC.)	938	Vapor deposition or gas diffusion
543	MISCELLANEOUS (E.G., TREATED SURFACES,	939	Molten or fused coating
	ETC.)	940	Pressure bonding (e.g., explosive,
	*******		etc.)
•	CROSS-REFERENCE ART COLLECTIONS	941	Solid state alloying (e.g., diffusion, to disappearance of an original
900	MAGNETIC FEATURE	•	layer)
901	PRINTED CIRCUIT		*******
902	HIGH MODULUS FILAMENT OR FIBER		FOREIGN ART COLLECTIONS
903	MICROFIBER (LESS THAN 100 MICRON DIAMETER)	FOR 000	**************************************
903.3	RECYCLED MATERIALS	1010 000	
904	ARTIFICIAL LEATHER	Any fore	eign patents or non-patent liter-
904.4	WALL AND SHELF COVERING		rom subclasses that have been re-
905	ODOR RELEASING MATERIAL		ed have been transferred direct-
906	ROLL OR COIL		FOR Collections listed below. ollections contain ONLY foreign
906.6	EMBROIDERY		or non-patent literature. The
907	RESISTANT AGAINST PLANT OR ANIMAL ATTACK		etical references in the Collec-
907.7	LAYER OR ARTICLE RENDERED LIGHT-TRANSMISSIVE BY PRESSURE (E.G., BLUSHED, ETC.)	1	tles refer to the abolished sub- from which these Collections rived.
908	IMPRESSION RETENTION LAYER (E.G., PRINT MATRIX, SOUND RECORD, ETC.)		WEB OR SHEET CONTAINING STRUCTURALLY DEFINED ELEMENT OR COMPONENT
908.8	WEAR-RESISTANT LAYER		(428/221)
909	RESILIENT LAYER (E.G., PRINTER'S	FOR 100	.Including noninterengaged strand(s) or
707	BLANKET, ETC.)		strand-portion(s) (428/292)
910	PRODUCT WITH MOLECULAR ORIENTATION	FOR 101	With or in fiber layer (428/293)
911	PENETRATION RESISTANT LAYER	FOR 102	Parallel (428/294)
912	PUNCTURE HEALING LAYER	FOR 103	With coating, impregnation or bond of
912.2	MIRROR		rubber or elastomeric material
913	MATERIAL DESIGNED TO BE RESPONSIVE TO TEMPERATURE, LIGHT, MOISTURE, ETC.	FOR 104	(428/295) .Autogeneously bonded fibers (428/296)
913.3	DECORATIVE ARTICLE FOR VIEWING FROM ONE SIDE ONLY (E.G., PLAQUE, ETC.)	FOR 105	.Including a second component containing structurally defined fibers
914	TRANSFER OR DECALCOMANIA	Top 106	(428/297)
915	.Fraud or tamper detecting	FOR 106	.Plural fiber layers (428/298)
916	FRAUD OR TAMPER DETECTING	FOR 107	Intertangled and/or interfitted (428/299)
917	ELECTROLUMINESCENT	FOR 108	Needled (428/300)
918	MATERIAL ABNORMALLY TRANSPARENT	FOR 108	With coating, impregnation or bond
919	CAMOUFLAGED ARTICLE	FOR 109	(428/301)
920	FIRE OR HEAT PROTECTION FEATURE	FOR 110	With coating, impregnation or bond
921	.Fire or flameproofing	10K 110	(428/302)
922	STATIC ELECTRICITY METAL BLEED-OFF	FOR 111	Physical dimension specified (428/303)
	METALLIC STOCK	FOR 112	Void-containing component has a
923	.Physical dimension	1011 111	continuous matrix of fibers only
924	Composite		(e.g., porous paper, etc.)
925	Relative dimension specified		(428/311.1)
.926	Thickness of individual layer specified	FOR 113	And a force disintegratable component (e.g., stencil sheet, etc.)
	Special properties		(428/311.3)
927	Decorative informative	FOR 114	Fibers of defined composition
928	Magnetic		(428/311.5)
929	Electrical contact feature	FOR 115	Cellulosic (428/311.7)
930	Electric superconducting	FOR 116	Plural cellulosic components
931	Components of differing electric	mon 44*	(428/311.9)
•	conductivity	FOR 117	.Discontinuos or differential coating,
932	Abrasive or cutting feature		<pre>impregnation or bond (e.g., artwork, printing, retouched photograph,</pre>
933	Sacrificial component	•	etc.) (428/195)
	.Product by special process	FOR 118	Including paper layer (428/211)
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	•		
FOR 119	.Of wax or waxy material (428/484)Next to cellulosic (428/485)	* FOR 146	Hardness, stress, thermal or electrical coefficients
	Cellulosic is paper (428/486)		specified (428/694 PR)
	WEB OR SHEET CONTAINING STRUCTURALLY	* FOR 147	Microporous layer (428/694 MP)
	DEFINED ELEMENT OR COMPONENT (428/221)	* FOR 148	Metal thin film magnetic layer (428/694 T)
	.Of wax or waxy material (428/484)	* FOR 149	Specified subbing or underlayer (428/694 TS)
	Next to cellulosic (428/485)Cellulosic is paper (428/486)	* FOR 150	Specified back coat layer (428/694
FOR 120	With pigment or dye (e.g., carbon	~	TB)
	<pre>paper hectograph paper, etc.) (428/488.1)</pre>	* FOR 151	Topcoat, or protective overlayer (428/694 TP)
FOR 121	Having layer over transferable	* FOR 152	Carbon (428/694 TC)
	material or on carrier opposite	* FOR 153	Plasma polymerized (428/694 TZ)
	transferable material layer (428/488.4)	* FOR 154	Fluorocarbon or organosilicon layer (428/694 TF)
*	CIRCULAR SHEET OR CIRCULAR BLANK (428/64.1)	* FOR 155	Specified surface feature or roughness (428/694 TR)
*	.Recording medium or carrier (428/64.2)	* FOR 156	Multiple magnetic layer (428/694
* FOR 122	Magneto optical recording medium or carrier (428/64.3)	* FOR 157	TM)Binder containing magnetic layer
* FOR 123	. Magnetic recording medium or carrier		(428/694 B)
	(428/65.3)	* FOR 158	Radiation curable binder (428/694 BC)
* FOR 124	Lubricant containing (428/65.4)	* FOR 159	·
* FOR 125	Protective layer containing (428/65.5)		Organic acid or salt thereof (428/694 BG)
* FOR 126	Aluminum containing (428/65.6)	* FOR 160	Polyurethane binder (428/694 BU)
* FOR 127	Chromium containing (428/65.7)	* FOR 161	Isocyanate specified (428/694 BY)
*	COMPOSITE (NONSTRUCTURAL LAMINATE)	* FOR 162	Polyol specified (428/694 BL)
*	(428/411.1) .Of inorganic material (428/688)	* FOR 163	Specified lubricant or protective layer (428/694 BP)
*	Metal-compound-containing layer (428/689)	* FOR 164	Fluorocarbon or organosilicon (428/694 BF)
* FOR 128 * FOR 129	Defined magnetic layer (428/692)Next to second	* FOR 165	Including subbing or underlayer (428/694 BS)
101( 12)	metal-compound-containing layer (428/693)	* FOR 166	Including back coat layer (428/694
* FOR 130	Dynamic recording medium (428/694 R)	* FOR 167	Specified surface feature or
* FOR 131	Magneto optical recording layer (428/694 ML)	* FOR 168	roughness (428/694 BR)With non-magnetic particle
* FOR 132	Specified recording layer		(428/694 BN)
* FOR 133	composition (428/694 SC)Lanthanoid (428/694 LE)	* FOR 169	Magnetic particle with specified shape or dimension (428/694 BA)
* FOR 134	Garnet or magnetoplumbite	* FOR 170	Hexagonal or tabular (428/694 BH)
* FOR 135	(428/694 GT)Separate refractive,	* FOR 171	Multiple magnetic layers (428/694 BM)
	anti-reflective or protective layer composition (428/694 DE)	* FOR 172	Support composition specified (428/694 ST)
* FOR 136	Pure metal or alloy (428/694 MT)	* FOR 173	Organic material (428/694 SL)
* FOR 137		* FOR 174	Specified surface feature or
* FOR 138	Rare earth (428/694 RE)Nitride, carbide, or fluoride		roughness (428/694 SG)
	(428/694 NF)	* FOR 175	With lubricant in or on layer
* FOR 139	0xide or sulfide (428/694 XS)		(428/695)
* FOR 140	Reflective layer specified (428/694 RL)	,	•
* FOR 141	With plasma polymerized organic top coat or other adhesive layer (428/694 AH)		
* FOR 142	Multiple magnetic layers (428/694 MM)		
* FOR 143			
* FOR 144	Exchange coupling (428/694 EC)		
	Magnetically or thermally isolated (428/694 IS)		
* FOR 145	Composition gradient (428/694 GR)		

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New Classification	Number Of ORs	Source Classification	Number Of ORs
2/161.1	1	428/692	190
365/27	1	428/693	33
365/31	1	428/693	33
365/32	1	428/692	190
	1	428/694 T	96
365/33	1	428/692	190
	7	428/693	33
428/212	1	428/692	190
428/32.1	1	428/694 T	96
428/692.1	1	428/694 BA	27
	6	428/692	190
428/693.1	1	428/693	33
428/800	1	428/694 BA	27
	1	428/694 R	32
	20	428/692	190
428/810	2	428/694 R	32
	4	428/692	190
428/811	13	428/692	190
428/811.1	3	428/692	190
428/811.2	1	428/694 ML	94
	1	428/694 TM	49
	4	428/693	33
	35	428/692	190
428/811.3	1	428/693	33
	1	428/694 T	96
	1	428/694 TM	49
	7	428/692	190
428/811.4	6	428/692	190
428/811.5	1	428/693	33
	1	428/694 R	32
	6	428/692	190
428/812	1	428/65.7	14
	1	428/693	33
	1	428/694 ML	94
	1	428/694 TS	110
	5	428/694 R	32
	6	428/694 T	96
400/012	24	428/692	190
428/813	1	428/693	33
	1	428/694 ST	10
	1 2	428/694 TS	110
	3	428/694 R	32 100
428/814	1	428/692 428/65.3	190 169
428/814	1	428/692	190
740/014	Т.	740/074	190

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New Classification	Number Of ORs	Source Classification	Number Of ORs
	1	428/693	33
	1	428/694 R	32
428/815	2	428/693	33
	2	428/694 R	32
	14	428/692	190
428/815.2	1	428/694 R	32
	3	428/692	190
428/816	1	428/693	33
428/817	1	428/64.3	46
	2	428/694 ML	94
428/818	1	428/694 ML	94
428/819	3	428/64.3	46
	7	428/694 ML	94
428/819.1	1	428/694 EC	8
	1	428/694 MM	11
	1	428/694 T	96
	2	428/693	33
	2	428/694 SC	8
	3	428/694 ML	94
428/819.2	1	428/692	190
	1	428/694 RE	8
	2	428/694 MM	11
400/010 2	6	428/694 ML	94
428/819.3	1	428/694 RE	8
	1	428/694 SC	8
	3	428/694 EC	8
400/000	3	428/694 ML	94
428/820	1	428/694 ML	94
428/820.1	3 3	428/694 ML	94
428/820.2	3 1	428/694 MM 428/693	11 33
420/020.2	5	428/694 ML	94
428/820.3	1	428/64.3	46
420/020.5	1	428/694 MM	11
	4	428/694 ML	94
428/820.4	1	428/693	33
120/020.1	1	428/694 EC	8
	1	428/694 MT	4
	1	428/694 R	32
	2	428/694 ML	94
	2	428/694 MM	11
	3	428/64.3	46
428/820.5	1	428/694 EC	8
428/820.5	2	428/64.3	46
-,	2	428/694 ML	94
		· · · · <del>-</del>	

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New Classification	Number Of ORs	Source Classification	Number Of ORs
428/820.6	1	428/694 TM	49
	2	428/694 EC	8
	8	428/694 ML	94
428/821	1	428/694 NF	4
	3	428/692	190
	3	428/694 ML	94
428/822	1	428/694 MM	11
	2	428/692	190
	3	428/694 ML	94
428/822.1	1	428/694 T	96
	3	428/694 ML	94
428/822.2	1	428/64.3	46
	1	428/693	33
	2	428/694 GT	2
	2	428/694 ML	94
400/000 3	5	428/692	190
428/822.3	1	428/64.3	46
	1	428/65.3	169
	1	428/694 RE	8
	1	428/694 T	96
	2 9	428/694 SC 428/694 ML	8
428/822.4	1	428/64.3	94 46
420/022.4	1	428/692	190
	1	428/694 R	32
	1	428/694 SC	8
	5	428/694 ML	94
428/822.5	2	428/694 ML	94
428/823	1	428/64.3	46
120, 025	1	428/694 DE	6
	1	428/694 ML	94
	1	428/694 MT	4
	1	428/694 SC	8
428/823.1	1	428/64.3	46
	1	428/65.3	169
	1	428/694 RL	1
	3	428/694 ML	94
428/823.2	1	428/694 ML	94
	3	428/64.3	46
428/824	2	428/692	190
428/824.1	1	428/692	190
	2	428/694 ML	94
428/824.2	1	428/694 R	32
	1	428/694 TS	110
	2	428/694 DE	6

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New Classification	Number Of ORs	Source Classification	Number Of ORs
	2	428/694 ML	94
	2	428/694 RE	8
	2	428/694 XS	2
428/824.4	1	428/694 DE	6
	1	428/694 ML	94
	1	428/694 NF	4
	1	428/694 RE	8
428/824.5	1	428/694 DE	6
	1	428/694 R	32
	1	428/694 TS	110
	2	428/64.3	46
400 / 005	4	428/694 ML	94
428/825	1	428/65.5	37
	1 1	428/694 AH	1
	6	428/694 ML	94 46
428/825.1	1	428/64.3 428/694 ML	46 94
420/023.1	6	428/64.3	46
428/826	1	428/65.7	14
120/020	1	428/693	33
	1	428/694 ML	94
	1	428/694 ST	10
	1	428/694 TM	49
	2	428/65.4	49
	2	428/692	190
	2	428/694 R	32
	4	428/694 TS	110
	13	428/694 T	96
428/827	1	428/65.3	169
	1	428/694 BP	38
	1	428/694 MM	11
	1	428/694 T	96
	3	428/65.5	37
	3	428/694 TP	13
	4	428/694 TM	49
400 /000	4	428/694 TS	110
428/828	1	428/65.7	14
	1	428/693	33
	2 2	428/692 428/694 BM	190 7
	2	428/694 BM 428/694 T	7 96
428/828	5	428/65.3	169
720/020	9	428/694 TS	110
	16	428/694 TM	49
	10	420/094 IM	7.7

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New Classification	Number Of ORs	Source Classification	Number Of ORs
428/828.1	1	428/65.3	169
	1	428/65.7	14
	1	428/694 ML	94
	1	428/694 T	96
	2	428/694 TM	49
	2	428/694 TS	110
428/829	1	428/65.3	169
	1	428/65.6	24
	1	428/692	190
	1	428/694 SG	7
	1	428/694 TP	13
	2	428/694 T	96
	5	428/694 TM	49
428/830	1	428/65.5	37
	1	428/65.7	14
	1	428/694 TS	110
	2	428/694 T	96
	3	428/65.3	169
	5	428/694 TM	49
428/831	1	428/65.5	37
	1	428/65.6	24
	1	428/65.7	14
	1	428/694 TZ	3
	3	428/694 TM	49
	7	428/65.3	169
	9 17	428/694 T	96 110
420/021 1	17	428/694 TS	110
428/831.1	1 1	428/65.3 428/694 T	169 96
	4	428/694 TS	110
428/831.2	1	428/65.7	14
420/031.2	1	428/692	190
	1	428/694 BU	10
	1	428/694 SG	7
	1	428/694 T	96
	1	428/694 TM	49
	1	428/694 TR	5
	2	428/65.6	24
	7	428/65.3	169
	14	428/694 TS	110
428/832	1	428/694 TM	49
428/832	2	428/694 T	96
	3	428/694 TS	110
	4	428/65.3	169

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New Classification	Number Of ORs	Source Classification	Number Of ORs
428/832.1	1	428/65.3	169
	1	428/65.5	37
	1	428/692	190
	1	428/693	33
	1	428/694 R	32
	1	428/694 TM	49
	3	428/694 T	96
	6	428/694 TS	110
428/832.2	1	428/65.5	37
	1	428/694 TR	5
	2	428/65.7	14
	2	428/694 TM	49
	5	428/694 T	96
	6	428/65.3	169
	26	428/694 TS	110
428/832.3	1	428/65.3	169
	1	428/65.4	49
400/000 4	1	428/694 TS	110
428/832.4	1	428/65.3	169
	1	428/65.5	37
400/022	1	428/694 BP	38
428/833	1	428/692	190
	1	428/695	3
100/000 1	2 1	428/65.4	49 37
428/833.1 428/833.2	1	428/65.5 428/65.5	37
420/033.2	3	428/694 TP	13
	4	428/65.3	169
428/833.3	1	428/694 TS	110
428/833.5	1	428/65.5	37
120/033.3	1	428/694 TF	2
	2	428/65.4	49
	3	428/65.3	169
428/833.6	1	428/65.3	169
,	1	428/694 T	96
428/834	1	428/65.5	37
-,	1	428/694 T	96
	2	428/65.3	169
	2	428/65.4	49
428/835	1	428/65.5	37
	2	428/65.3	169
428/835.1	2	428/65.4	49
428/835.2	1	428/65.3	169
	2	428/65.5	37

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New Classification	Number Of ORs	Source Classification	Number Of ORs
	2	428/694 TC	2
428/835.3	1	428/65.3	169
428/835.5	2	428/694 TR	5
428/835.6	1	428/694 TP	13
	1	428/694 TZ	3
	2	428/65.5	37
	3	428/694 BP	38
	5	428/65.4	49
428/835.7	1	428/65.3	169
	1	428/65.5	37
	1	428/694 BP	38
	1	428/694 TF	2
	1	428/694 TP	13
	2	428/65.4	49
	2	428/694 T	96
428/835.8	1	428/694 R	32
	1	428/695	3
	2	428/694 BP	38
	2	428/694 T	96
	5	428/65.4	49
428/836	1	428/65.5	37
	1	428/692	190
428/836.1	1	428/65.7	14
	1	428/692	190
	1	428/694 B	38
	1	428/694 NF	4
	2	428/694 TM	49
	4	428/65.3	169
	4	428/694 TS	110
	8	428/694 T	96
428/836.2	1	428/65.6	24
	1	428/694 TB	4
	1	428/694 TM	49
	1	428/694 TP	13
	1	428/694 TZ	3
	2	428/65.4	49
	2	428/692	190
	2	428/694 R	32
	2	428/694 TS	110
	14	428/694 T	96
428/836.3	1	428/694 NF	4
428/836.3	1	428/694 TB	4
	1	428/694 TP	13
	2	428/65.3	169
	2	428/65.6	24

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New Classification	Number Of ORs	Source Classification	Number Of ORs
	2	428/692	190
	4	428/694 TS	110
	9	428/694 T	96
428/837	1	428/695	3
	2	428/694 TB	4
428/838	1	428/65.3	169
	1	428/692	190
	1	428/694 BN	6
	1	428/694 BU	10
428/839	1	428/694 BM	7
	1	428/694 BN	6
	1	428/694 BS	6
428/839.1	2	428/692	190
428/839.3	1	428/694 BA	27
	1	428/694 BM	7
	1	428/694 BU	10
	2	428/65.3	169
	3	428/694 B	38
428/839.4	1	428/694 BM	7
428/839.6	1	428/694 BM	7
	1	428/694 BP	38
	1	428/694 R	32
	1	428/694 SL	3
428/840	1	428/694 BS	6
428/840.1	1	428/694 B	38
100/010	3	428/65.3	169
428/840.2	1	428/65.3	169
	1	428/65.4	49
	1	428/694 BN	6
420/040 2	1	428/694 BS	6
428/840.3	1 3	428/694 BR	5 1.60
428/840.4	1	428/65.3 428/65.4	169 49
428/840.4	1	428/65.3	169
420/040.3	1	428/694 BC	6
	2	428/694 BS	6
	2	428/694 BU	10
428/840.6	2	428/694 B	38
120/010.0	4	428/65.3	169
428/841	1	428/694 B	38
428/841.1	1	428/65.3	169
120,011.1	1	428/65.5	37
	1	428/694 BP	38
	1	428/694 BS	6
	1	428/694 BU	10
	-	123, 031 23	

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New Classification	Number Of ORs	Source Classification	Number Of ORs
	2	428/694 TP	13
428/841.2	1	428/65.4	49
·	1	428/65.5	37
428/841.3	2	428/65.4	49
	5	428/694 BP	38
428/842	1	428/694 BG	12
	1	428/694 BN	6
	1	428/694 BR	5
	1	428/694 BY	2
	2	428/65.3	169
	2	428/694 B	38
428/842.1	1	428/65.3	169
	1	428/692	190
	2	428/694 BA	27
428/842.2	1	428/694 B	38
	1	428/694 BP	38
	1	428/694 T	96
400/040 2	1	428/694 TM	49
428/842.3	1	428/65.6	24
	1	428/694 BL	2
	1	428/694 BR	5
	2	428/694 RE	1.00
	3 3	428/65.3	169
	3	428/694 B 428/694 BA	38 27
428/842.4	1	428/694 BA	38
120/012.1	1	428/694 MT	4
428/842.5	1	428/65.3	169
1207012.0	1	428/692	190
	1	428/694 BN	6
	1	428/694 BR	5
	3	428/694 B	38
	6	428/694 BA	27
428/842.6	1	428/692	190
	2	428/694 BA	27
428/842.7	1	428/694 B	38
	3	428/694 BA	27
428/842.8	1	428/65.6	24
	1	428/693	33
428/842.8	1	428/694 MT	4
	1	428/694 R	32
	3	428/694 BA	27
	4	428/694 B	38
	5	428/694 BH	6
	6	428/65.3	169

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New Classification	Number Of ORs	Source Classification	Number Of ORs
428/843.1	1	428/692	190
	1	428/694 B	38
	1	428/694 BA	27
	1	428/694 BN	6
	1	428/694 BP	38
	1	428/694 R	32
	1	428/694 TS	110
428/843.2	1	428/694 B	38
	2	428/694 BP	38
	2	428/694 BU	10
428/843.3	1	428/65.3	169
428/843.4	1	428/694 B	38
	1	428/694 SL	3
	2	428/65.3	169
	2	428/65.4	49
	5	428/694 BG	12
428/843.5	10	428/694 BP	38
428/843.5	1 2	428/694 BP 428/65.4	38 49
428/843.6	1	428/65.3	169
420/043.0	1	428/65.4	49
	1	428/692	190
	2	428/694 BP	38
428/843.7	1	428/694 BB	7
,	1	428/694 BU	10
	5	428/694 BP	38
428/844	1	428/65.6	24
	1	428/694 BA	27
428/844.1	1	428/693	33
	1	428/694 BA	27
428/844.2	1	428/65.4	49
	1	428/694 T	96
428/844.3	1	428/694 B	38
428/844.4	1	428/65.3	169
428/844.5	1	428/65.3	169
	1	428/694 BB	7
	1	428/694 BC	6
400/044 5	1	428/694 BG	12
428/844.5	1	428/694 BL	2
400/044	4	428/694 B	38
428/844.6	1	428/694 BA	27
100/011 7	4	428/694 BC	6 40
428/844.7	1 1	428/65.4	49
	1	428/694 BB 428/694 BG	7 12
	Т	420/094 BG	12

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New Classification	Number Of ORs	Source Classification	Number Of ORs
	1	428/694 BY	2
	1	428/694 R	32
	2	428/65.3	169
	2	428/65.6	24
428/844.71	1	428/65.3	169
	1	428/65.6	24
	1	428/692	190
	1	428/694 B	38
428/844.8	1	428/694 B	38
	1	428/694 BU	10
	2	428/694 BG	12
428/844.9	1	428/694 BA	27
	1	428/694 BP	38
	2	428/694 B	38
	2	428/694 BG	12
428/845	1	428/694 BB	7
428/845.2	1	428/694 B	38
428/845.5	1	428/694 BH	6
	1	428/694 T	96
428/845.6	1	428/694 T	96
428/845.7	3	428/694 BB	7
428/846.1	1	428/692	190
	2	428/65.3	169
428/846.2	1	428/65.5	37
	1	428/65.7	14
	1	428/692	190
	1	428/694 B	38
	4	428/65.3	169
400/046 2	4	428/65.6	24
428/846.3	2	428/65.3	169
400/046 4	2	428/694 ST	10
428/846.4	1	428/65.6	24
428/846.5	1 1	428/65.3	169
428/846.6	3	428/694 TS 428/65.3	110 169
428/846.7		428/65.5	37
420/040./	1 1	428/65.6	24
428/846.7	1	428/694 TS	110
428/846.8	1	428/65.3	169
420/040.0	1	428/694 R	32
	1	428/694 ST	10
428/846.9	1	428/65.4	49
120/040.7	1	428/65.5	37
	1	428/694 SC	8
	1	428/694 TM	49
	_	120,001 111	1.7

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New Classification	Number Of ORs	Source Classification	Number Of ORs
	2	428/65.6	24
	2	428/694 SG	7
	4	428/694 ST	10
	5	428/65.3	169
428/847	1	428/694 R	32
428/847.1	1	428/65.3	169
428/847.2	1	428/65.3	169
	1	428/694 TS	110
428/847.3	1	428/694 B	38
	3	428/65.3	169
428/847.4	1	428/65.3	169
428/847.7	1	428/65.3	169
428/847.8	1	428/694 SG	7
	1	428/694 SL	3
	2	428/65.3	169
428/848	1	428/64.3	46
	1	428/694 SG	7
	2	428/65.3	169
428/848.1	1	428/694 BM	7
	1	428/694 ST	10
	5	428/65.4	49
	б	428/65.5	37
	8	428/65.3	169
428/848.2	1	428/64.3	46
	1	428/65.4	49
	1	428/65.6	24
	1	428/65.7	14
	3	428/65.5	37
400/040 2	8	428/65.3	169
428/848.3	1	428/65.3	169
	1	428/65.4	49
	1 1	428/694 T 428/694 TR	96
428/848.4	1	-,	5 46
420/040.4	1	428/64.3 428/65.4	49
	1	428/65.7	14
428/848.4	5	428/65.3	169
428/848.5	1	428/64.3	46
420/040.3	1	428/65.6	24
	1	428/692	190
	1	428/693	33
	1	428/694 BR	5
	2	428/65.5	37
	7	428/65.3	169
428/848.6	1	428/64.3	46
120,010.0	_	120,01.5	10

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New	Number	Source	Number
Classification	Of ORs	Classification	Of ORs
	1	428/65.4	49
	2	428/65.3	169
428/848.7	1	428/65.5	37
	1	428/65.6	24
	2	428/65.4	49
	3	428/65.3	169
428/848.8	1	428/65.7	14
	1	428/694 R	32
	1	428/694 SG	7
	5	428/65.3	169
428/848.9	1	428/694 DE	6
	9	428/64.3	46

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Source Classification		New Classification	Number Of ORs
428/64.3	46	428/817 428/819 428/823 428/825 428/820.5 428/822.3 428/823.1 428/824.5 428/848.2 428/848.6 428/848.5 428/848.1 428/825.1 428/825.1 428/823.2 428/823.2 428/823.2 428/823.3 428/823.3 428/820.4 428/820.3 428/848	1 3 1 6 2 1 1 2 1 9 1 1 1 6 3 1 1 3 1
428/65.3	169	428/814 428/831 428/838 428/838 428/832.4 428/832.3 428/832.2 428/832.1 428/831.2 428/831.1 428/823.1 428/823.1 428/844.7 428/844.5 428/844.5 428/844.4 428/843.6 428/843.3 428/843.3 428/843.3 428/843.3 428/842.8 428/842.8 428/848.3	1 7 2 1 2 1 1 6 1 7 1 1 1 2 1 1 2 1 3 5 1

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Source Classification	Number Of ORs		Number Of ORs
		428/848.2	8
428/65.3	169	428/848.1	8
		428/847.8	2
		428/847.7	1
		428/847.4	1
		428/847.3	3
		428/847.2	1
		428/844.71	1
		428/848.8	5
		428/848.7	3
		428/848.6	2
		428/848.5	7
		428/847.1	1
		428/846.9	5
		428/846.8	1
		428/846.6	3
		428/846.5	1
		428/846.3	2
		428/846.2	4
		428/846.1	2
		428/842.1	1
		428/841.1	1
		428/840.6	4
		428/840.5	1
		428/840.3	3
		428/840.2	1
		428/840.1	3
		428/839.3	2
		428/836.3	2
		428/836.1 428/835.7	4
		428/835.7	1 1
		428/835.2	1
		428/833.6	1
		428/833.5	3
		428/833.2	4
		428/842	2
		428/835	2
		428/832	4
		428/830	3
		428/827	1
		428/829	1
		428/828	5
428/65.4	49	428/826	2
		428/848.6	1

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		New Classification	
428/65.4	49	428/848.4 428/848.3 428/848.2 428/848.1 428/846.9 428/844.7 428/844.2 428/843.6 428/843.5 428/843.5 428/843.4 428/841.3	1 1 5 1 1 1 2 2 2
400.465.5	25	428/841.2 428/840.4 428/840.2 428/836.2 428/835.8 428/832.3 428/833.5 428/835.1 428/835.7 428/835.6 428/834 428/833	1 1 2 5 1 2 2 2 2 5 2
428/65.5	37	428/825 428/841.1 428/835.7 428/835.6 428/833.2 428/833.2 428/833.1 428/832.4 428/832.2 428/848.7 428/848.5 428/848.5 428/846.7 428/846.7 428/846.7 428/846.2 428/841.2 428/831 428/834 428/834	1 1 2 2 1 1 1 1 2 3 6 1 1 1 1 1

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Source Classification	Number Of ORs	New Classification	Number Of ORs
		428/832.1	1
		428/836	1
		428/830	1
428/65.5	37	428/827	3
428/65.6	24	428/829	1
		428/844.71	1
		428/848.7	1
		428/848.5	1
		428/848.2	1
		428/846.9	2
		428/846.7	1
		428/846.4	1
		428/846.2	4
		428/844.7	2
		428/831.2	2
		428/836.2	1
		428/836.3	2
		428/842.8	1
		428/842.3	1
		428/844	1
		428/831	1
428/65.7	14	428/812	1
		428/848.8	1
		428/848.4	1
		428/848.2	1
		428/846.2	1
		428/836.1	1
		428/830	1
		428/831	1 1
		428/828.1	2
		428/832.2 428/831.2	1
		428/828	1
		428/826	1
428/692	190	2/161.1	1
120,002	100	365/32	1
		365/33	1
		428/212	1
		428/800	20
		428/810	4
		428/811	13
		428/812	24
		428/813	3
		428/814	1
		428/815	14

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		Classification	
428/692	190	428/821 428/822 428/824 428/826 428/828 428/829 428/833 428/836 428/838 428/692.1 428/811.1 428/811.2 428/811.3 428/811.5 428/811.5 428/811.5 428/811.5 428/811.5 428/811.5 428/811.2 428/811.3	3 2 2 2 2 2 1 1 1 6 3 35 7 6 6 3 1 5 1 1 1
428/693	33	428/836.2 428/836.3 428/839.1 428/842.1 428/842.6 428/843.1 428/843.6 428/846.1 428/846.2 428/846.2 428/846.2 428/848.5 428/813 428/812 428/813 428/816 428/816 428/826 428/828	2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

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Source Classification	Number Of ORs	New Classification	Number Of ORs
		428/693.1	1
		428/811.2	4
		428/811.3	1
		428/811.5	1
400/603	2.2	428/819.1	2
428/693	33	428/820.2	1
		428/820.4 428/822.2	1 1
		428/832.1	1
		428/842.8	1
		428/844.1	1
		428/848.5	1
428/694 AH	1	428/825	1
428/694 B	38	428/841	1
		428/842	2
		428/836.1	1
		428/839.3	3
		428/840.1	1
		428/840.6	2
		428/842.2	1
		428/842.3	3
		428/842.4	1
		428/842.5	3 1
		428/842.7 428/842.8	4
		428/843.1	1
		428/843.2	1
		428/843.4	1
		428/844.3	1
		428/844.5	4
		428/844.8	1
		428/844.9	2
		428/845.2	1
		428/846.2	1
		428/847.3	1
100/604 57	0.17	428/844.71	1
428/694 BA	27	428/800 428/844	1
		428/844 428/692.1	1 1
		428/839.3	1
		428/842.3	3
		428/842.6	2
		428/844.9	1
		428/844.6	1
		428/844.1	1

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Source Classification	Number Of ORs	New Classification	Number Of ORs
		428/843.1	1
		428/842.8	3
		428/842.7	3
		428/842.5	6
		428/842.1	2
428/694 BB	7	428/845	1
428/694 BB	7	428/843.7	1
		428/845.7	3
		428/844.7	1
	_	428/844.5	1
428/694 BC	6	428/840.5	1
		428/844.6	4
100/604 56	1.0	428/844.5	1
428/694 BG	12	428/842	1
		428/843.4	5
		428/844.8 428/844.7	2 1
		428/844.7	
		428/844.9	1 2
428/694 BH	6	428/842.8	5
420/094 Bn	0	428/845.5	1
428/694 BL	2	428/842.3	1
120/051 DD	2	428/844.5	1
428/694 BM	7	428/828	2
120, 051 211	•	428/839	1
		428/839.3	1
		428/839.4	1
		428/848.1	1
		428/839.6	1
428/694 BN	6	428/838	1
		428/839	1
		428/842.5	1
		428/840.2	1
		428/842	1
		428/843.1	1
428/694 BP	38	428/827	1
		428/835.7	1
		428/843.5	1
		428/843.4	10
		428/843.2	2
		428/843.1	1
		428/842.2 428/841.3	1 5
		428/841.1	1
		428/839.6	1
		120/032.0	т

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		428/835.8 428/844.9 428/843.7	2 1 5
428/694 BR	5	428/843.6 428/835.6 428/832.4 428/842	2 3 1 1
428/694 BR	5	428/842.3 428/848.5 428/842.5	1 1 1
428/694 BS	6	428/840.3 428/839 428/840 428/840.2	1 1 1
428/694 BU	10	428/840.5 428/841.1 428/838 428/844.8	2 1 1 1
		428/843.7 428/843.2 428/841.1 428/840.5 428/831.2 428/839.3	1 2 1 2 1
428/694 BY	2	428/842 428/844.7	1 1
428/694 DE	6	428/823 428/824.5 428/824.4 428/824.2 428/848.9	1 1 2 1
428/694 EC	8	428/819.1 428/820.5 428/820.6 428/820.4	1 1 2 1
428/694 GT 428/694 ML	2 94	428/819.3 428/822.2 428/812 428/817 428/819 428/821 428/822.3 428/822.2 428/822.1 428/820.6	3 2 1 2 7 3 9 2 3 8

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Source Classification	Of ORs	New Classification	Number Of ORs
		428/820.5	2
		428/820.4	2
		428/820.3	4
		428/820.2	5
		428/820.1	3
		428/819.3	3
		428/819.2	6
		428/819.1	3
428/694 ML	94	428/811.2	1
		428/826	1
		428/825	1
		428/823	1
		428/822	3
		428/825.1	1
		428/824.5	4
		428/824.4	1
		428/824.2	2
		428/824.1	2
		428/823.2	1
		428/823.1	3
		428/822.5	2
		428/822.4	5
		428/828.1	1
		428/820	1
		428/818	1
428/694 MM	11	428/822	1
		428/827	1
		428/819.1	1
		428/820.1	3
		428/820.4	2
		428/820.3	1
400 / 60 4 NET	4	428/819.2	2
428/694 MT	4	428/823	1
		428/820.4	1
		428/842.4	1
420/604 NE	4	428/842.8	1
428/694 NF	4	428/821 428/836.3	1 1
		428/836.1	1
		428/824.4	1
428/694 R	32	428/824.4	1
120/071 K	J <u>L</u>	428/810	2
		428/812	5
		428/813	2
		428/814	1
		,	_

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Source Classification		New Classification	Number Of ORs
		428/815	2
		428/826	2
		428/847	1
		428/811.5	1
		428/815.2	1
		428/820.4	1
		428/822.4	1
		428/824.2	1
		428/824.5	1
428/694 R	32	428/832.1	1
		428/835.8	1
		428/836.2	2
		428/839.6	1
		428/842.8	1
		428/843.1	1
		428/844.7	1
		428/846.8	1
		428/848.8	1
428/694 RE	8	428/819.2	1
		428/824.2	2
		428/824.4	1
		428/822.3	1
		428/819.3	1
		428/842.3	2
428/694 RL	1	428/823.1	1
428/694 SC	8	428/823	1
		428/819.1	2
		428/822.4	1
		428/846.9	1
		428/822.3	2
		428/819.3	1
428/694 SG	7	428/829	1
		428/831.2	1
		428/848.8	1
		428/847.8	1
		428/846.9	2
400/604 ==	_	428/848	1
428/694 SL	3	428/839.6	1
		428/843.4	1
400/604 5=	1.0	428/847.8	1
428/694 ST	10	428/813	1
		428/848.1	1
		428/846.9	4
		428/846.8	1
		428/846.3	2

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Source Classification	Number Of ORs	New Classification	Number Of ORs
428/694 T	96	428/826 365/32 428/812 428/826	1 1 6 13
		428/827 428/828 428/829 428/830	1 2 2 2
428/694 T	96	428/831 428/832 428/834 428/32.1	9 2 1 1
		428/811.3 428/819.1 428/822.1 428/822.3 428/828.1	1 1 1 1
		428/831.1 428/831.2 428/832.1 428/832.2	1 1 3 5
		428/833.6 428/835.7 428/835.8 428/836.1	1 2 2 8
		428/836.2 428/836.3 428/842.2 428/844.2	14 9 1
420 /C04 mp	4	428/845.5 428/845.6 428/848.3 428/837	1 1 1 1 2
428/694 TB 428/694 TC	4 2	428/836.2 428/836.3 428/835.2	1 1 2
428/694 TF 428/694 TM	2 49	428/833.5 428/835.7 428/826	1 1 1
120,091 IM	1)	428/827 428/828 428/829 428/830 428/831 428/832	4 16 5 5 3

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Source Classification	Number Of ORs	New Classification	Number Of ORs
		428/811.2 428/811.3 428/820.6	1 1 1
		428/828.1	2
		428/831.2	1
		428/832.1	1
		428/832.2	2
		428/836.1	2
		428/836.2 428/842.2	1 1
		428/846.9	1
428/694 TP	13	428/827	3
120/051 11	13	428/829	1
		428/833.2	3
		428/835.6	1
		428/835.7	1
		428/836.2	1
		428/836.3	1
		428/841.1	2
428/694 TR	5	428/831.2	1
		428/832.2	1
		428/835.5	2
400 /604 mg	110	428/848.3	1
428/694 TS	110	428/812	1 1
		428/813 428/826	4
		428/827	4
		428/828	9
		428/830	1
		428/831	17
		428/832	3
		428/824.2	1
		428/824.5	1
		428/828.1	2
		428/831.1	4
		428/831.2	14
		428/832.1	6
		428/832.2	26
		428/832.3 428/833.3	1 1
		428/836.1	4
		428/836.2	2
		428/836.3	4
		428/843.1	1
		428/846.6	1

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Source	Number	New	Number
Classification	Of ORs	Classification	Of ORs
		428/846.7	1
		428/847.2	1
428/694 TZ	3	428/831	1
		428/835.6	1
		428/836.2	1
428/694 XS	2	428/824.2	2
428/695	3	428/833	1
		428/837	1
		428/835.8	1

## JUNE 7, 2005

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

	U.S.		I.P.C.	
Class		Subclass	Subclass	Notation
428		692.1	B32B	15/00
		693.1		15/04
		800, 810	G11B	05/33
		811-811.5		05/39
		812-816		05/33
		817-820.6		05/66
		821		05/65
		822-825		05/66
		825.1		05/725
		826		05/64
		827-832.4		05/66
		833-836.3		05/65
		837		05/64
		838		05/838
		839-841.3		05/716
		842-843.2		05/708
		843.3-843.7		05/71
		844-848.9		05/706

#### CLASS 29 - METAL WORKING

#### **Definitions Modified**

Subclass 603.1: After the subclass definition

#### Insert:

#### SEE OR SEARCH CLASS:

428, Stock Material or Miscellaneous Articles, subclasses 800-848.9 for magnetic recording component or stock, having disclosed utility in dynamic magnetic recording, reproducing, or storage or in a component intended for information storage, with specific chemical composition or physical chemistry.

#### CLASS 148 – METAL TREATMENT

#### **Definitions Modified**

Class Definition: Under SECTION IV – REFERENCES TO OTHER CLASSES, SEE OR SEARCH CLASS

#### Insert:

428, Stock Material or Miscellaneous Articles, subclasses 692.1 and 693.1 for stock materials having a defined magnetic layer; and subclasses 800-848.9 for magnetic heads, and magnetic and magneto-optic storage medium, per se, with specific detail of composition or physical chemistry (e.g., materials, microstructure, surface property, etc.).

Subclass 300: Under SEE OR SEARCH CLASS

#### Insert:

428, Stock Material or Miscellaneous Articles, subclasses 692.1 and 693.1 for stock materials having a defined magnetic layer and subclasses 800-848.9 for magnetic recording component or stock.

CLASS 242 – WINDING, TENSIONING, OR GUIDING

#### **Definitions Modified**

Class Definition: Under SECTION V – REFERENCES TO OTHER CLASSES, SEE OR SEARCH CLASS

Delete:

The reference to Class 428

Insert:

428, Stock Material or Miscellaneous Articles, subclasses 826-837 and 838-845.7 for specific magnetic recording media and subclasses 846-848.9 for recording media substrates relating to a roll or coil.

#### CLASS 360 – DYNAMIC MAGNETIC INFORMATION STORAGE OR RETRIEVAL

#### **Definitions Modified**

Class Definition: Under SECTION IV – REFERENCES TO OTHER CLASSES, SEE OR SEARCH CLASS

#### Delete:

The reference to Class 428

#### Insert:

428, Stock Material or Miscellaneous Articles, subclasses 800-848.9 for magnetic heads, and magnetic and magneto-optic storage medium, per se, having specific detail of physical chemistry or composition (e.g., material, microstructure, surface property, etc.).

#### Subclass 77.01: Under SEE OR SEARCH CLASS

#### Insert:

428, Stock Material or Miscellaneous Articles, subclass 845.6 for magnetic storage medium having backcoat layer for servo tracking, with specific physical chemistry or chemical composition; and subclass 848.5 for magnetic storage medium having specified pits, tracks, or indicia with specific physical chemistry or chemical composition.

#### Subclass 110: Under SEE OR SEARCH CLASS

#### Insert:

428, Stock Material or Miscellaneous Articles, subclasses 810-816 for magnetic recording component or stock with specified composition or physical chemistry, such as microstructure, or property resulting from microstructure, composition, or chemistry.

#### Subclass 131: Under SEE OR SEARCH CLASS

#### Insert:

428, Stock Material or Miscellaneous Articles, subclasses 800-848.9 for magnetic recording component or stock distinguished by composition or physical chemistry (e.g., materials, microstructure, surface property, etc.), usable as

magnetic record carrier or component; subclasses 817-825.1 for media or magnetizable material free of polymeric binder; subclasses 826-837 for magneto-optical stock material; subclasses 838-845.7 for media wherein the magnetizable material is in particulate form dispersed in a binder; and subclasses 846-848.9 for media substrates.

Subclass 133: After the subclass definition

Insert:

#### SEE OR SEARCH CLASS:

428, Stock Material or Miscellaneous Articles, subclass 848.7 for stock articles distinguished by composition or physical chemistry, usable as magnetic record carriers in the form of the disk within enclosure.

#### CLASS 369 – DYNAMIC INFORMATION STORAGE OR RETRIEVAL

#### **Definitions Modified**

Subclass 13.35: Under SEE OR SEARCH CLASS

Delete:

The reference to Class 428

Insert:

428, Stock Material or Miscellaneous Articles, subclasses 817-825.1 for magnetooptic storage medium, per se, with specific composition of materials or physical chemistry; and subclass 848.9 for magneto-optic media disk substrate, per se, with specific composition of materials or physical chemistry.

Subclass 13.41: Under SEE OR SEARCH CLASS

Delete:

The reference to Class 428

Insert:

428, Stock Material or Miscellaneous Articles, subclasses 817-825.1 for magnetooptic storage medium, per se, with specific chemical composition or physical chemistry.

Subclass 13.42: Under SEE OR SEARCH CLASS

Delete:

The reference to Class 428

Insert:

428, Stock Material or Miscellaneous Articles, subclasses 819-819.4 for magnetooptic storage medium having a unit structure of three or more differing magnetic layers in series, per se, having a specific chemical composition or physical chemistry.

Subclass 13.44: Under SEE OR SEARCH CLASS

Delete:

The reference to Class 428

Subclass 13.45: Under SEE OR SEARCH CLASS

Delete:

The reference to Class 428

Insert:

428, Stock Material or Miscellaneous Articles, subclasses 822.3-822.5 for magneto-optic storage medium stock, per se, having rare earth in single magneto-optic magnetic layer.

Subclass 13.49: Under SEE OR SEARCH CLASS

Delete:

The reference to Class 428

Insert:

428, Stock Material or Miscellaneous Articles, subclasses 817-825.1 for magnetooptic storage medium, per se, having a specific chemical composition or physical chemistry.

Subclass 13.5: Under SEE OR SEARCH CLASS

Delete:

The reference to Class 428

Insert:

428, Stock Material or Miscellaneous Articles, subclasses 822.3-822.5 for magnetooptic storage medium stock, per se, having rare earth in single magneto-optic magnetic layer.

Subclass 272.1: Under SEE OR SEARCH CLASS

Delete:

The reference to Class 428

Insert:

428, Stock Material or Miscellaneous Articles, subclasses 817-825.1 for magnetooptic storage medium, per se, with specific chemical composition or physical chemistry.

Subclass 286: Under SEE OR SEARCH CLASS

Delete:

The reference to Class 428

Insert:

428, Stock Material or Miscellaneous Articles, subclasses 817-825.1 for magnetooptic storage media, per se, with specific composition or physical chemistry; subclass 848.9 for magneto-optic media disk substrate of specific composition or physical chemistry.

#### CLASS 427 - COATING PROCESSES

#### **Definitions Modified**

Subclass 131: Under SEE OR SEARCH CLASS

Delete:

The reference to Class 428

Insert:

428, Stock Material or Miscellaneous Articles, subclasses 692.1 and 693.1 for stock materials having a defined magnetic layer; and subclasses 800-848.9 for magnetic recording component or stock, with specific chemical composition or physical chemistry.

#### CLASS 428 – STOCK MATERIAL OR MISCELLANEOUS ARTICLES

#### **Definitions Abolished**

Subclasses

64.3, 65.3-65.7, 692-695

#### **Definitions Modified**

Class Definition: Under SECTION IV – GLOSSARY, after the definition for ANIMAL MEMBRANE

#### Insert:

#### **ANTIFERROMAGNETISM**

Antiferromagnetism occurs when the exchange interaction between neighboring atoms cancel each other, so the net magnetic moment is zero. Examples of antiferromagnetic materials are (Pt, Ir, Cr, and Pd) Mn alloys, and select transition metal oxides.

Under SECTION IV – GLOSSARY, after the definition for FABRIC

#### Insert:

#### **FERRIMAGNETISM**

Ferrimagnetic materials exhibit exchange interaction between neighboring atoms leading to adjacent moments; however, the magnetic moments are unequal and opposite in direction. The magnetic properties of ferrimagnetic materials are strongly temperature dependent and are characterized by their Curie temperature. Examples of ferrimagnetic materials are rare earth-transition metal amorphous alloys, such as GdFeCo, TbFeCo, and select granular transition-metal alloys.

#### **FERROMAGNETISM**

Ferromagnetic materials exhibit exchange interaction between neighboring atoms leading to adjacent moments. Ferromagnetism is temperature dependent and field strength dependent. Typical ferromagnetic materials include transition metals such as Fe, Ni, and Co and their alloys.

#### Under SECTION IV – GLOSSARY, after the definition for LAYER

#### Insert:

#### **MAGNETIC**

A material exhibiting the inherent property of magnetism, which is dependent on the electronic configuration of the atom, crystalline and molecular structure, and coupling between electrons arising from the orbital and spin magnetic moments of the nucleus and electrons. A material is considered magnetic for the purposes of this class if it exhibits a nonzero magnetic moment, such as in paramagnetism, ferromagnetism, and ferrimagnetism.

Under SECTION IV – GLOSSARY, after the definition for PAPER

#### Insert:

#### **PARAMAGNETISM**

Paramagnetic materials have magnetic moments not completely canceled because of electronic configuration and exhibit a resultant moment. Paramagnetic susceptibility is strongly temperature dependent. Examples of paramagnetic materials are CoCr alloys at specific Cr concentrations and materials exhibiting specific size ranges of either the magnetic grains or particle dimensions.

#### Subclass 611: Under SEE OR SEARCH THIS CLASS, SUBCLASS

#### Insert:

800-848.9, for magnetic recording component or stock.

#### **Definitions Established**

#### 692.1 Defined magnetic layer:

Subject matter under subclass 689 in which a layer or component thereof has disclosed properties which include magnetic susceptibility.

#### SEE OR SEARCH THIS CLASS, SUBCLASS:

800-848.9, for magnetic recording component or stock, with specific chemical composition or physical chemistry.

900, for an article having a magnetic feature.

#### 693.1 Next to second metal compound-containing layer:

Subject matter under subclass 692.1 wherein the magnetic component is in a metal compound-containing layer next to another metal compound-containing layer.

#### 800 MAGNETIC RECORDING COMPONENT OR STOCK:

Stock material under the class definition comprising a laminate of one or more layers deposited on a substrate, which laminate has a disclosed utility in a dynamic magnetic recording, magnetic reproducing, or magnetic storage apparatus or in a component thereof that consists of a layer of magnetizable material deposited on a substrate intended for information storage.

- Note. This subclass does not provide for magnetic recording media having an information-bearing track.
- (2) Note. Subclasses 544-691 have not been exhaustively screened for patents which meet the definition of subclasses 800-848.9; a search of these subclasses, in particular subclass 611, may thus be appropriate to ensure a complete search.

#### SEE OR SEARCH THIS CLASS, SUBCLASS:

846-848.9, for magnetic recording media structures that includes a specified substrate structure.

#### SEE OR SEARCH CLASS:

- 360, Dynamic Magnetic Information Storage or Retrieval, appropriate subclasses for storage elements that include discrete magnetic areas, inserts, spots, etc.
- 365, Static Information Storage and Retrieval, appropriate subclasses for static memory.
- 369, Dynamic Information Storage or Retrieval, appropriate subclasses for processes and apparatus for the storage or retrieval of arbitrarily variable information which is retained in a storage medium by variation of a physical characteristic, where the information is stored or retrieved by causing or sensing a variation of physical characteristic of the storage medium by a transducer having relative motion along a continuous path; and subclasses 272.1-291.1 for information-bearing storage medium with structure having an information-bearing track.

#### 810 Magnetic head:

Subject matter under subclass 800 in which the laminate of one or more layers has a disclosed utility as a component in a magnetic head or transducer (i.e., layer or laminate intended to sense stored magnetic information or to magnetically record information on a media) and which has a specified chemical composition, microstructure, or a property resulting from or influenced by microstructure of a layer or layers.

- (1) Note. The term "*microstructure*" is intended to mean atomic, magnetic, crystalline, molecular, or dimensional characteristics of less than 100 microns.
- (2) Note. A magnetic head or transducer is a device especially adapted to generate an electrical signal in response to a recorded magnetic bit on a media (e.g., a tape or disc) in relative motion to the device or to record a bit of information by magnetization in response to an electrical signal.

#### SEE OR SEARCH CLASS:

- 29, Metal Working, subclass 603.1 for a device which either (1) exhibits magnetic attraction when electrical current is applied, or (2) changes the magnitude or phase of an alternating current by inductive coupling, or (3) impedes a change of current flow by induced magnetism.
- 420, Alloys or Metallic Compositions, appropriate subclasses for alloy stock or strands which are claimed broadly as "magnetic", or "magnetized" or "permanent magnet" or are defined only in terms of their composition but are inherently magnetic, and for metallic stock or strands composed of a single metal.

#### 811 Magnetoresistive:

Subject matter under subclass 810 in which the laminate has material whose resistance varies in accordance with a magnetic field.

#### SEE OR SEARCH CLASS:

- 324, Electricity: Measuring and Testing, subclass 252 for magneto-resistive sensing means.
- 338, Electrical Resistors, subclass 32 for an electrical resistor which is responsive to a magnetic field.
- 365, Static Information Storage and Retrieval, subclass 8 for magnetic bubbles which use magnetoresistive devices, and subclass 158 for static storage systems which use magnetoresistive-type storage elements.
- 369, Dynamic Information Storage or Retrieval, subclasses 113-115 for magnetoresistive heads with or without specified chemical composition, microstructure, or property.

#### 811.1 Having tunnel junction effect:

Subject matter under subclass 811 in which the laminate has at least one tunnel junction effect.

(1) Note. Ferromagnetic magneto-resistive tunnel junction effect occurs when a current is applied in direction of the laminate between ferromagnetic layers sandwiching a nonmetal tunnel barrier layer; a tunnel current flowing in the tunnel barrier layer then changes, depending on the relative angle of magnetization between ferromagnetic layers.

#### SEE OR SEARCH CLASS:

360, Dynamic Magnetic Information Storage or Retrieval, subclass 324.2 for tunnel junction effect in a magnetic head.

#### 811.2 Multilayer:

Subject matter under subclass 811 in which the laminate comprises two or more layers, at least one of which exhibits magneto resistance.

# 811.3 Super lattice (e.g., giant magneto resistance (GMR) or colossal magneto resistance (CMR), etc.):

Subject matter under subclass 811.2 in which the multilayered laminate has repeated occurrence of a sequence of layers forming a single sensor.

(1) Note. Each sequence of layers whose sequence periodically repeats is termed a "period". The magnetoresistive response is dependent on the quantity of periods.

#### 811.4 Single film:

Subject matter under subclass 811 in which the laminate contains a single layer exhibiting magneto resistance.

#### 811.5 With defined structural feature:

Subject matter under subclass 811 in which the laminate has a particular structure specified such as a micro or macro physical topographic feature.

(1) Note. Sequence of the layers is not provided for in this subclass.

#### 812 Magnetic layer composition:

Subject matter under subclass 810 in which the laminate has a chemical composition specified for one or more of the magnetic layers.

(1) Note. The term "specified" means that a substance is identified by its chemical name or by its class of chemical compound structure (i.e., greater specificity than "organic compound" or "inorganic compound" is required).

#### SEE OR SEARCH CLASS:

- 106, Compositions: Coating or Plastic, particularly subclass 749 for strands, filaments, and records distinguished solely by compositions.
- 148, Metal Treatment, subclasses 300-315 for stock magnetic material claimed as resulting from metal treatment.
- 206, Special Receptacle or Package, subclasses 307-387.15 for a container for removably containing an article which includes machine readable information registered thereon.
- 235, Registers, subclass 493 for a record containing discrete bits which are coded markings on a record of magnetic material.
- 252, Compositions, subclasses 62.51-62.64 for compositions specialized and designed for use as magnetic materials, substances peculiar to such compositions, or processes of making compositions or substances.
- 346, Recorders, subclasses 134-138 for nonmagnetic records.
- 352, Optics: Motion Pictures, subclasses 1-37 for sound recording, including magnetic sound records, combined with motion picture structure.

420, Alloys or Metallic Compositions, appropriate subclasses for alloys or strands recited broadly as "magnetic", or "magnetized" or "permanent magnet" or defined only in terms of their inherently magnetic composition, and for metallic stock or strands composed of a single metal.

#### 813 Substrate composition:

Subject matter under subclass 810 in which the laminate has the chemical composition of the substrate identified.

(1) Note. The expression "chemical composition of the substrate identified" means that a substance is identified by its chemical name or by its class of chemical compound (i.e., greater specificity than "glass" or "inorganic compound" is required).

#### 814 With protective film:

Subject matter under subclass 810 in which the laminate has a layer or coating disclosed to resist physical or chemical deterioration or damage.

#### With defined laminate structural detail:

Subject matter under subclass 810 in which the laminate microstructure or macrostructure has been specified.

(1) Note. The term "specified" means that a substance is identified by its structure name or by its class of structure (i.e., greater specificity than "microstructure" or "macrostructure" is required).

#### 815.1 Head with slider structure:

Subject matter under subclass 815 in which the surface of the laminate head has a structure to allow for sliding contact with a magnetic recording media surface.

#### SEE OR SEARCH CLASS:

- 360, Dynamic Magnetic Information Storage or Retrieval, subclasses 234.3-237.1 for a floating slider in a fluid-bearing head support and subclass 246.2 for a full contact slider.
- 369, Dynamic Information Storage or Retrieval, subclass 300 for specific slider structure provided on a slider which is part of an optical head.

#### 815.2 With head pole component:

Subject matter under subclass 815 in which a chemical or microstructural feature includes a head pole component for reading information stored in the media by sensing transitions of magnetic domains.

#### With interlaminar component (e.g., adhesion layer, etc.):

Subject matter under subclass 810 in which the laminate includes a component in between layers (e.g., specified for adhesion or cohesion between adjacent layers).

#### 817 Magneto-optical media stock:

Subject matter under subclass 800 for a magnetic recording medium where the magnetic flux intensity from a recorded bit is determined by directing a beam of polarized light at the record surface and detecting the rotation angle of polarization caused by the flux.

#### SEE OR SEARCH CLASS:

- 360, Dynamic Magnetic Information Storage or Retrieval, subclass 114.1 for a magnetic record carrier, an element which consists of magnetizable material or comprised of a coating or impregnation of magnetizable material which includes discrete magnetic areas, inserts, spots, etc., each intended for the storage of single bits of information.
- 369, Dynamic Information Storage or Retrieval, subclasses 13.35-13.55 for storage media in combination with a light beam without specified composition or physical chemistry and subclass 272.1 for information-bearing storage medium with structure having an information-bearing track.

#### 818 Multiple magnetic layers, at least one of which is magneto-optic:

Subject matter under subclass 817 in which the laminate medium contains two or more magnetic layers, at least one of which is intended for magneto-optic recording.

#### 819 Unit structure (i.e., three or more differing magnetic layers in series):

Subject matter under subclass 818 in which the medium has three or more magnetic layers forming a structure as a unit.

#### 819.1 Reoccurring unit structure:

Subject matter under subclass 819 in which the medium has the unit structure repeated multiple times.

#### 819.2 Only three adjacent magnetic layers form series:

Subject matter under subclass 819 in which the medium has just three contiguous magnetic layers.

#### 819.3 Only four or six adjacent magnetic layers form series:

Subject matter under subclass 819 in which the medium has just four or six contiguous magnetic layers.

# 819.4 Magnetic layers and at least one intervening nonmagnetic layer (e.g., antiferromagnetic, dielectric, etc.):

Subject matter under subclass 819 in which the medium includes at least one nonmagnetic layer, positioned between adjacent magnetic layers (e.g., antiferromagnetic, paramagnetic, etc.).

#### Only two magnetic layers, at least one of which is magneto-optic:

Subject matter under subclass 818 in which the medium has only two magnetic layers present, at least one of which is magneto-optic responsive.

# 820.1 Magnetic layer pairs separated by single nonmagnetic (e.g., antiferromagnetic, dielectric, etc.) layer:

Subject matter under subclass 820 in which the medium has two magnetic layers separated by a nonmagnetic layer (e.g., antiferromagnetic, paramagnetic, etc.).

#### 820.2 Adjacent magnetic layers:

Subject matter under subclass 820 in which the medium has magnetic layers specified as being directly adjacent each other.

#### 820.3 Having in-plane orientated magnetization:

Subject matter under subclass 820.2 in which the medium has magnetic layers with magnetization aligned in the same magnetic plane.

#### 820.4 Magnetic layer composition specified:

Subject matter under subclass 820.2 in which the medium has a chemical composition of at least one magnetic layer specified.

(1) Note. The term "specified" means that a substance is identified by its chemical name or by its class of chemical compound (i.e., greater specificity than "organic compound" or "inorganic compound" is required).

#### 820.5 Specified performance related property (e.g., Kerr rotation, etc.):

Subject matter under subclass 820.2 in which one or more of the magnetic layers has properties (physical or chemical) related to performance identified.

(1) Note. The term "identified" means that a substance is identified by its property explicitly set forth in definite parameter terms.

#### 820.6 Curie temperature:

Subject matter under subclass 820.5 in which the property specified is the Curie temperature of at least one component.

(1) Note. The Curie temperature is the temperature above which the molecular forces of magnetism of paramagnetic bodies cease to exist.

#### 821 Single magneto-optic magnetic layer:

Subject matter under subclass 817 in which the one magnetic layer present in the medium is a magneto-optic layer.

#### 822 Magneto-optic magnetic layer contains transition metal:

Subject matter under subclass 821 in which the single magneto-optic magnetic layer contains an elemental or an alloyed transition metal.

(1) Note. In the periodic table, transition metals include elements 21 through 30 (scandium through zinc), 39 through 48 (yttrium through cadmium), 57 through 80 (lanthanum through mercury), and 89 through 103 (actinium through lawrencium).

#### 822.1 Magnetic transition metal oxide in magneto-optic layer:

Subject matter under subclass 822 in which the single magneto-optic layer has an oxide of a transition metal.

#### 822.2 Having garnet crystal structure:

Subject matter under subclass 822.1 in which the magnetic transition metal oxide has the garnet crystal structure.

#### 822.3 Rare-earth or lanthanum series element with iron or cobalt or nickel:

Subject matter under subclass 822 in which the medium contains one or more of Fe, Co, or Ni, in addition to one or more rare-earth element (i.e., an element of the group scandium (Sc), yttrium (Y), or lanthanum series) (i.e., elements of atomic numbers 57-71) element.

# 822.4 With additional element(s) other than rare-earth or lanthanum series element and iron, cobalt, or nickel:

Subject matter under subclass 822.3 in which the medium contains one or more elements in addition to the rare-earth or lanthanum series element, with iron or cobalt or nickel that is other than a rare-earth or lanthanum series element or iron or cobalt or nickel.

# 822.5 Rare-earth or lanthanum series element contained in separate lattice phase (e.g., scandium or yttrium in separate phase from FeCoNi, etc.):

Subject matter under subclass 822.3 in which the medium contains more than one phase wherein the rare-earth element is in a separate phase from the iron or cobalt or nickel containing phase.

With nonmagnetic metal (e.g., antiferromagnetic metal layer, Cu layer, etc.):
Subject matter under subclass 821 in which the medium contains a nonmagnetic metal layer or antiferromagnetic layer.

#### 823.1 Metal reflecting layer (e.g., reflecting polarized beam, etc.):

Subject matter under subclass 823 in which the metal layer is for reflecting a beam of (polarized) light.

#### 823.2 Al -, Ag -, Au -, or Cu-base reflecting layer:

Subject matter under subclass 823.1 in which the metal reflective layer is an elemental metal or alloy of more than 40% Al (aluminum), Ag (silver), Au (gold), or Cu (copper), or a combination of two or more of these metals.

#### With dielectric layer (e.g., SiO, AlN, ZnS, MgF<sub>2</sub>, etc.):

Subject matter under subclass 821 in which the medium also contains a layer that is dielectric.

#### 824.1 Plural dielectric layers or sections:

Subject matter under subclass 824 in which the dielectric layer is in more than one layer or in portions.

# 824.2 Plural compounds in single dielectric layer (e.g., mixed layer of TiN and TiC, etc.): Subject matter under subclass 824 in which the dielectric layer includes two or more distinct compounds.

#### 824.3 Dielectric layer having chalcogen (i.e., O, S, Se, or Te) compound:

Subject matter under subclass 824 in which the dielectric layer includes a chalcogen compound.

(1) Note. The term "chalcogen" includes oxygen, sulfur, selenium, or tellurium.

#### 824.4 Dielectric layer having nitride or carbide compound (e.g., TiN, TiC, etc.):

Subject matter under subclass 824 in which the dielectric layer has a carbide or nitride compound (e.g., TiC, TiN).

#### 824.5 Dielectric layer having refractive index specified:

Subject matter under subclass 824 in which the dielectric layer has a numerically specified refractive index.

#### 825 With topcoat:

Subject matter under subclass 821 in which the medium has a layer on its outermost surface (e.g., carbon or organic compound).

#### 825.1 Lubricant:

Subject matter under subclass 825 in which the topcoat is a lubricant (i.e., a substance for reducing friction (e.g., perfluoropolyether, etc.)).

#### 826 Thin film media:

Subject matter under subclass 800 in which the media or magnetizable material is a continuous layer free of polymeric binder having a thickness of approximately 1 angstrom to 100 micrometers.

#### SEE OR SEARCH CLASS:

- 148, Metal Treatment, subclasses 300-315 for stock magnetic material claimed as resulting from metal treatment.
- 252, Compositions, subclasses 62.51-62.64 for compositions specialized and designed for use as magnetic materials, substances peculiar to such compositions, or processes of making the compositions or substances.
- 346, Recorders, subclasses 134-138 for nonmagnetic records.
- Optics: Motion Pictures, subclasses 1-37 for sound recording, including magnetic sound records, combined with motion picture structure.
- 360, Dynamic Magnetic Information Storage or Retrieval, subclass 131 for specific structure of a record carrier for the storage of information.
- 365, Static Information Storage and Retrieval, subclasses 86 and 87 for static memory systems, apparatus, or processes using thin film magnetic shift register where information is transferred (shifted) from one magnetic element to another along an array where the magnetic element is thin film material; and subclass 171 for a nonshifting system where the magnetic element is thin film media.
- 420, Alloys or Metallic Compositions, appropriate subclasses for alloy stock or strands which are claimed broadly as "magnetic", or "magnetized" or "permanent magnet" or are defined only in terms of their composition but are inherently magnetic, and for metallic stock or strands composed of a single metal.
- 430, Radiation Imagery Chemistry: Process, Composition, or Product Thereof, subclass 39 for products or processes where magnetic force forms an image.

#### 827 Multiple magnetic layers:

Subject matter under subclass 826 in which the medium contains more than one magnetic layer.

#### SEE OR SEARCH CLASS:

360, Dynamic Magnetic Information Storage or Retrieval, appropriate subclasses for magnetic recording media that consists of a layer of magnetizable material deposited on a substrate that is intended for the storage of more than a single bit of information.

# Magnetic layers separated by nonmagnetic (antiferromagnetic, Cu, dielectric, etc.) layer(s):

Subject matter under subclass 827 in which there is at least one intervening nonmagnetic or antiferromagnetic layer between magnetic layers.

#### 828.1 Three or more magnetic layers on one substrate side:

Subject matter under subclass 828 in which the medium has at least three magnetic layers on a single side of the substrate, with at least one intervening nonmagnetic or antiferromagnetic layer.

Differing compositions in plurality of magnetic layers (e.g., layer compositions having differing elemental components, different proportions of elements, etc.):

Subject matter under subclass 827 having two or more magnetic layers, with each layer having a different composition.

# Plural magnetic layers of same empirical composition, each with different structure (e.g., differing crystalline lattice, atomic structure, etc.):

Subject matter under subclass 827 having a plurality of magnetic layers having the same chemical constituents but differing in crystal lattice or molecular arrangement.

# 831 Single magnetic layer having two or more nonmagnetic underlayers (e.g., seed layers, barrier layers, etc.):

Subject matter under subclass 826 in which the medium has a single magnetic layer and at least two nonmagnetic layers between substrate and the magnetic layer.

- (1) Note. "Underlayer" encompasses a layer designated by position (e.g., precoat layer, prelayer, base layer, sublayer, ground layer) or designated by function such as nucleation layer, seed layer, barrier layer, corrosion prevention layer, diffusion prevention layer, or texture layer.
- (2) Note. This subclass includes chemically modified substrate surface (e.g., oxidized, etc.).

#### 831.1 Including NiP underlayer:

Subject matter under subclass 831 in which the medium includes NiP underlayer.

#### 831.2 Specified physical structure of underlayer (e.g., texture, etc.):

Subject matter under subclass 831 in which the medium underlayer includes an identified physical structure.

(1) Note. This subclass provides for microstructure influencing magnetic properties.

#### SEE OR SEARCH THIS CLASS, SUBCLASS:

848.2 and 848.3, for disk substrates having a specified roughness or texture above the microscale (i.e., more than 100 micrometers).

847.4-847.7, for substrates with texture as an end result of a layer.

#### 832 Single magnetic layer and single underlayer:

Subject matter under subclass 826 in which the medium has a single magnetic layer and a single layer between substrate and the magnetic layer.

#### 832.1 Co or Co-base magnetic layer:

Subject matter under subclass 832 in which the medium single magnetic layer is cobalt or cobalt-base alloy containing 40% or more cobalt.

#### 832.2 Cr or Cr-base underlayer:

Subject matter under subclass 832.1 in which the medium single underlayer consists of chromium or chromium-base alloy containing 40% or more chromium.

#### 832.3 Ni or Ni-base underlayer:

Subject matter under subclass 832 in which the medium single underlayer consists of nickel or nickel-base alloy containing 40% or more nickel.

# 832.4 Polymeric underlayer (e.g., polymeric adhesion layer, plasma polymerized carbon, etc.):

Subject matter under subclass 832 in which the medium single underlayer is polymeric.

#### 833 Single magnetic layer with plural overcoat layers:

Subject matter under subclass 826 in which the medium includes a single magnetic layer and two or more layers on its upmost side.

(1) Note. The outer surface side is the side facing away from the substrate and adjacent to the magnetic layer.

#### 833.1 Inorganic overcoat layer:

Subject matter under subclass 833 in which the medium has an overcoat layer that is inorganic.

(1) Note. The term "inorganic" means that the components do not include organic carbon bonds.

#### 833.2 Carbon overcoat (e.g., graphite, diamond like, doped carbon, etc.):

Subject matter under subclass 833.1 in which at least one of the inorganic overcoat layers is made of carbon (e.g., graphite, etc.).

#### 833.3 With lubricant over carbon layer:

Subject matter under subclass 833.2 in which the overcoat layer includes a lubricant (i.e., a substance for reducing friction or wear) directly on the carbon layer.

 Note. Included in this subclass are lubricants which are chemically or physically bonded to the carbon layer.

#### 833.4 Plural lubricant layers over carbon layer:

Subject matter under subclass 833.3 in which the medium has at least two distinct layers of lubricant over the carbon layer.

#### 833.5 Having elemental nitrogen in carbon layer:

Subject matter under subclass 833.2 in which the carbon layer contains uncombined nitrogen.

#### 833.6 With lubricant:

Subject matter under subclass 833.5 in which the carbon layer has a lubricant (i.e., a substance for reducing friction).

#### 834 Single magnetic layer with single specified overcoat layer:

Subject matter under subclass 826 in which the medium has a single magnetic layer and a single overcoat layer.

#### SEE OR SEARCH THIS CLASS, SUBCLASS:

833.3, 833.4, and 833.6, for specific lubricants in combination with a specified overcoat layer.

#### 835 Carbon overcoat (e.g., graphite, diamond like, doped carbon, etc.):

Subject matter under subclass 834 in which the single overcoat layer is made of carbon (e.g., graphite, etc.).

#### 835.1 Sputter-formed carbon overcoat:

Subject matter under subclass 835 in which the single elemental carbon overcoat layer has been formed by sputtering.

#### SEE OR SEARCH CLASS:

204, Chemistry: Electrical and Wave Energy, subclass 192.11 for sputter deposition processes.

#### 835.2 Plasma-formed carbon overcoat:

Subject matter under subclass 835 in which the single elemental carbon overcoat layer of the medium has been formed by plasma deposition.

#### SEE OR SEARCH CLASS:

- 204, Chemistry: Electrical and Wave Energy, subclass 192.38 for vacuum arc discharge coating utilizing processes for the deposition of a coating onto a substrate within a vacuum environment by the action of an arc discharge between an anode and a cathode wherein the source material is the cathode, per se, or the source material is on the cathode.
- 219, Electric Heating, particularly subclasses 73.11, 73.21, and 76.1-77 for coating operations that involve a buildup of metal coating on a metal work piece and wherein an arc between an electrode and the work is utilized.

427, Coating Processes, subclasses 127-132 for forming a magnetic coating.

#### 835.3 Fullerene carbon:

Subject matter under subclass 835 in which the single elemental carbon overcoat layer contains fullerene carbon.

(1) Note. Fullerene carbon is generally carbon with 20-1,000 atoms having pentagonal or hexagonal faces.

# 835.4 Containing elemental nitrogen in carbon overcoat:

Subject matter under subclass 835 in which the carbon overcoat layer contains uncombined nitrogen.

#### 835.5 Textured surface overcoat:

Subject matter under subclass 835 in which the single elemental carbon overcoat layer has a specified texture or a particular external surface quality.

#### 835.6 Organic compound overcoat:

Subject matter under subclass 834 in which the single overcoat layer of the medium is comprised of an organic compound.

(1) Note. When the expression "organic compound" is used in this class, it means a compound characterized by two carbons bonded together, one atom of carbon bonded to at least one atom of hydrogen or halogen, or one atom of carbon bonded to at least one atom of nitrogen by a single or double bond.

#### 835.7 Fluorocarbon:

Subject matter under subclass 835.6 in which the overcoat includes an organic compound of fluorine.

# 835.8 Perfluoropolyether:

Subject matter under subclass 835.7 in which the fluorocarbon overcoat consists of a perfluoropolyether compound.

#### 836 Single magnetic layer:

Subject matter under subclass 826 in which the medium has only a single magnetic layer.

# 836.1 Metal or alloy magnetic layer:

Subject matter under subclass 836 in which the medium consists of only elemental metal or alloy.

#### 836.2 Magnetic layer having oxygen (i.e., uncombined or oxide):

Subject matter under subclass 836 in which the magnetic layer includes magnetic metal oxide or a magnetic layer with uncombined oxygen present within the magnetic elemental metal or the alloy lattice structure.

# 836.3 Magnetic layer having inorganic compound of Si, N, P, B, H, or C:

Subject matter under subclass 836 in which the magnetic layer includes an inorganic compound of Si, N, P, B, H, or C within the layer (e.g., CoPtCrB, etc.).

# With nonmagnetic backcoat layer (e.g., inorganic particles in polymer, carbon, etc.): Subject matter under subclass 826 in which the medium has a nonmagnetic layer on the substrate side opposite the magnetic layer.

(1) Note. The backcoat layer is the layer directly contacting the substrate on the side opposite the side having a magnetic layer.

#### SEE OR SEARCH THIS CLASS, SUBCLASS:

847.1, 847.4, and 847.5, for substrate which is a laminate or which has precoating on a side opposite to the magnetic layer.

#### 838 Binder media:

Subject matter under subclass 800 wherein the magnetizable material of the recording medium dispersed in a binder (i.e., magnetic particulate dispersed in binder).

(1) Note. A binder is secondary material which is usually an organic polymer holding a layer having magnetic particulate material together.

#### SEE OR SEARCH CLASS:

- 252, Compositions, subclasses 62.51-62.64 for compositions specialized and designed for use as magnetic materials, substances peculiar to such compositions, or processes of making compositions or substances.
- 346, Recorders, subclasses 134-138 for nonmagnetic records.
- 352, Optics: Motion Pictures, subclasses 1-37 for sound recording, including magnetic sound records, combined with motion picture structure.
- 360, Dynamic Magnetic Information Storage or Retrieval, subclass 131 for specific structure of a record carrier for the storage of information.

# 839 Multiple magnetic layers:

Subject matter under subclass 838 in which the magnetic recording medium has two or more magnetic layers.

# 839.1 Magnetic layers only on single side of substrate:

Subject matter under subclass 839 in which the medium has plurality of magnetic layers on a single side of the substrate (i.e., two or more magnetic layers).

(1) Note. These magnetic layers are all present on the same side of the substrate.

# 839.2 Two magnetic layers on single side of substrate:

Subject matter under subclass 839.1 in which the medium has exactly two magnetic layers on the same side of the substrate.

(1) Note. These magnetic layers are all present on the same side of the substrate.

# 839.3 Chemically specified magnetic material:

Subject matter under subclass 839.2 in which the magnetic composition in one or more of the layers has been chemically identified.

(1) Note. The expression "chemically identified" means that a substance is identified by its chemical name or by its class of chemical compound (i.e., greater specificity than generic "ferrite" is required).

# 839.4 Chemically specified binder:

Subject matter under subclass 839.2 in which the medium includes a chemically identified binder in the magnetic layers.

(1) Note. The expression "specific binder" means that a substance is identified by its chemical name or by its class of chemical compound (i.e., greater specificity than "polymeric" or "inorganic compound" is required).

#### 839.5 With chemically identified adjuvant:

Subject matter under subclass 839.2 in which the medium includes a chemically identified additional component to enhance binder effectiveness.

(1) Note. The term "identified" means that a substance is identified by its chemical name or by its class of chemical compound (i.e., greater specificity than "organic compound" or "inorganic compound" is required).

# 839.6 Specified property (e.g., density, Tg, etc.):

Subject matter under subclass 839.2 in which a characteristic of the medium (e.g., density, glass transition temperature, Vickers hardness, Young's modulus of the magnetic layers, etc.) is identified.

#### 840 Single magnetic layer with underlayer:

Subject matter under subclass 838 in which the medium has a single magnetic layer and one or more nonmagnetic layers in contact with the substrate and between the substrate and the magnetic layer.

(1) Note. Included in this subclass are transfer tapes with a removable single magnetic layer.

# SEE OR SEARCH THIS CLASS, SUBCLASS:

- 40.1-42.3, for a nonmagnetic product which layers lie removable on the outermost surface of the web or sheet.
- 200, for a nonmagnetic product which must be heated to destroy the adhesion or cohesion of a layer to an adjacent layer or component.
- 202, for a nonmagnetic product which layers lie on the outermost surface of the web or sheet and are removable from the web or sheet.

352, for a nonmagnetic product web or sheet having a layer of adhesive as an outermost coating and a release or antistick coating associated therewith on the side of the base opposite to the adhesive layer.

#### 840.1 Underlayer composition or structure:

Subject matter under subclass 840 in which the medium has the chemical composition or arrangement of atoms of molecules of one or more of the underlayers specified.

(1) Note. The term "specified" means that a substance is identified with greater specificity than "organic compound" or "inorganic compound".

# 840.2 Nonmagnetic particles in underlayer (e.g., Al<sub>2</sub>O<sub>3</sub> particles, etc.):

Subject matter under subclass 840.1 in which the medium underlayer contains nonmagnetic particles.

#### 840.3 Carbon black particles:

Subject matter under subclass 840.2 in which the medium underlayer contains carbon black particles.

# 840.4 Lubricant in underlayer (e.g., perfluoether, etc.):

Subject matter under subclass 840.1 in which the medium underlayer contains a material identified as a lubricant (i.e., a substance for reducing friction or wear).

(1) Note. Included in this subclass are migrating lubricants, which are intended to move around within the medium, as well as single-layer lubricants.

# 840.5 Chemically identified underlayer binder:

Subject matter under subclass 840.1 in which the medium underlayer contains a chemically identified binder.

(1) Note. The expression "chemically identified" means that a substance is identified by its chemical name or by its class of chemical compound (i.e., greater specificity than "polymeric" is required).

#### 840.6 Magnetic layer chemical composition:

Subject matter under subclass 840 in which the composition of the single magnetic layer in the medium is specified by physical chemistry or chemical compound (e.g., by lattice structure, etc.).

(1) Note. The term "specified" means that a substance is identified by its chemical name or by its class of chemical compound (i.e., greater specificity than "ferromagnetic" or "inorganic compound" is required).

# 841 Single magnetic layer with overcoat:

Subject matter under subclass 838 in which the medium has an overcoat layer on the magnetic layer bearing side of the substrate (i.e., the head contact surface).

# 841.1 Two overcoat layers:

Subject matter under subclass 841 in which the medium has exactly two overcoat layers.

#### SEE OR SEARCH THIS CLASS, SUBCLASS:

- 40.1-42.3, for a nonmagnetic product which layers lie removable on the outermost surface of the web or sheet.
- 200, for a nonmagnetic product which must be heated to destroy the adhesion or cohesion of a layer to an adjacent layer or component.
- 202, for a nonmagnetic product which layers lie on the outermost surface of the web or sheet and are removable from the web or sheet.
- 352, for a nonmagnetic product web or sheet having a layer of adhesive as an outermost coating and a release or antistick coating associated therewith on the side of the base opposite to the adhesive layer.
- 847.1, for a composite or coated organic polymer substrate.

#### 841.2 Chemical composition of overcoat specified:

Subject matter under subclass 841 in which the overcoat layer chemical composition is specified chemically or physically (e.g., by lattice structure, etc.).

(1) Note. The expression "chemical composition is specified" means that a substance is identified by its chemical name or by its class of chemical compound (i.e., greater specificity than "organic compound" or "inorganic compound" is required).

#### 841.3 Lubricant in overcoat layer:

Subject matter under subclass 841.2 in which the overcoat layer has a lubricant (i.e., a substance to reduce friction or wear).

#### 842 Single magnetic layer:

Subject matter under subclass 838 in which the medium has only one magnetic layer.

# 842.1 Having chemically specified magnetic particles (e.g., FeCo, CoNiPt, etc.):

Subject matter under subclass 842 in which the single magnetic layer contains magnetic particles specified.

(1) Note. The expression "chemically specified" means that a substance is identified by chemical name or by chemical compound structure (i.e., greater specificity than "ferromagnetic" is required).

# 842.2 Organic compound encapsulated or coated magnetic particles (e.g., polystyrene encapsulated magnetic particles, etc.):

Subject matter under subclass 842.1 in which the magnetic particles in the magnetic layer have been coated or encapsulated with an organic compound.

# 842.3 Ferromagnetic (elemental or alloy) particles:

Subject matter under subclass 842.1 in which the magnetic particles in the layer are composed of a ferromagnetic metal or alloy.

# 842.4 Inorganic compound encapsulated or coated magnetic particles (e.g., Co oxide coated Fe particles, etc.):

Subject matter under subclass 842.3 in which the magnetic particles in the magnetic layer are coated or encapsulated with an element or an inorganic compound (e.g., Co or Co oxide coated Fe particles, etc.).

#### 842.5 Magnetic metal oxide, nitride, or carbide particles:

Subject matter under subclass 842.1 in which magnetic particles in the magnetic layer are metal oxide, metal nitride, or metal carbide compound particles.

# 842.6 Inorganic compound encapsulated or coated magnetic particles (e.g., Co coated $Fe_2O_3$ , etc.):

Subject matter under subclass 842.5 in which magnetic particles in the magnetic layer are coated with an element or inorganic compound.

#### 842.7 Chromium oxide:

Subject matter under subclass 842.5 in which the magnetic particles in the magnetic layer are composed of chromium oxide.

# 842.8 Hexagonal or plate lattice-shaped oxides:

Subject matter under subclass 842.5 in which the magnetic particles have a hexagonal or plate lattice shape.

#### 842.9 Magnetic metal nitride or carbide:

Subject matter under subclass 842.5 in which the magnetic particles contained in the magnetic layer are metallic nitride or carbide compound particles.

# With organic compound adjuvant in magnetic layer:

Subject matter under subclass 842 in which the medium also has an organic compound adjuvant in the magnetic layer to modify or enhance a property.

(1) Note. This subclass does not include a binder.

# SEE OR SEARCH THIS CLASS, SUBCLASS:

839.5, for magnetic recording media with binders that include an adjuvant.

# 843.1 Dispersant or surfactant:

Subject matter under subclass 843 in which organic compound adjuvant is a surface active dispersant or surfactant.

#### 843.2 Inhibitor:

Subject matter under subclass 843 in which the organic compound adjuvant delays or retards a chemical change in one or more layer.

#### 843.3 Lubricant:

Subject matter under subclass 843 in which the organic compound adjuvant is a lubricant (i.e., a substance for reducing friction or wear).

#### SEE OR SEARCH THIS CLASS, SUBCLASS:

833.3, 833.4, and 833.6, for lubricating layer on binder media.

#### 843.4 Ester:

Subject matter under subclass 843.3 in which the lubricant is an ester (i.e., a compound formed from reacting an organic acid and an alcohol).

#### 843.5 Fluorine compound:

Subject matter under subclass 843.3 in which the lubricant is a fluorine compound.

#### 843.6 Silicon compound:

Subject matter under subclass 843.3 in which the lubricant is an organic compound that includes silicon.

# 843.7 Acids, amines, amides, or salts thereof:

Subject matter under subclass 843 in which the organic compound adjuvant is an amine, amide, acid, or their salts.

# With nonmagnetic particles (e.g., hematite particles, polystyrene, and polyisoprene copolymer, etc.):

Subject matter under subclass 842 in which the magnetic layer contains nonmagnetic particles.

# 844.1 Only single-type nonmagnetic particle:

Subject matter under subclass 844 in which the medium magnetic layer has only one structure nonmagnetic particle.

# 844.2 Surface modified particle (e.g., aluminum oxide coated particles, etc.):

Subject matter under subclass 844.1 in which the magnetic layer contains nonmagnetic particles whose surfaces have been altered.

# 844.3 Alumina particle (i.e., $Al_2O_3$ ):

Subject matter under subclass 844.1 in which the nonmagnetic particle is a compound of alumina (aluminum oxide).

# 844.4 Carbon black particle (e.g., lamp carbon, etc.):

Subject matter under subclass 844.1 in which the nonmagnetic particle is a compound of carbon in the form of carbon black.

#### 844.5 Chemically specified polymer binder:

Subject matter under subclass 842 in which the magnetic layer medium has an identified polymeric binder having a specified physical or chemical structure.

(1) Note. The expression "chemically specified" means that a substance is identified by its chemical name or by its class of chemical compound (i.e., greater specificity than "polymeric" is required).

# 844.6 Radiation cured (i.e., cross linked) binder:

Subject matter under subclass 844.5 in which the binder is one that has been cured by radiation.

(1) Note. This subclass provides for radiation cross-linked binders. Radiation cross-linking may cause chain scission and differences in the magnetic layer from other induced cross linking.

# 844.7 Plural chemically specified polymeric binders in single layer:

Subject matter under subclass 844.5 wherein two or more different binders have been chemically identified as present in the magnetic layer.

(1) Note. More than a single binder must be identified as to its specific structure; nominal recitation of a second binder, or relationship with a second binder, is not proper for this subclass.

# SEE OR SEARCH THIS CLASS, SUBCLASS:

844.5 and 844.6, for single binder with specific disclosed structure.

#### 844.71 Polyurethane binder with vinyl chloride binder:

Subject matter under subclass 844.7 wherein the plural binders in the magnetic layer are a specific polyurethane compound binder and a specific vinyl chloride compound binder.

#### 844.8 Polyurethane binder:

Subject matter under subclass 844.5 wherein the single binder present in the magnetic layer is specific polyurethane compound.

# 844.9 Vinyl chloride binder:

Subject matter under subclass 844.5 wherein the single binder in the magnetic layer is a specific structure polyvinyl chloride.

#### Nonmagnetic backcoat layer (e.g., polysiloxane, etc.):

Subject matter under subclass 838 in which the medium has a nonmagnetic layer opposite the magnetic recording layer side of the substrate.

(1) Note. This subclass provides for a medium having a nonmagnetic substrate coating opposite the magnetic layer side of the substrate.

#### SEE OR SEARCH THIS CLASS, SUBCLASS:

846.2-846.4, 847.1, and 847.5, for laminated, coated, or surface treated magnetic recording composite substrates.

### 845.1 Nonmagnetic particles in backcoat layer (TiO<sub>2</sub>, ZnO, SiO<sub>2</sub>, etc.):

Subject matter under subclass 845 in which the nonmagnetic backcoat layer contains nonmagnetic particles.

# 845.2 Carbon black particles:

Subject matter under subclass 845.1 in which the nonmagnetic backcoat layer contains carbon black particles.

# 845.3 With additional nonmagnetic particles:

Subject matter under subclass 845.2 in which the backcoat layer has carbon black particles and other nonmagnetic particles in the binder.

### 845.4 With additive (e.g., lubricant, etc.):

Subject matter under subclass 845 in which the nonmagnetic backcoat layer contains an additive component in addition to particles and binders (e.g., a substance that reduces friction, etc.).

# 845.5 Having specified property (e.g., average roughness (Ra), etc.):

Subject matter under subclass 845 in which the backcoat layer has a physical property identified.

# 845.6 For servo tracking:

Subject matter under subclass 845.5 in which the medium backcoat layer provides for servo tracking information, including closed-loop control of the alignment between track and information processing means, on the backcoat layer.

#### SEE OR SEARCH CLASS:

360, Dynamic Magnetic Information Storage or Retrieval, subclasses 77.01-77.17 for track centering aligning a transducer head with the midpoint of a continuous information containing path.

# 845.7 Chemically specified polymeric binder:

Subject matter under subclass 845 in which the binder of the backcoat layer has been specified chemically.

(1) Note. The expression "chemically specified" means that a substance is identified by its chemical name or by its class of chemical compound (i.e., greater specificity than "polymeric" is required).

# 846 Magnetic recording media substrate:

Subject matter under subclass 800 in which a layer or laminate provides physical integrity to a magnetic recording media by acting as base or support for a magnetic recording layer.

(1) Note. This subclass provides for media details substrate set forth with chemical or structural specificity.

#### SEE OR SEARCH CLASS:

360, Dynamic Magnetic Information Storage or Retrieval, subclass 131 for specific structure of a record carrier for the storage of information.

### 846.1 Inorganic substrate:

Subject matter under subclass 846 in which the substrate is composed of inorganic material.

# SEE OR SEARCH THIS CLASS, SUBCLASS:

846.2 and 846.3, for inorganic substances contained in a polymeric matrix.

#### 846.2 Composite or coated substrate (e.g., ceramic-epoxy composite, etc.):

Subject matter under subclass 846.1 in which the substrate has two or more contiguous layers or portions of distinct components (e.g., glass containing metallic particles, etc.).

(1) Note. Included in this subclass are an inorganic structural element and an organic compound as metallic particles and resin, etc.

#### 846.3 Silicon compound coating:

Subject matter under subclass 846.2 in which the composite substrate has a contiguous layer of a silicon compound.

#### 846.4 Anodized or oxidized aluminum or aluminum-base alloy:

Subject matter under subclass 846.2 in which an aluminum or aluminum-base alloy substrate has an oxide coating or has been anodized or otherwise oxidized.

(1) Note. Included in this subclass are substrates with filled pores that comprise anodized or oxidized aluminum or aluminum-based alloy.

#### 846.5 Carbon substrate:

Subject matter under subclass 846.1 in which the substrate is composed of elemental carbon.

#### 846.6 Metallic (i.e., elemental or alloy) substrate:

Subject matter under subclass 846.1 in which the substrate is metallic.

(1) Note. This subclass includes metals in elemental and alloy form.

#### 846.7 Al or Al-base alloy substrate:

Subject matter under subclass 846.6 in which the substrate is composed of elemental aluminum or an aluminum-base alloy (i.e., an alloy containing 40% or more aluminum).

#### 846.8 Ti or Ti-base alloy substrate:

Subject matter under subclass 846.6 in which the substrate is composed of elemental titanium or a titanium base alloy (i.e., an alloy containing 40% or more titanium).

# 846.9 Glass or ceramic substrate:

Subject matter under subclass 846.1 in which the substrate is composed of glass or ceramic.

(1) Note. This subclass includes amorphous and crystalline glasses as well as ceramic compositions.

### SEE OR SEARCH THIS CLASS, SUBCLASS:

- 426, for a layer of quartz or glass next to a nonmagnetic material.
- 848.2, for glass in ceramic substrates with texture.

# 847 Organic polymer substrate:

Subject matter under subclass 846 in which the substrate is composed of solid polymer compound or polymeric composition (e.g., polyurethane, melamine resin, etc.).

# SEE OR SEARCH THIS CLASS, SUBCLASS:

847.6, for a polymeric composition comprised of one or more polymers and/or inorganic particulate components.

#### 847.1 Composite or coated nonesterfied substrate:

Subject matter under subclass 847 in which the substrate is other than an ester and composed of plural layers (i.e., laminate or distinct nonparticulate components contained in a single layer).

- (1) Note. A coating on an organic substrate directed to the improvement of the properties of the substrate and not affecting the crystalline anisotropy of a subsequently deposited layer (e.g., a coating solely for adhesive, texture, etc.) is provided for in this subclass.
- (2) Note. Included in this subclass are substrate leader and trailer tapes.

# 847.2 Polyester substrate (e.g., polyethylene terephthalate, etc.):

Subject matter under subclass 847 in which the polymer substrate includes an ester group thereon such as carboxylic acid ester.

# SEE OR SEARCH THIS CLASS, SUBCLASS:

847.1, for a composite or coated organic polymer substrate.

#### 847.3 Containing naphthalene ring (e.g., polyethylenenaphthalate, etc.):

Subject matter under subclass 847.2 in which polyester substrate contains a naphthalene ring structure.



Example of a naphthalene ring structure.

# 847.4 Laminate of two or more layers:

Subject matter under subclass 847.2 in which the polyester polymer substrate is composed of two or more layers, at least one of which is the polyester layer.

# 847.5 Coated or surface treated layer (e.g., by corona discharge, etc.):

Subject matter under subclass 847.2 in which the polyester polymer layer has been coated or surface treated.

(1) Note. Included in this subclass are polyester substrate leader and trailer tapes.

# 847.6 Containing particles (e.g., aluminum carbonate particles, calcium carbonate particles, etc.):

Subject matter under subclass 847.2 in which the single polyester polymer layer contains particles (e.g., aluminum carbonate particles, calcium carbonate particles, etc.).

# 847.7 Having specific surface feature or roughness (e.g., by added particles, etc.):

Subject matter under subclass 847.6 in which the single polyester polymer layer, which contains particles, has a definite surface feature or roughness.

# 847.8 Polymer containing specified ring structure:

Subject matter under subclass 847 in which the substrate layer contains an organic ring structure such as benzyl groups, 1,4-dihydroxydimethylbenzene, etc.

#### 848 Circular shape (e.g., disk, etc.):

Subject matter under subclass 846 in which the substrate is in the form of a circular disk.

#### SEE OR SEARCH THIS CLASS, SUBCLASS:

900, for a collection of magnetizable stock material.

#### SEE OR SEARCH CLASS:

- 360, Dynamic Magnetic Information Storage or Retrieval, subclass 135 for a disc having information recorded thereon in magnetic form.
- 369, Dynamic Information Storage or Retrieval, subclasses 272.1-291.1 for a disc having information recorded thereon in the form of grooves.

#### 848.1 Having zones (e.g., landing zone or contact stop/start (CSS) zone, etc.):

Subject matter under subclass 848 in which the circular shape substrate has areas or regions distinguished from adjacent parts by a distinctive feature or characteristic (e.g., landing zone or contact stop/start (CSS) zone, data zone, etc.).

#### 848.2 Specified texture or roughness (e.g., average roughness (Ra), etc.):

Subject matter under subclass 848 in which the disk substrate has a specified surface finish, irregularity, or amount of surface unevenness (e.g., Ra, Rz, etc.).

#### 848.3 Uniform texture:

Subject matter under subclass 848.2 for a disk substrate where the texture projections or "bumps" are arranged in an orderly fashion relative to a surface (e.g., by laser irradiation or photolithography).

(1) Note. A uniform texture is also known in the art as a "regular" texture.

#### 848.4 Stretched surface:

Subject matter under subclass 848 in which the disc substrate surface has been extended by stretching.

# 848.5 Having specified pits, tracks, or indicia:

Subject matter under subclass 848 in which the disk substrate has depressions or grooves (e.g., pits which may be used for address information).

#### SEE OR SEARCH CLASS:

- 235, Registers, subclass 493 for a record containing discrete bits of magnetic material, the bits being coded markings on a record.
- 360, Dynamic Magnetic Information Storage or Retrieval, subclass 134 for a recording tape having recording thereon.

# 848.6 Edge feature (e.g., chamfered edge, etc.):

Subject matter under subclass 848 in which the disk substrate has edge of particular profile or coating at the outer extremity of the disk.

# 848.7 Disk in holder (e.g., disk in casing, etc.):

Subject matter under subclass 848 in which the disk is within an enclosure.

(1) Note. This subclass provides for a medium wherein the circular-shaped substrate is within a container distinguished by composition.

#### SEE OR SEARCH CLASS:

- 206, Special Receptacle or Package, subclasses 307-387.15 for a container for removably containing an article which includes machine readable information registered thereon.
- 360, Dynamic Magnetic Information Storage or Retrieval, subclass 133 for specific structure of a record carrier in the form of a disk distinguished by the container in which it is housed.

# 848.8 Disk property resulting from specified process (e.g., injection molding, photolithography, sintering, etc.):

Subject matter under subclass 848 in which the disk has a property that is the product of a specific method of production such as a specified shaping method (e.g., injection molding, photolithography, sintering, etc.).

(1) Note. Mere recitation of a product produced by a method is not sufficient to place a patent in this subclass. The product of a specific method with parameters must be recited as a description of the disk.

#### 848.9 Magneto-optic media disc:

Subject matter under subclass 848 in which the disk substrate has identified utility as a magneto-optic disk substrate.

#### FOR 122 Magneto optical recording medium or carrier:

Foreign art collection wherein the recording medium or carrier is composed of a magnetic material and records information based on changes in magnetization and the recorded information is readable; e.g., by diffraction of polarized light through a magnetic field, etc.

# FOR 123 Magnetic recording medium or carrier:

Foreign art collection wherein the recording medium or carrier contains magnetizable material in the form of particles, film, coating, layer, or impregnant which is intended for the storage of more than a single bit of information to be read by a magnetic head.

#### **FOR 124 Lubricant containing:**

Foreign art collection wherein the recording medium or carrier contains a substance that reduces friction.

# FOR 125 Protective layer containing:

Foreign art collection wherein the magnetic recording medium or carrier layer is covered by a resistant layer; e.g., resistant to heat, cold, oxidation, pollution, etc.

#### FOR 126 Aluminum containing:

Foreign art collection wherein the magnetic recording medium or carrier contains aluminum as a free metal, combined metal, and includes alloys and metal compounds.

### FOR 127 Chromium containing:

Foreign art collection wherein the magnetic recording medium or carrier contains chromium as a free metal, combined metal, and includes alloys and metal compounds.

#### FOR 128 Defined magnetic layer:

Foreign art collection in which a layer or component thereof has disclosed properties which include magnetic susceptibility.

# FOR 129 Next to second metal-compound-containing layer:

Foreign art collection wherein the magnetic component is in a metal-compound-containing layer next to another metal-compound-containing layer.

#### FOR 130 Dynamic recording medium:

Foreign art collection which has a use as a recording medium, e.g., tape, disc, etc., which is "read" by using relative motion between the medium and the reading device and wherein the composition of a backing or support material is not defined in the claims.

# FOR 131 Magneto optical recording layer:

This foreign art collection was derived from an undefined alpha subclass. Consult the documents contained herein to clarify or interpret the title and scope of this foreign art collection.

# FOR 132 Specified recording layer composition:

This foreign art collection was derived from an undefined alpha subclass. Consult the documents contained herein to clarify or interpret the title and scope of this foreign art collection.

### FOR 133 Lanthanoid:

This foreign art collection was derived from an undefined alpha subclass. Consult the documents contained herein to clarify or interpret the title and scope of this foreign art collection.

# FOR 134 Garnet or magnetoplumbite:

This foreign art collection was derived from an undefined alpha subclass. Consult the documents contained herein to clarify or interpret the title and scope of this foreign art collection.

#### FOR 135 Separate refractive, anti-reflective or protective layer composition:

#### FOR 136 Pure metal or alloy:

This foreign art collection was derived from an undefined alpha subclass. Consult the documents contained herein to clarify or interpret the title and scope of this foreign art collection.

#### FOR 137 Rare earth:

This foreign art collection was derived from an undefined alpha subclass. Consult the documents contained herein to clarify or interpret the title and scope of this foreign art collection.

# FOR 138 Nitride, carbide, or fluoride:

This foreign art collection was derived from an undefined alpha subclass. Consult the documents contained herein to clarify or interpret the title and scope of this foreign art collection.

#### FOR 139 Oxide or sulfide:

This foreign art collection was derived from an undefined alpha subclass. Consult the documents contained herein to clarify or interpret the title and scope of this foreign art collection.

#### FOR 140 Reflective layer specified:

This foreign art collection was derived from an undefined alpha subclass. Consult the documents contained herein to clarify or interpret the title and scope of this foreign art collection.

# FOR 141 With plasma polymerized organic top coat or other adhesive layer:

This foreign art collection was derived from an undefined alpha subclass. Consult the documents contained herein to clarify or interpret the title and scope of this foreign art collection.

#### FOR 142 Multiple magnetic layers:

This foreign art collection was derived from an undefined alpha subclass. Consult the documents contained herein to clarify or interpret the title and scope of this foreign art collection.

### FOR 143 Exchange coupling:

This foreign art collection was derived from an undefined alpha subclass. Consult the documents contained herein to clarify or interpret the title and scope of this foreign art collection.

# FOR 144 Magnetically or thermally isolated:

This foreign art collection was derived from an undefined alpha subclass. Consult the documents contained herein to clarify or interpret the title and scope of this foreign art collection.

#### **FOR 145 Composition gradient:**

#### FOR 146 Hardness, stress, thermal or electrical coefficients specified:

This foreign art collection was derived from an undefined alpha subclass. Consult the documents contained herein to clarify or interpret the title and scope of this foreign art collection.

#### **FOR 147 Microporous layer:**

This foreign art collection was derived from an undefined alpha subclass. Consult the documents contained herein to clarify or interpret the title and scope of this foreign art collection.

# FOR 148 Metal thin film magnetic layer:

This foreign art collection was derived from an undefined alpha subclass. Consult the documents contained herein to clarify or interpret the title and scope of this foreign art collection.

# FOR 149 Specified subbing or underlayer:

This foreign art collection was derived from an undefined alpha subclass. Consult the documents contained herein to clarify or interpret the title and scope of this foreign art collection.

# FOR 150 Specified back coat layer:

This foreign art collection was derived from an undefined alpha subclass. Consult the documents contained herein to clarify or interpret the title and scope of this foreign art collection.

# FOR 151 Topcoat, or protective overlayer:

This foreign art collection was derived from an undefined alpha subclass. Consult the documents contained herein to clarify or interpret the title and scope of this foreign art collection.

#### FOR 152 Carbon:

This foreign art collection was derived from an undefined alpha subclass. Consult the documents contained herein to clarify or interpret the title and scope of this foreign art collection.

### FOR 153 Plasma polymerized:

This foreign art collection was derived from an undefined alpha subclass. Consult the documents contained herein to clarify or interpret the title and scope of this foreign art collection.

# FOR 154 Fluorocarbon or organosilicon layer:

This foreign art collection was derived from an undefined alpha subclass. Consult the documents contained herein to clarify or interpret the title and scope of this foreign art collection.

#### FOR 155 Specified surface feature or roughness:

# FOR 156 Multiple magnetic layer:

This foreign art collection was derived from an undefined alpha subclass. Consult the documents contained herein to clarify or interpret the title and scope of this foreign art collection.

#### FOR 157 Binder containing magnetic layer:

This foreign art collection was derived from an undefined alpha subclass. Consult the documents contained herein to clarify or interpret the title and scope of this foreign art collection.

# FOR 158 Radiation curable binder:

This foreign art collection was derived from an undefined alpha subclass. Consult the documents contained herein to clarify or interpret the title and scope of this foreign art collection.

# FOR 159 Organic acid or salt thereof:

This foreign art collection was derived from an undefined alpha subclass. Consult the documents contained herein to clarify or interpret the title and scope of this foreign art collection.

#### FOR 160 Polyurethane binder:

This foreign art collection was derived from an undefined alpha subclass. Consult the documents contained herein to clarify or interpret the title and scope of this foreign art collection.

# FOR 161 Isocyanate specified:

This foreign art collection was derived from an undefined alpha subclass. Consult the documents contained herein to clarify or interpret the title and scope of this foreign art collection.

#### FOR 162 Polyol specified:

This foreign art collection was derived from an undefined alpha subclass. Consult the documents contained herein to clarify or interpret the title and scope of this foreign art collection.

#### FOR 163 Specified lubricant or protective layer:

This foreign art collection was derived from an undefined alpha subclass. Consult the documents contained herein to clarify or interpret the title and scope of this foreign art collection.

# FOR 164 Fluorocarbon or organosilicon:

This foreign art collection was derived from an undefined alpha subclass. Consult the documents contained herein to clarify or interpret the title and scope of this foreign art collection.

#### FOR 165 Including subbing or underlayer:

# FOR 166 Including back coat layer:

This foreign art collection was derived from an undefined alpha subclass. Consult the documents contained herein to clarify or interpret the title and scope of this foreign art collection.

#### FOR 167 Specified surface feature or roughness:

This foreign art collection was derived from an undefined alpha subclass. Consult the documents contained herein to clarify or interpret the title and scope of this foreign art collection.

# FOR 168 With non-magnetic particle:

This foreign art collection was derived from an undefined alpha subclass. Consult the documents contained herein to clarify or interpret the title and scope of this foreign art collection.

#### FOR 169 Magnetic particle with specified shape or dimension:

This foreign art collection was derived from an undefined alpha subclass. Consult the documents contained herein to clarify or interpret the title and scope of this foreign art collection.

#### FOR 170 Hexagonal or tabular:

This foreign art collection was derived from an undefined alpha subclass. Consult the documents contained herein to clarify or interpret the title and scope of this foreign art collection.

# FOR 171 Multiple magnetic layers:

This foreign art collection was derived from an undefined alpha subclass. Consult the documents contained herein to clarify or interpret the title and scope of this foreign art collection.

#### FOR 172 Support composition specified:

This foreign art collection was derived from an undefined alpha subclass. Consult the documents contained herein to clarify or interpret the title and scope of this foreign art collection.

### FOR 173 Organic material:

This foreign art collection was derived from an undefined alpha subclass. Consult the documents contained herein to clarify or interpret the title and scope of this foreign art collection.

# FOR 174 Specified surface feature or roughness:

This foreign art collection was derived from an undefined alpha subclass. Consult the documents contained herein to clarify or interpret the title and scope of this foreign art collection.

#### FOR 175 With lubricant in or on layer:

Foreign art collection which has, either in or on the magnetic layer, a material disclosed as having a lubricant function.