

U. S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

CLASSIFICATION ORDER 1905

FEBRUARY 1, 2011

PROJECT E-7273

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

	<u>Class</u>	<u>Subclass</u>	<u>Art Unit</u>	<u>Ex'r Search Room</u>
<b>Abolished:</b>	359	483-502	2872	RND0000B15
<b>Established:</b>	359	483.01, 484.01-484.09, 484.1, 485.01-485.07, 486.01-486.03, 487.01-487.06, 488.01, 489.01- 489.09, 489.1, 489.11-489.19, 489.2, 490.01-490.03, 491.01, 492.01, 493.01, 494.01	2872	RND0000B15

**The following classes are also impacted by this order:**

40, 106, 250, 313, 343, 351, 353, 356, 360, 362, 365, 369, 385, 386, 398, 427, 428, 430

**This order includes the following:**

- A. CLASSIFICATION MANUAL CHANGES
- B. LISTING OF PRINCIPAL SOURCE OF ESTABLISHED AND DISPOSITION OF ABOLISHED SUBCLASSES
- C. CHANGES TO THE USPC-TO- IPC CONCORDANCE
- D. DEFINITION CHANGES AND NEW OR ADDITIONAL DEFINITIONS

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1	<b>HOLOGRAPHIC SYSTEM OR ELEMENT</b>	197.1	.Using a periodically moving element
2	.Authentication		
3	.Having particular recording medium	198.1	..With particular mount or driver for element
4	..Recyclable	199.1	...Oscillating driver
5	...Magnetic material	199.2	....Electrostatically driven
6	...Sandwich having photoconductor	199.3	....Electromagnetically driven
7	...Crystalline material	199.4	....Electromechanically driven
8	..Having nonplanar recording medium surface	200.1	...Bearing or shaft for rotary driver
9	.For synthetically generating a hologram	200.2	....Specific shaft material or structure (e.g., ceramic ring)
10	.Using modulated or plural reference beams	200.3	.....Grooved shaft
11	..Spatial, phase or amplitude modulation	200.4	....Fluid pressure bearing
12	.Copying by holographic means	200.5	.....Dynamic fluid bearing
13	.Head up display	200.6	...Electrostatic driver
14	..Holograph on curved substrate	200.7	...Electromagnetic driver
15	.Using a hologram as an optical element	200.8	...Electromechanical driver
16	..With aberration correction	201.1	..With multiple scanning elements (e.g., plural lenses, lens and prism, etc.)
17	..Scanner	201.2	...Reflective element (e.g., mirror, reflector, etc.)
18	...Flat rotating disk	202.1	...X-Y scanners
19	..Lens	203.1	...Having a common axis or rotation
20	..Multiple point hologram (e.g., fly-eye lens, etc.)	204.1	..Utilizing multiple light beams
21	.Having defined page composer	204.2	...Including modulated light beam
22	.For producing or reconstructing images from multiple holograms (e.g., color, etc.)	204.3	...Including polarized light beam
23	..Holographic stereogram	204.4	...Having multiple light beams with visible wavelengths
24	..Superimposed holograms only	204.5	...With diffraction grating
25	..Discrete hologram only	205.1	..Post scanning optical element
26	...Sequential frames on moving film	206.1	...High distortion lens (e.g., f-Theta lens)
27	.Having particular laser source	207.1	...Anamorphic elements
28	.Having multiple object beam or diffuse object illumination	207.2	....Having an aspheric surface
29	.Fourier transform holography	207.3	.....Multiple aspheric surfaces
30	.Having optical element between object and recording medium	207.4	.....Multiple symmetrical aspheric surfaces
31	..Focused image holography	207.5	.....Multiple nonsymmetrical aspheric surfaces
32	.For reconstructing image	207.6	...Cylindrical or toric lens
33	..Real image	207.7	...With diffraction portion or element
34	.With optical waveguide	207.8	...With reflecting prism
35	.Hardware for producing a hologram	207.9	...Polarized beam
107	<b>OPTICAL COMPUTING WITHOUT DIFFRACTION</b>	207.11	...Thermal compensation
108	.Logic gate	208.1	...Concave reflector
196.1	<b>DEFLECTION USING A MOVING ELEMENT</b>	208.2	....Aspheric reflector
		209.1	..Transmissive type moving element
		210.1	...Moving lens

210.2	....Rotational Lens	230	.Electro-mechanical
211.1	..Moving prism	231	..String or ribbon type
211.2	....Rotating prism	232	.Slit type
211.3	.....Multiple prisms	233	.With relative motion of two apertured elements
211.4	....With angled axis of rotation	234	.With rotating or pivoting element (e.g., scanning discs)
211.5	....Rotating element	235	..Continuously rotating apertured element
211.6	....With diffraction grating	236	..Element rotates about axis perpendicular to light path
212.1	..reflective type moving element	237	<b>OPTICAL MODULATOR</b>
212.2	..Rotating reflective element	238	.Light wave temporal modulation (e.g., frequency, amplitude, etc.)
213.1	..Oscillating reflective element	239	..Modulator output feedback to modulator
214.1	....Single plane mirror	240	..Changing bulk optical parameter
215.1	.....With imaging lens	241	...By actinic radiation (e.g., photochromic)
216.1	..Multifaceted rotating element	242	....Display device
218.1	....Having six, seven, or eight facets	243	....Bistable device
219.1	....Having five or fewer facets	244	....Opto-optical device
219.2	....Inclined reflective elements	245	...Electro-optic
217.1	....With facet plane substantially parallel to rotating axis plane	246	...Modulation of polarized light via modulating input signal
217.2	....With beam modulation	247	....Using reflective or cavity structure
217.3	....Having vibration absorbing means	248	.....Semiconductor
217.4	....With diffractive element	249	.....Compensation technique
220.1	..Rotation axis transversely oriented relative to reflective element	250	....Using plural mediums
221.1	..Having planar rotating reflector with co-planar axis of rotation	251	....With particular direction of the field in relation to the medium, beam direction or polarization
221.2	..With particular mount or drive for element	252	....With particular medium or state of the medium
221.3	..Bearing or shaft for rotary driver	253	.....Liquid medium
221.4	..Specific shaft material or structure (e.g., ceramic ring)	254	....With particular electrode structure or arrangement, or medium mounting structure or arrangement
222.1	..By frustrated total internal reflection	255	....With particular field
223.1	..By moving a reflective element	256	....With birefringent element
224.1	..Reflective element moved by deformable support	257	....Pockel's cell
224.2	..Modulated light beam	258	....Kerr cell
225.1	..Pivotal or moving in circular arc	259	...Plural modulation cells
226.1	..Rotating	260	...Etalon structure
226.2	..Pivotal or rotational element	261	...Multiple reflections within cell
226.3	..Fluid filled medium	262	....Excitation by electron beam
227	<b>LIGHT CONTROL BY OPAQUE ELEMENT OR MEDIUM MOVABLE IN OR THROUGH LIGHT PATH</b>	263	....By reflection
228	..Fluid	264	....Pulse modulation
229	..With glare or flicker elimination		

265	....Electrochromic	298	.Light wave directional modulation (e.g., deflection or scanning is representative of the modulating signal)
266	.....Particular nonplanar electrode arrangement	299	..Opto-optical device
267	.....Reflection-type (e.g., display device)	300	..Phase conjugate
268	.....Complementary device	301	..Acting on polarized light
269	.....Particular counter electrode	302	...Using reflecting or cavity structure
270	.....Particular electrolyte layer	303	...Using more than one polarization (e.g., digital)
271	.....Particular planar electrode pattern	304	...Using single polarization
272	.....Liquid cell	305	..Acousto-optic
273	.....Particular electrochromic layer structure	306	...Correlation or convolution
274	.....Diverse layer	307	...Utilizing optical feedback
275	.....Transmission-type (e.g., windows)	308	...Filter
276	...Amplitude modulation	309	...Acting on polychromatic light
277	....Within display element	310	...Plural cell array
278	...Frequency modulation	311	...Plural transducers on single cell
279	...Phase modulation	312	...Single transducer generating composite plural frequency acoustic wave
280	..Magneto-optic	313	...Particular cell shape
281	...Modulation of polarized light via modulating input signal	314	...Particular cell orientation
282	....Using layered structure or plural mediums	315	..Electro-optic
283	....With particular direction of the field in relation to the medium, beam direction or polarization	316	...Plural modulation cells
284	...Amplitude modulation	317	...Multiple reflections within cell
285	...Acousto-optic	318	...By reflection
286	...Amplitude modulation	319	...Focusing
287	...Frequency modulation	320	...Switching
288	...Thermo-optic	321	.Having particular chemical composition or structure
289	...Amplitude modulation	322	..Electro-optic crystal material
290	..By changing physical characteristics (e.g., shape, size or contours) of an optical element	323	...PLZT material
291	...Shape or contour of light control surface altered	324	..Magneto-optic crystal material
292	....Light control surface forms image on projected light beam	325	<b>OPTICAL DEMODULATOR</b>
293	.....Electron beam causes surface alteration	326	<b>OPTICAL FREQUENCY CONVERTER</b>
294	....Using photoconductive layer	327	.Raman type
295	....Having multiple electrodes	328	.Harmonic generator
296	...Changing position or orientation of suspended particles	329	..Third harmonic
297	...Light control surface formed or destroyed	330	.Parametric oscillator
		331	.Optical laser acoustic delay line type
		332	.Dielectric optical waveguide type
		333	<b>OPTICAL AMPLIFIER</b>
		334	.Raman or Brillouin process
		335	.Free electron
		336	.Bistable
		337	.Correction of deleterious effects

337.1	..Spectral gain flattening or equalization	357	...Having four or more components
337.11	...Feedback	358	.Fluid filter or fluid mirror
337.12	....Using number of signals	359	.Multilayer filter or multilayer reflector
337.13	....Adjusting input signal power	360	..Having metal layer
337.2	..Filtering (e.g., noise)	361	.Having ultraviolet absorbing or shielding property
337.21	...Grating	362	<b>COMPOUND LENS SYSTEM</b>
337.22	...Interferometer or interference	363	.With image recorder
337.3	..Additional dopant or host composition	364	.With curved reflective imaging element
337.4	..Complementary, adjusting stages	365	..Two or more in a series
337.5	.Dispersion compensation	366	...Concave, convex combination
338	..Using phase conjugation	367	.Right angle inspector
339	..Using saturable or spatial filter	368	.Microscope
340	.Mode locked	369	..With viewed screen
341.1	.Optical fiber	370	..Interference
341.2	..Bi-directional	371	...Using polarized light
341.3	..Pumping	372	..With plural optical axes
341.31	...Operating frequency	373	...Side-by-side fields
341.32	...Radiation routing	374	...Plural oculars
341.33	...With multiple systems	375	....Binocular
341.4	..Feedback	376	.....Stereoscopic
341.41	...Automatic Gain Control (AGC)	377	.....With single or parallel objectives
341.42	...Automatic Level Control (ALC)	378	.....For viewing stereo pairs
341.43	...Surge protection	379	..Spacing of optical elements axially adjustable
341.44	...Fault detection	380	...Variable magnification
341.5	..Composition (e.g., Tm, Tb, Eu, Ho, Dy, Nd)	381	..Imaging elements movable in and out of optical axis
342	.Particular active medium (e.g., crystal, plasma, fluid, etc.)	382	..Entire microscope adjustable along optical axis
343	..Glass (amorphous)	383	...Focus adjustment
344	..Semiconductor	384	..With rotatable adjustment
345	.Particular pumping type (e.g., electrical, optical, nuclear, magnetic, etc.)	385	..Illuminator
346	.Particular resonator cavity (e.g., scanning, confocal or folded mirrors, etc.)	386	...Using polarized light
347	.Multiple pass	387	...With annular lighting structure
348	..Regenerative	388	...With optical switching means
349	.Beam combination or separation	389	...With illumination and viewing paths coaxial at the image field
350	<b>HAVING SIGNIFICANT INFRARED OR ULTRAVIOLET PROPERTY</b>	390	...With illuminator support
351	.Having folded optical path	391	..Stage or slide carrier
352	.Having polarizing element	392	...Adjustable along optical axis
353	.Including alternative optical path or optical element (e.g., day-night, hi-low magnification)	393	...With plural transverse movements
354	.Including continuously variable magnification or focal length (zoom lens, adjustable lens)	394	...With turntable
355	.Lens, lens system or component	395	...With temperature control
356	..Infrared lens	396	..Transparent slide
		397	...Reference lines or grids
		398	...Specimen cavity or chamber
		399	.Telescope

400	..With viewed screen	442	...Along scale or indicia
401	..With image anti-rotation	443	<b>PROJECTION SCREEN</b>
402	..Periscope	444	.With sound producer
403	...With plural optical axes	445	.Acoustical
404	....Binocular	446	.Moving during projection
405	...With mechanical adjustment	447	.Tracing (e.g., camera lucida, etc.)
406	....Extensible structure	448	.With lens (e.g., camera obscura, etc.)
407	..Binocular	449	.With reflector or additional screen
408	...Foldable or collapsible	450	.Border, mask, shade, or curtain
409	...Body supported or with handle	451	.Curved
410	....With focusing means	452	.Embedded particles
411	....With adjustable interocular distance	453	..Rear projection screen
412	...With adjustable interocular distance	454	.Unitary sheet comprising plural refracting areas
413	....Oculars swing about central axis	455	..Lenticular
414	....Spacing of optical elements axially adjustable	456	...Rear projection screen
415	....Oculars rotate about separate axes	457	...With Fresnel lens
416	....Spacing of optical elements axially adjustable	458	...Stereoscopic imaging or three dimensional imaging
417	....Spacing of optical elements axially adjustable	459	.Unitary sheet comprising plural reflecting areas
418	...Spacing of optical elements axially adjustable	460	.Rear projection screen
419	..With plural optical axes	461	.Roll up screen
420	...Plural magnification in same viewing field	462	<b>STEREOSCOPIC</b>
421	..Selectable magnification	463	.Having record with lenticular surface
422	..Variable magnification	464	.With right and left channel discriminator (e.g., polarized or colored light)
423	..With relay	465	..Using polarized light
424	...With reticle	466	.Stereo-viewers
425	..Focusing or relatively sliding barrels	467	..View changers
426	...Internal focusing	468	...Picture moves linearly past viewing aperture
427	...With reticle	469	...Using film strips
428	..With reticle	470	..Compensates for camera position (e.g., plotting or mapping type)
429	..With line of sight adjustment	471	..Reflected line of sight
430	...Equatorial mount	472	...Pictures offset, transposed or have respective right or left sides adjacent
431	..With prism or U-shaped optical path	473	..Ocular spacing or angle between ocular axes adjustable
432	.Variable magnification	474	..Collapsible
433	.With tilted lens or tilted image plane	475	..Having illumination
434	.With relay	476	..Ocular to picture distance adjustable
435	.Repetitious lens structure	477	..Supporting, mounting, enclosing or light shielding structure
436	<b>SCALE OR INDICIA READING</b>	478	<b>RELIEF ILLUSION</b>
437	.Polarizer	479	.Reflected line of sight
438	.Prism		
439	.Mirror		
440	.Lens		
441	..Movable or adjustable		

480	<b>BINOCULAR DEVICES</b>	489.11	...Film or layer
481	.Binocular loupe type	489.12	....Uniaxial
482	.Reflected line of sight	489.13	....Biaxial
483.01	<b>POLARIZATION WITHOUT MODULATION</b>	489.14	..Lens
484.01	.Polarization using a time invariant electric, magnetic, or electromagnetic field (e.g. electro-optical, magneto- optical)	489.15	..Plural birefringent elements
484.02	..Faraday effect	489.16	...Three or more birefringent elements
484.03	...Isolator	489.17	...In parallel
484.04	....With reflector	489.18	...With lenses
484.05	..Circulator	489.19	...Frequency filter or interference effects
484.06	..Optical switch	489.2	..Mounting structure
484.07	..Interleaver	490.01	.By relatively adjustable superimposed or in series polarizers
484.08	..Attenuator	490.02	..Rotating elements
484.09	...Interference or comb filter	490.03	..Translating or sliding elements
484.1	...With particular Faraday effect material	491.01	.With color filter
485.01	.Polarization by reflection or refraction	492.01	.Polarization by optical activity
485.02	..Brewster angle polarizer (reflective or transmissive)	493.01	.Polarization by scattering
485.03	..Multilayer polarizer	494.01	.Depolarization
485.04	...Pile-of-plates polarizer	503	<b>EXTENDED SPACING STRUCTURE FOR OPTICAL ELEMENTS</b>
485.05	..Wire grid polarizer	504	.Wide angle (e.g., door peep)
485.06	..Prism	505	.With screen or reticle in real image plane
485.07	..Mirror	506	.Extension of tubular element adjustable
486.01	.Polarization (direction or magnitude) variation over surface of the medium	507	<b>PROTECTION FROM MOISTURE OR FOREIGN PARTICLE</b>
486.02	..Linear variation	508	.Optical element rotates
486.03	..Radial variation	509	.Fluid directed across optical element
487.01	.Polarization by dichroism	510	.Microscope drape
487.02	..With stain or dye	511	.Cap or cover
487.03	..Wire grid polarizer	512	.Humidity or temperature control
487.04	..Wavelength-selective beamsplitter	513	.Sealing
487.05	..Having plural elements	514	..Mirror, prism or signal reflector
487.06	..Oriented particles	515	<b>SIGNAL REFLECTOR</b>
488.01	.Glare prevention by discriminating against polarized light	516	.Body carried
489.01	.Polarization by birefringence	517	..Worn by hand or wrist
489.02	..With compensation techniques	518	..Permanently fixed to clothing
489.03	...Intrinsic birefringence or photoelastic (stress) effect	519	..Worn over clothing
489.04	...Temperature	520	.Moving
489.05	...Path length	521	..Pedal mounted
489.06	..Form birefringent element	522	..Rotating
489.07	..Waveplate or retarder	523	...Spoke mounted
489.08	..Beam deflector or splitter	524	...Tire, wheel, valve stem, hub cap, or axle mounted
489.09	...Prism	525	...Wind driven
489.1	....Adjustable element(s)	526	..Vibration
		527	.For a signal source remote from observer



528	..Light transmitting from source behind a reflector	560	..For convolution (cross-correlation)
529	..3-Corner retroreflective (i.e., cube corner, trihedral, or triple reflector type)	561	..For correlation
530	..Unitary plate or sheet comprising plural reflecting elements	562	..For changing zeroth order intensity
531	...Mounted on roadway	563	..With diffraction grating
532	...Mounted adjacent roadway	564	..With photographic media
533	...Mounted on vehicle	565	.From zone plate
534	..Including a curved refracting surface	566	.From grating
535	..Within individual indentations	567	..For ornamental effect or display
536	..Minute transparent spheres	568	..For diffractive subtractive filtering
537	...Directional reflection (e.g., prevent viewing unless critical angle of light is used)	569	..Including particular grating characteristic
538	...On flexible substrate (e.g., flexible sheeting, bumper sticker, etc.)	570	...Nonplanar grating substrate (e.g., concave)
539	..Mixture in liquid binder (e.g., paint, resin)	571	...Echelette or blazed grating
540	...Placed on top of binder (e.g., resin, asphalt, glue, etc.)	572	...Reflection grating (e.g., retrodirective)
541	...With single transparent coating between spheres and atmosphere	573	...Variable grating
542	..Plural refracting elements formed as a unitary mass	574	...With curved or geometrically shaped corrugation
543	..With individual reflector element mount	575	...With nonuniform corrugation width, spacing, or depth
544	...Including a snap, spring clip, or spring retainer	576	...Laminated or layered
545	...Including a threaded member	577	<b>LIGHT INTERFERENCE</b>
546	..Discrete reflecting elements formed as a unitary mass	578	.Electrically or mechanically variable (e.g., tunable, adjustable)
547	..Mounted on or adjacent roadway	579	..By nonmovable driving element (e.g., piezoelectric, magnetostrictive)
548	..Mounted on vehicle	580	.Produced by coating or lamina
549	..Rigidly mounted on vehicle	581	..By transmissive coating on lens
550	..Bicycle or motorcycle	582	..Layer having specified nonoptical property
551	..Mounted on roadway	583	..Beam splitter or combiner
552	..Mounted adjacent roadway	584	..Reflector
553	..Emergency or temporary reflectors (i.e., portable self standing)	585	..Including metal or conductive layer
554	<b>IMAGE STABILIZATION</b>	586	..Layers having specified index of refraction
555	..By movable reflective structure	587	...Plural layer groups lateral in parallel light paths
556	..Having plural reflecting surfaces	588	...Filter having four or more layers
557	..By movable refractive structure	589	..Selective wavelength transmission or reflection
558	<b>DIFFRACTION</b>	590	...Having another filter
559	..Using Fourier transform spatial filtering	591	<b>BUILDING INTERIOR ILLUMINATION WITH REFLECTED, REFRACTED OR PREDETERMINED ANGLE OF ENTRANCE OF OUTSIDE LIGHT</b>

592	.Unitary light transmitting member comprising plural reflecting or refracting elements	628	..Noncircular cross section
593	..Plural members in series	629	.By partial reflection at beam splitting or combining surface
594	..Elements on two sides of member	630	..Superimposing visual information on observer's field of view (e.g., head-up arrangement, etc.)
595	..With internal reflections	631	...Including curved reflector
596	.Slats or strips	632	..Rotatable heads-up device or combiner
597	.With reflection	633	...With additional reflector (e.g., serial reflections, etc.)
598	..Internal reflection in single optical element	634	..Wavelength selective (e.g., dichroic mirror, etc.)
599	<b>DIFFUSING OF INCIDENT LIGHT</b>	635	..Drawing or plotting aid
600	<b>BARREL END EYE GUARD (E.G., SHIELD OR CUSHION, ETC.)</b>	636	..Including full reflection and transmission of a beam at different portions of a beam divider
601	<b>GLARE OR UNWANTED LIGHT REDUCTION</b>	637	..With path length or aberration correcting element
602	.With mirror (e.g., mirror with glare screen, etc.)	638	..With partial reflection at a surface of a prism
603	..Anti-glare mirror	639	.By refraction at beam splitting or combining surface
604	...Adjustable	640	..Including prismatic element
605	....Plural reflecting surfaces	641	<b>COLLIMATING OF LIGHT BEAM</b>
606	.....Prismoidal	642	<b>LENS</b>
607	.....Reversible	643	.Eyepiece
608	....Translucent or other semitransmitting panel selectively positioned in front of mirror	644	..Having four components
609	.Display window	645	..Having three components
610	.With blind for nonviewing eye	646	..Having two components
611	.Barrel end or lens mount shade	647	..Having one component
612	..Collapsible or foldable	648	.With field curvature shaping
613	.Directional or angular discrimination	649	..Projection type
614	.With absorption means	650	...Having four components
615	<b>LIGHT DISPERSION</b>	651	...Having less than four components
616	<b>KALEIDOSCOPE</b>	652	.With graded refractive index
617	.Including particles loosely housed for agitation	653	..Having an axial gradient
618	<b>SINGLE CHANNEL SIMULTANEOUSLY TO OR FROM PLURAL CHANNELS (E.G., LIGHT DIVIDING, COMBINING, OR PLURAL IMAGE FORMING, ETC.)</b>	654	..Having a radial gradient
619	.By surface composed of lenticular elements	655	...In a variable media (e.g., gas, elastomer, etc.)
620	..Having particular composition	656	.Microscope objective
621	..Plural lenticular plates	657	..Having seven components
622	...Serially disposed along optic axis	658	..Having six components
623	....Cylindrical lenslets	659	..Having five components
624	.....Having crossed axes	660	..Having four components
625	..Focusing or defocusing by noncurved surfaces (e.g., prismatic, etc.)	661	..Having less than four components
626	..Particular focusing or defocusing characteristic	662	.High distortion lens (e.g., $f_0$ , etc.)
627	..Reflective	663	.Telecentric system
		664	.Spherical

665	.Fluid	708	.Including a nonspherical surface
666	..With variable magnification	709	..Conical
667	..With gas	710	..Cylindrical
668	.Anamorphic	711	..Toroidal
669	..With prism anamorphoser	712	..Paraboloidal
670	..Variable magnification anamorphoser	713	..Having six components
671	..Having four or more components	714	..Having five components
672	.Selective magnification by exchanging or adding a lens component	715	..Having four components
673	..To the front of a basic lens	716	..Having three components
674	..To the middle of a basic lens	717	..Having two components
675	..To the rear of a basic lens	718	..Having one component
676	.With variable magnification (e.g., zoom type)	719	...Objective for laser (e.g., optical disc, etc.)
677	..Optically compensated	720	.Asymmetric (e.g., prismatic or eccentric, etc.)
678	..Prism lens type	721	.Plural focal length
679	..With fixed conjugates	722	.Selective wavelength transmitting or blocking
680	..Reverse telephoto	723	..With separate filter
681	...Having eight or nine components	724	.Annular zonal correcting
682	...Having seven or less components	725	.Panoramic
683	..With mechanical compensation	726	.With reflecting element
684	...Other than first group moves for focusing (internal focus type)	727	..Including concave or convex reflecting surface
685	...Nonlinear variator/compensator movements	728	...With aspheric surface (e.g., Schmidt lens, etc.)
686	...Four groups	729	...With concave and convex reflectors in series
687	....+ - + + Arrangement	730	...Reflectors in series
688	....+ - - + Arrangement	731	...With concave and convex reflectors in series
689	...Three groups	732	..For producing a double pass
690	....+ - + Arrangement	733	..Multiple component lenses
691	...Two groups	734	...Four components
692	....+ - Arrangement	735	...Three components
693	..With macro-type focusing	736	...Two components
694	..Adjusting mechanism	737	.With diverse refracting element
695	..Three or more movable lens groups	738	.With light limiting or controlling means
696	...Motor driven	739	..Diaphragm
697	....Condition responsive	740	...Between lens components
698	.....Auto focusing	741	.With multipart element
699	...Having cam device	742	..Echelon (e.g., Fresnel lens, etc.)
700	....Cam groove type	743	...Having curvilinear lens
701	....Cam ring type or zoom ring type	744	.Afocal (e.g., Galilean telescopes, etc.)
702	...With adjustment lock	745	.Telephoto
703	...With specified mount	746	..With five components
704	....Having detail of barrel	747	..With four components
705	...With macro type focusing	748	..With less than four components
706	....With specific ring means	749	.Reverse telephoto
707	.Diffusing	750	..With eight components
		751	..With seven components

752	..With six components	799	..Illuminating beam coaxial with lens axis
753	..With five or less components	800	..Illumination through lens
754	..Multiple component lenses	801	..With viewed object support
755	..Seven components	802	..Magnifier
756	..Six components	803	...Hand held
757	...First component positive	804	.With viewed object support
758	....+ - + + - + Arrangement	805	..On lens supporting handle
759	....First two components positive	806	..Relatively movable informatory sheet and lens (e.g., reading machine, etc.)
760	.....+ + - - + + Arrangement	807	..Flat opaque document or picture
761	...First component negative	808	.With lens casing
762	....First two components negative	809	.Combined with diverse art tool, instrument or machine
763	..Five components	810	..Operation viewed through lens
764	...First component positive	811	.With support
765	....+ - - + + Arrangement	812	..With additional handle
766	....+ - + - + Arrangement	813	..Lens movable in its plane
767	....First two components positive	814	...Electromagnetic motive power
768	.....+ + - - + Arrangement	815	..Body or apparel attached or carried
769	.....+ + - + + Arrangement	816	...Monocular loupe type
770	...First component negative	817	..Foldable or collapsible
771	..Four components	818	..With clamp or grip
772	...First component positive	819	..Lens mounts
773	....+ - + - Arrangement	820	...With temperature compensation or control
774	....+ - + + Arrangement	821	...Plural lenses in common carrier selectively operable (e.g., turret type, etc.)
775	....+ - - + Arrangement	822	...Adjustable
776	....With multiple element component	823	...With axial adjustment (e.g., adjustable focus, etc.)
777	.....Infinite radius	824	....Electromagnetic or piezoelectric drive
778	.....Having a biconvex single element component	825	....Focusing ring
779	....+ + - + Arrangement	826	....Sliding barrels
780	....+ + + - Arrangement	827	...Detachably attached (e.g., plate, barrel, etc.)
781	...First component negative	828	...Bayonet coupling
782	....- + + - Arrangement	829	...With threads
783	....- + + + Arrangement	830	...With ring
784	..Three components	831	<b>PRISM (INCLUDING MOUNT)</b>
785	...+ - + Arrangement	832	.Fluid filled
786	...With multiple element first component	833	.With reflecting surface
787	...With multiple element second component	834	..Plural reflecting surfaces
788	...With multiple element third component	835	...For binocular or porro-prism
789	...With first component biconvex	836	...Roof or roof-angle
790	...With third component biconvex	837	.With refracting surface
791	...+ + - Arrangement	838	<b>MIRROR</b>
792	...+ + + Arrangement	839	.With a transmitting property
793	..Two components	840	.Back to back
794	...+ + Arrangement	841	.Retractable vehicle mirror
795	...+ - Arrangement		
796	.Single component with multiple elements		
797	..Three or more elements		
798	.With viewed object or viewed field illumination		

- |     |  |     |  |
|-----|--|-----|--|
| 842 | .Mounted on vehicle having handlebars (e.g., bicycle, motorcycle, etc.)            | 872 | ..Mirror movable relative to support                           |
| 843 | .Automatically adjustable in response to vehicle position, control, or indicator   | 873 | ...With rotary to linear motion converting mirror adjustment   |
| 844 | .On adjustable diverse vehicle portion or accessory                                | 874 | ...With rotation of mirror about perpendicular axes            |
| 845 | .Fluid cooled mirror   | 875 | ...With a rigid handle extending to or near a mirror pivot     |
| 846 | .Including specified control or retention of the shape of a mirror surface         | 876 | ...With rotation of mirror about perpendicular axes            |
| 847 | ..Membrane mirror in mechanical contact only at its edge                           | 877 | ...With switch or motor controlling mirror movement            |
| 848 | ..With structure to minimize internal mirror stress                                | 878 | ....Fluid pressure actuated                                    |
| 849 | ..Including a plurality of adjustable mirror supports                              | 879 | ...Body or apparel mirror support                              |
| 850 | .Plural mirrors or reflecting surfaces   | 880 | ...Having support or apparel engaging head or neck             |
| 851 | ..Composite or echelon mirrors or light concentrating array                        | 881 | ..With mirror supporting column or sliding adjustment          |
| 852 | ..With a line focus  | 882 | ..With handle  |
| 853 | ...Light concentrating (e.g., heliostat, etc.), concave, or paraboloidal structure | 883 | ..Laminated or layered mirror support                          |
| 854 | ..Identical side mirrors adjustable with respect to a central mirror               | 884 | .With selective absorption or transparent overcoating          |
| 855 | ..Identical adjacent mirrors identically supported                                 | 885 | <b>ABSORPTION FILTER</b>                                       |
| 856 | ...With successive reflections   | 886 | .Fluid   |
| 857 | ..With successive reflections  | 887 | .Sequentially additive   |
| 858 | ...Including curved mirror surfaces in series                                      | 888 | .Neutral or graded density                                     |
| 859 | ...With concave and convex mirrors in series                                       | 889 | .Movable in or out of optical path                             |
| 860 | ...To view observer  | 890 | .Superimposed or series  |
| 861 | ...With three or more successive reflections                                       | 891 | .Filters in optical parallel (e.g., colors side-by-side, etc.) |
| 862 | ...Including an adjustable mirror  | 892 | .With support or frame   |
| 863 | ...Including a curved mirror   | 893 | <b>SCREEN (E.G., HALFTONE SCREEN, ETC.)</b>                    |
| 864 | ..Including adjacent plane and curved mirrors                                      | 894 | <b>OPTICAL APERTURE OR TUBE, OR TRANSPARENT CLOSURE</b>        |
| 865 | ..Relatively adjustable  | 895 | .Submerged object viewer                                       |
| 866 | ..Wide angle segmented mirrors   | 896 | <b>MISCELLANEOUS</b>   |
| 867 | .Concave cylindrical or providing a line focus                                     |     |  |
| 868 | .With mirror surface of varied radius  |     |  |
| 869 | ..Concave  |     |  |
| 870 | .Fracture resistant (e.g., shatterproof, etc.)                                     |     |  |
| 871 | .With support  |     |  |
- CROSS-REFERENCE ART COLLECTIONS**
- |     |   |
|-----|---|
| 900 | <b>METHODS</b>                                |
| 901 | <b>ACOUSTIC HOLOGRAPHY</b>                    |
| 902 | <b>HOLOGRAPHIC INTERFEROMETER WITH MAGNET</b> |
| 903 | <b>WITH MAGNET</b>                            |
| 904 | <b>MICRO MIRROR</b>                           |

**FOREIGN ART COLLECTIONS****FOR 000 CLASS-RELATED FOREIGN DOCUMENTS**

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

**FOR 100 DEFLECTING USING A MOVING ELEMENT OR MEDIUM (OFFSETTING OR CHANGING AT LEAST A PORTION OF THE BEAM) (359/196)**

- FOR 101 ..Using a periodically moving element (periodic change of optically reflecting, refracting or diffracting element) (359/197)
- FOR 102 ..Particular mount or driver for element (359/198)
- FOR 103 ...Particular oscillating driver (359/199)
- FOR 104 ...Bearing or shaft for rotary driver (359/200)
- FOR 105 ..Plural moving scanning elements (359/201)
- FOR 106 ...X-Y scanner (359/202)
- FOR 107 ...Having a common axis of rotation (359/203)
- FOR 108 ..Utilizing plural light beams (359/204)
- FOR 109 ..Having particular focusing element to receive scanned light (359/205)
- FOR 110 ...High distortion lens (e.g., fQ lens, etc.) (359/206)
- FOR 111 ...Anamorphic element (359/207)
- FOR 112 ...Concave reflector (359/208)
- FOR 113 ..Including transmissive type moving element (359/209)
- FOR 114 ..Having moving lens (359/210)
- FOR 115 ..Having moving prism (359/211)
- FOR 116 ..Including reflective type moving element (359/212)
- FOR 117 ...Having oscillating element (359/213)
- FOR 118 ....Single plane mirror element (359/214)

- FOR 119 ....With imaging lens (359/215)
- FOR 120 ...Having multifaceted rotating element (359/216)
- FOR 121 ....With facets parallel to rotation axis (359/217)
- FOR 122 ....Having six, seven, or eight facets (359/218)
- FOR 123 ....Having five or fewer facets (359/219)
- FOR 124 ...Having planar rotating reflector with transverse rotation axis (359/220)
- FOR 125 ...Having planar rotating reflector with rotation axis in its plane (359/221)
- FOR 126 ..By frustrated total internal reflection (359/222)
- FOR 127 ..By moving a reflective element (359/223)
- FOR 128 ..Reflective element moved by deformable support (359/234)
- FOR 129 ..Pivoting or moving in circular arc (359/225)
- FOR 130 ..Rotating (359/226)
- FOR 131 **POLARIZATION WITHOUT MODULATION (359/483)**
- FOR 132 ..Time invariant electric, magnetic, or electromagnetic field responsive (e.g., electro-optical, magneto-optical) (359/484)
- FOR 133 ..Light polarization without any external input (359/485)
- FOR 134 ..By grid or dipoles (359/486)
- FOR 135 ..By reflection or refraction (e.g., Brewster angle) (359/487)
- FOR 136 ...With particular medium (359/488)
- FOR 137 ..Polarization (direction or magnitude) varies over surface of the medium (e.g., vectograph) (359/489)
- FOR 138 ..By dichroic medium (359/490)
- FOR 139 ...Stain or dye (359/491)
- FOR 140 ...Oriented particles (359/492)
- FOR 141 ..Glare prevention by discriminating against polarized light (359/493)
- FOR 142 ..By birefringent element (359/494)
- FOR 143 ...For beam deflection or splitting (359/495)
- FOR 144 ...Prisms (359/496)

- FOR 145 ...Using plural elements (359/  
497)
- FOR 146 ....Frequency filter or  
interference effects (359/498)
- FOR 147 ....Using compensation techniques  
(359/499)
- FOR 148 ...With particular material or  
mounting structure (359/500)
- FOR 149 ..By relatively adjustable  
superimposed or in series  
polarizers (359/501)
- FOR 150 ..With color filter (359/502)

CLASSIFICATION ORDER 1905

B-1

FEBRUARY 1, 2011

PROJECT E-7273

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

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<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
283/90	1	359/485	88
356/513	1	359/497	113
359/239	1	359/497	113
359/242	1	359/497	113
	2	359/500	52
359/245	1	359/497	113
359/256	1	359/494	101
	1	359/497	113
	1	359/498	76
359/257	1	359/495	142
359/259	1	359/497	113
359/260	2	359/498	76
359/27	1	359/485	88
359/272	1	359/497	113
359/283	2	359/497	113
359/287	1	359/494	101
	1	359/500	52
359/320	2	359/501	56
359/350	1	359/497	113
359/352	1	359/497	113
	2	359/486	75
	2	359/500	52
	4	359/499	47
359/360	1	359/498	76
359/361	2	359/498	76
359/464	1	359/497	113
	1	359/499	47
359/483.01	1	359/483	28
	1	359/485	88
359/484.01	1	359/495	142
	2	359/484	154
	2	359/497	113
	4	359/484	154
359/484.02	1	359/487	184
	1	359/491	50
	1	359/494	101
	1	359/500	52
	2	359/483	28
	2	359/495	142
	4	359/484	154
359/484.03	1	359/500	52
	3	359/486	75
	4	359/492	45



## CLASSIFICATION ORDER 1905

B-2

FEBRUARY 1, 2011

PROJECT E-7273

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

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<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
359/484.03	4	359/494	101
	5	359/497	113
	56	359/484	154
359/484.04	1	359/495	142
	1	359/498	76
	1	359/499	47
	2	359/496	34
	3	359/487	184
	3	359/494	101
	3	359/497	113
	26	359/484	154
359/484.05	1	359/494	101
	2	359/485	88
	2	359/496	34
	4	359/497	113
	5	359/495	142
	42	359/484	154
359/484.06	1	359/483	28
	1	359/501	56
	2	359/487	184
	3	359/495	142
	9	359/484	154
359/484.07	1	359/485	88
	1	359/487	184
	1	359/494	101
	3	359/498	76
	6	359/497	113
	7	359/495	142
359/484.08	1	359/485	88
	1	359/485	88
	1	359/486	75
	2	359/495	142
	3	359/499	47
	4	359/487	184
	5	359/484	154
359/484.09	1	359/483	28
	1	359/485	88
	1	359/486	75
	1	359/497	113
359/484.1	1	359/483	28
	1	359/487	184
	2	359/484	154
359/485.01	1	359/485	88

CLASSIFICATION ORDER 1905

B-3

FEBRUARY 1, 2011

PROJECT E-7273

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

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<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
359/485.01	1	359/488	37
	1	359/501	56
	2	359/485	88
	2	359/487	184
	2	359/487	184
	4	359/486	75
	359/485.02	1	359/490
	1	359/493	42
	1	359/494	101
	2	359/498	76
	2	359/499	47
	3	359/483	28
	3	359/496	34
	3	359/497	113
	5	359/485	88
	5	359/495	142
	7	359/487	184
	11	359/488	37
	43	359/487	184
359/485.03	1	359/484	154
	1	359/489	60
	1	359/497	113
	1	359/498	76
	1	359/501	56
	2	359/490	54
	2	359/492	45
	2	359/494	101
	2	359/500	52
	3	359/486	75
	3	359/495	142
	4	359/483	28
	14	359/486	75
	17	359/488	37
	18	359/485	88
	49	359/487	184
	359/485.04	1	359/493
1		359/496	34
1		359/497	113
1		359/498	76
2		359/500	52
3		359/486	75
3		359/488	37
3		359/501	56

## CLASSIFICATION ORDER 1905

B-4

FEBRUARY 1, 2011

PROJECT E-7273

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

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<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
359/485.04	7	359/485	88
	19	359/487	184
359/485.05	1	359/483	28
	1	359/488	37
	1	359/500	52
	2	359/485	88
	10	359/486	75
	29	359/486	75
359/485.06	1	359/494	101
	1	359/495	142
	1	359/502	4
	2	359/488	37
	2	359/497	113
	6	359/485	88
	21	359/487	184
359/485.07	1	359/484	154
	1	359/495	142
	2	359/485	88
	2	359/485	88
	2	359/488	37
	2	359/497	113
	2	359/499	47
	2	359/501	56
	17	359/487	184
359/486.01	8	359/489	60
359/486.02	1	359/489	60
	1	359/490	54
	1	359/492	45
	1	359/501	56
	2	359/494	101
	3	359/483	28
	3	359/485	88
	31	359/489	60
359/486.03	1	359/483	28
	1	359/489	60
	1	359/491	50
	1	359/494	101
	1	359/499	47
	4	359/485	88
	16	359/489	60
359/487.01	1	359/490	54
359/487.02	1	359/483	28
	1	359/491	50

CLASSIFICATION ORDER 1905

B-5

FEBRUARY 1, 2011

PROJECT E-7273

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

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<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>	
359/487.02	1	359/493	42	
	1	359/502	4	
	2	359/489	60	
	2	359/490	54	
	2	359/498	76	
	3	359/485	88	
	3	359/499	47	
	4	359/497	113	
	4	359/500	52	
	5	359/492	45	
	5	359/495	142	
	6	359/494	101	
	16	359/490	54	
	45	359/491	50	
	359/487.03	2	359/486	75
	359/487.04	1	359/483	28
359/487.04	1	359/484	154	
	1	359/485	88	
	1	359/485	88	
	1	359/491	50	
	1	359/492	45	
	1	359/501	56	
	3	359/494	101	
	3	359/498	76	
	6	359/495	142	
	6	359/497	113	
	9	359/490	54	
	359/487.05	1	359/485	88
	359/487.05	1	359/487	184
1		359/490	54	
1		359/492	45	
2		359/490	54	
2		359/498	76	
359/487.06		1	359/491	50
359/487.06	1	359/497	113	
	1	359/499	47	
	1	359/500	52	
	2	359/494	101	
	3	359/492	45	
	19	359/490	54	
	28	359/492	45	
	359/488.01	1	359/496	34
359/488.01	1	359/498	76	

CLASSIFICATION ORDER 1905

B-6

FEBRUARY 1, 2011

PROJECT E-7273

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

Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
359/488.01	2	359/497	113
	3	359/483	28
	4	359/485	88
	5	359/501	56
	39	359/493	42
359/489.01	1	359/499	47
	1	359/501	56
	3	359/500	52
359/489.02	10	359/494	101
	1	359/496	34
	2	359/495	142
359/489.03	2	359/497	113
	1	359/497	113
	2	359/485	88
	2	359/499	47
	2	359/500	52
359/489.04	3	359/494	101
	13	359/499	47
	1	359/494	101
	1	359/497	113
	2	359/498	76
359/489.05	4	359/499	47
	1	359/485	88
	1	359/497	113
	1	359/501	56
359/489.06	2	359/494	101
	3	359/495	142
	9	359/499	47
	1	359/487	184
	1	359/496	34
	1	359/497	113
	2	359/498	76
359/489.07	3	359/486	75
	4	359/485	88
	5	359/494	101
	12	359/495	142
	1	359/484	154
	2	359/501	56
	12	359/496	34
	12	359/500	52
359/489.07	14	359/498	76
	23	359/497	113
	28	359/494	101

CLASSIFICATION ORDER 1905

B-7

FEBRUARY 1, 2011

PROJECT E-7273

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

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<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
359/489.07	29	359/495	142
359/489.08	1	359/487	184
	1	359/494	101
	1	359/496	34
	2	359/495	142
	2	359/497	113
	12	359/495	142
359/489.09	1	359/498	76
	2	359/495	142
	2	359/501	56
	2	359/502	4
	3	359/497	113
	4	359/487	184
	4	359/494	101
	10	359/496	34
	30	359/495	142
359/489.11	1	359/483	28
	1	359/494	101
	1	359/495	142
	1	359/500	52
	3	359/487	184
	4	359/495	142
359/489.12	1	359/495	142
	1	359/495	142
	1	359/497	113
	1	359/501	56
	2	359/500	52
	4	359/498	76
	6	359/494	101
359/489.13	3	359/500	52
	4	359/494	101
359/489.14	1	359/494	101
	1	359/497	113
	2	359/483	28
	2	359/501	56
359/489.15	1	359/485	88
	1	359/494	101
	1	359/500	52
	2	359/498	76
	6	359/497	113
	6	359/497	113
359/489.16	1	359/494	101
	3	359/497	113

CLASSIFICATION ORDER 1905

B-8

FEBRUARY 1, 2011

PROJECT E-7273

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

Generated by Data Control Division

<u>New Classification</u>	<u>Number of ORs</u>	<u>Source Classification</u>	<u>Number of ORs</u>
359/489.17	1	359/497	113
	1	359/497	113
359/489.18	1	359/501	56
	2	359/494	101
	2	359/498	76
359/489.19	2	359/485	88
	2	359/497	113
	3	359/497	113
	3	359/498	76
	3	359/500	52
	4	359/501	56
	23	359/498	76
359/489.2	1	359/494	101
	2	359/500	52
	4	359/501	56
	6	359/485	88
	6	359/500	52
359/490.01	4	359/501	56
359/490.02	1	359/498	76
	2	359/501	56
	12	359/501	56
359/490.03	1	359/483	28
	1	359/501	56
359/491.01	1	359/483	28
	1	359/485	88
	1	359/501	56
359/493.01	1	359/487	184
362/310	1	359/487	184
362/560	1	359/501	56

CLASSIFICATION ORDER 1905

B-9

FEBRUARY 1, 2011

PROJECT E-7273

DISPOSITION CLASSIFICATION(S) OF PATENTS  
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>Source</u> <u>Classification</u>	<u>Number</u> <u>of ORs</u>	<u>New</u> <u>Classification</u>	<u>Number</u> <u>of ORs</u>
359/496	34	359/484.05	2
359/494	101	359/484.05	1
359/484	154	359/484.1	2
		359/485.03	1
359/490	54	359/487.02	16
359/483	28	359/484.02	2
359/494	101	359/485.03	2
359/486	75	359/485.05	29
359/499	47	359/489.05	9
359/496	34	359/489.08	1
359/495	142	359/489.09	30
		359/484.08	2
359/494	101	359/486.03	1
359/501	56	359/484.06	1
359/485	88	359/485.06	6
		359/485.07	2
359/500	52	359/489.01	3
359/501	56	359/489.14	2
		359/489.2	4
359/484	154	359/484.05	42
359/495	142	359/485.02	5
		359/487.02	5
359/502	4	359/487.02	1
359/495	142	359/489.02	2
359/501	56	359/486.02	1
359/492	45	359/487.05	1
359/494	101	359/489.06	5
		359/489.01	10
359/486	75	359/485.03	3
359/501	56	359/489.01	1
359/495	142	359/489.08	12
359/494	101	359/256	1
359/500	52	359/352	2
359/497	113	359/352	1
359/498	76	359/256	1
		359/260	2
359/499	47	359/464	1
359/485	88	359/27	1
359/501	56	359/320	2
359/494	101	359/484.02	1
359/483	28	359/484.09	1
359/495	142	359/489.05	3
		359/484.01	1



CLASSIFICATION ORDER 1905

B-10

FEBRUARY 1, 2011

PROJECT E-7273

DISPOSITION CLASSIFICATION(S) OF PATENTS  
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>Source</u> <u>Classification</u>	<u>Number</u> <u>of ORs</u>	<u>New</u> <u>Classification</u>	<u>Number</u> <u>of ORs</u>
359/499	47	359/484.08	3
359/501	56	359/485.04	3
359/488	37	359/485.04	3
359/495	142	359/485.07	1
359/492	45	359/487.06	28
359/501	56	359/489.18	1
359/498	76	359/484.07	3
359/493	42	359/485.04	1
359/495	142	359/489.07	29
359/501	56	359/489.09	2
359/490	54	359/485.02	1
359/493	42	359/487.02	1
359/498	76	359/488.01	1
359/501	56	359/491.01	1
359/483	28	359/484.06	1
359/502	4	359/485.06	1
359/497	113	359/489.08	2
		359/489.17	1
359/499	47	359/487.02	3
359/483	28	359/487.02	1
359/494	101	359/489.03	3
359/498	76	359/489.06	2
359/484	154	359/489.07	1
359/487	184	359/484.06	2
359/492	45	359/487.02	5
359/495	142	359/487.04	6
359/491	50	359/487.02	45
359/501	56	359/487.04	1
359/491	50	359/487.06	1
359/500	52	359/489.03	2
359/495	142	359/489.11	4
359/492	45	359/487.06	3
359/483	28	359/483.01	1
359/490	54	359/487.01	1
359/499	47	359/489.03	2
359/497	113	359/283	2
		359/272	1
359/499	47	359/352	4
359/498	76	359/360	1
		359/361	2
359/501	56	362/560	1
359/497	113	359/484.09	1
359/489	60	359/486.03	16

## CLASSIFICATION ORDER 1905

B-11

FEBRUARY 1, 2011

PROJECT E-7273

DISPOSITION CLASSIFICATION(S) OF PATENTS  
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>Source</u> <u>Classification</u>	<u>Number</u> <u>of ORs</u>	<u>New</u> <u>Classification</u>	<u>Number</u> <u>of ORs</u>
359/497	113	359/489.14	1
359/484	154	359/484.02	4
359/485	88	359/484.05	2
359/487	184	359/484.07	1
		359/485.07	17
359/485	88	359/485.01	2
		359/486.03	4
359/497	113	359/487.04	6
359/487	184	359/489.09	4
359/498	76	359/484.04	1
359/495	142	359/484.05	5
359/497	113	359/485.03	1
359/498	76	359/487.02	2
		359/489.07	14
359/485	88	359/489.15	1
359/488	37	359/485.03	17
359/495	142	359/485.06	1
359/486	75	359/487.03	2
359/498	76	359/489.04	2
359/483	28	359/489.11	1
359/500	52	359/485.05	1
359/501	56	359/485.07	2
359/483	28	359/486.03	1
359/485	88	359/487.02	3
359/489	60	359/487.02	2
359/497	113	359/489.03	1
359/499	47	359/489.04	4
359/497	113	359/489.19	3
359/488	37	359/485.05	1
359/494	101	359/489.04	1
359/501	56	359/489.05	1
359/487	184	359/485.02	7
359/494	101	359/287	1
		359/489.12	6
359/500	52	359/489.13	3
		359/489.15	1
359/498	76	359/485.04	1
359/483	28	359/489.14	2
359/492	45	359/484.03	4
359/486	75	359/485.04	3
359/494	101	359/484.03	4
359/497	113	359/485.06	2
359/485	88	359/489.05	1

CLASSIFICATION ORDER 1905

B-12

FEBRUARY 1, 2011

PROJECT E-7273

DISPOSITION CLASSIFICATION(S) OF PATENTS  
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>Source</u> <u>Classification</u>	<u>Number</u> <u>of ORs</u>	<u>New</u> <u>Classification</u>	<u>Number</u> <u>of ORs</u>
359/494	101	359/489.11	1
359/498	76	359/489.18	2
359/497	113	359/484.01	2
359/499	47	359/486.03	1
359/487	184	359/489.06	1
359/497	113	359/489.16	3
359/498	76	359/489.19	23
359/484	154	359/484.03	56
359/488	37	359/485.01	1
359/498	76	359/485.03	1
359/485	88	359/486.02	3
359/492	45	359/487.04	1
359/497	113	359/489.06	1
359/489	60	359/486.01	8
359/486	75	359/485.05	10
359/499	47	359/489.01	1
359/497	113	359/350	1
		359/245	1
359/495	142	359/257	1
359/497	113	359/259	1
359/485	88	283/90	1
359/498	76	359/489.12	4
359/500	52	359/489.19	3
359/496	34	359/485.02	3
359/490	54	359/487.05	2
359/500	52	359/484.02	1
359/494	101	359/484.07	1
		359/484.04	3
359/485	88	359/485.02	5
359/483	28	359/488.01	3
359/487	184	359/485.02	43
359/494	101	359/489.08	1
359/490	54	359/486.02	1
359/485	88	359/489.2	6
359/484	154	359/484.04	26
359/485	88	359/485.05	2
359/488	37	359/485.07	2
359/500	52	359/487.02	4
359/497	113	359/489.04	1
		359/489.07	23
359/500	52	359/489.2	2
359/494	101	359/489.09	4
359/496	34	359/484.04	2

## CLASSIFICATION ORDER 1905

B-13

FEBRUARY 1, 2011

PROJECT E-7273

DISPOSITION CLASSIFICATION(S) OF PATENTS  
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>Source</u> <u>Classification</u>	<u>Number</u> <u>of ORs</u>	<u>New</u> <u>Classification</u>	<u>Number</u> <u>of ORs</u>
359/487	184	359/484.08	4
359/485	88	359/485.04	7
359/487	184	359/487.05	1
359/485	88	359/487.05	1
359/484	154	359/485.07	1
359/494	101	359/489.18	2
359/490	54	359/487.02	2
359/495	142	359/489.09	2
359/498	76	359/489.15	2
359/495	142	359/489.11	1
359/487	184	362/310	1
359/499	47	359/485.07	2
		359/485.02	2
		359/484.04	1
359/501	56	359/485.03	1
359/485	88	359/489.03	2
359/491	50	359/484.02	1
359/483	28	359/485.03	4
359/484	154	359/487.04	1
359/501	56	359/488.01	5
359/494	101	359/489.07	28
359/492	45	359/486.02	1
359/498	76	359/487.05	2
359/485	88	359/488.01	4
359/487	184	359/489.08	1
		359/485.01	2
		359/485.03	49
359/494	101	359/487.04	3
359/485	88	359/487.04	1
359/493	42	359/488.01	39
359/484	154	359/484.06	9
359/485	88	359/485.03	18
359/497	113	359/487.06	1
359/495	142	359/489.08	2
359/498	76	359/487.04	3
359/499	47	359/489.03	13
359/497	113	359/489.15	6
359/501	56	359/489.19	4
359/494	101	359/489.14	1
359/485	88	359/485.01	1
359/484	154	359/484.01	2
359/498	76	359/489.19	3
359/494	101	359/489.2	1

CLASSIFICATION ORDER 1905

B-14

FEBRUARY 1, 2011

PROJECT E-7273

DISPOSITION CLASSIFICATION(S) OF PATENTS  
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>Source</u> <u>Classification</u>	<u>Number</u> <u>of ORs</u>	<u>New</u> <u>Classification</u>	<u>Number</u> <u>of ORs</u>
359/500	52	359/489.2	6
359/501	56	359/490.02	2
359/489	60	359/486.02	1
359/490	54	359/487.05	1
359/500	52	359/242	2
359/486	75	359/352	2
359/497	113	359/256	1
359/487	184	359/489.11	3
359/498	76	359/490.02	1
359/497	113	359/485.04	1
359/500	52	359/485.04	2
359/488	37	359/485.06	2
359/485	88	359/484.07	1
359/495	142	359/485.03	3
359/496	34	359/485.04	1
359/499	47	359/487.06	1
359/496	34	359/489.09	10
359/497	113	359/489.09	3
359/495	142	359/484.04	1
359/486	75	359/485.03	14
359/497	113	359/485.07	2
359/491	50	359/487.04	1
359/484	154	359/484.01	4
359/487	184	359/484.02	1
359/490	54	359/487.06	19
359/494	101	359/489.05	2
359/500	52	359/489.07	12
359/502	4	359/489.09	2
359/501	56	359/489.12	1
359/494	101	359/485.02	1
359/487	184	359/485.04	19
		359/485.06	21
359/496	34	359/489.02	1
359/485	88	359/489.19	2
359/483	28	359/491.01	1
359/486	75	359/484.09	1
359/483	28	359/484.1	1
359/500	52	359/485.03	2
359/498	76	359/489.09	1
359/497	113	359/489.12	1
359/487	184	359/493.01	1
359/500	52	359/484.03	1
359/495	142	359/484.07	7

CLASSIFICATION ORDER 1905

B-15

FEBRUARY 1, 2011

PROJECT E-7273

DISPOSITION CLASSIFICATION(S) OF PATENTS  
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>Source</u> <u>Classification</u>	<u>Number</u> <u>of ORs</u>	<u>New</u> <u>Classification</u>	<u>Number</u> <u>of ORs</u>
359/493	42	359/485.02	1
359/494	101	359/486.02	2
359/483	28	359/487.04	1
359/497	113	359/488.01	2
359/491	50	359/486.03	1
359/497	113	359/489.05	1
359/485	88	359/489.06	4
359/494	101	359/489.13	4
		359/489.15	1
359/483	28	359/490.03	1
359/485	88	359/483.01	1
		359/484.08	1
359/489	60	359/486.03	1
359/495	142	359/489.12	1
359/491	50	359/487.02	1
359/500	52	359/287	1
359/497	113	359/239	1
359/486	75	359/484.03	3
359/497	113	359/484.04	3
		359/484.05	4
359/483	28	359/485.02	3
359/494	101	359/485.06	1
359/489	60	359/486.02	31
359/500	52	359/489.11	1
359/501	56	359/485.01	1
359/488	37	359/485.02	11
359/485	88	359/484.09	1
359/492	45	359/485.03	2
359/483	28	359/485.05	1
359/494	101	359/487.02	6
359/500	52	359/487.06	1
359/486	75	359/489.06	3
359/497	113	359/485.02	3
359/496	34	359/489.06	1
359/494	101	359/489.16	1
359/497	113	359/487.02	4
		359/489.02	2
359/500	52	359/489.12	2
359/501	56	359/490.03	1
359/498	76	359/485.02	2
359/490	54	359/485.03	2
359/496	34	359/489.07	12
359/487	184	359/484.04	3

CLASSIFICATION ORDER 1905

B-16

FEBRUARY 1, 2011

PROJECT E-7273

DISPOSITION CLASSIFICATION(S) OF PATENTS  
FROM ABOLISHED SUBCLASSES REPORT

Generated by Data Control Division

<u>Source</u> <u>Classification</u>	<u>Number</u> <u>of ORs</u>	<u>New</u> <u>Classification</u>	<u>Number</u> <u>of ORs</u>
359/486	75	359/484.08	1
359/489	60	359/485.03	1
359/501	56	359/490.02	12
359/485	88	359/491.01	1
359/497	113	359/484.07	6
359/487	184	359/484.1	1
359/490	54	359/487.04	9
359/494	101	359/487.06	2
359/496	34	359/488.01	1
359/501	56	359/489.07	2
359/486	75	359/485.01	4
359/497	113	359/489.19	2
359/501	56	359/490.01	4
359/497	113	359/464	1
		359/242	1
		356/513	1
		359/484.03	5
359/495	142	359/484.06	3
359/483	28	359/486.02	3
359/495	142	359/489.06	12
		359/484.02	2
359/484	154	359/484.08	5

FEBRUARY 1, 2011

PROJECT E-7372

C. CHANGES TO THE US-TO-IPC CONCORDANCE

<u>U. S. Class</u>	<u>Subclass</u>	<u>I. P. C. Subclass</u>	<u>Notation</u>
359	483.01	G02B	5/30 27/28
	484.01	G02B	5/30 27/28
	484.02	G02B	5/30 27/28
	484.03	G02B	5/30 27/28
	484.04	G02B	5/30 27/28
	484.05	G02B	5/30 27/28
	484.06	G02B	5/30 27/28
	484.07	G02B	5/30 27/28
	484.08	G02B	5/30 27/28
	484.09	G02B	5/30 27/28
	484.1	G02B	5/30 27/28
	485.01	G02B	5/30 27/28
	485.02	G02B	5/30 27/28
	485.03	G02B	5/30 27/28
	485.04	G02B	5/30 27/28
	485.05	G02B	5/30 27/28
	485.06	G02B	5/30 27/28



FEBRUARY 1, 2011

PROJECT E-7372

C. CHANGES TO THE US-TO-IPC CONCORDANCE

<u>U. S. Class</u>	<u>Subclass</u>	<u>I. P. C. Subclass</u>	<u>Notation</u>
359	485.07	G02B	5/30 27/28
	486.01	G02B	5/30 27/28
	486.02	G02B	5/30 27/28
	486.03	G02B	5/30 27/28
	487.01	G02B	5/30 27/28
	487.02	G02B	5/30 27/28
	487.03	G02B	5/30 27/28
	487.04	G02B	5/30 27/28
	487.05	G02B	5/30 27/28
	487.06	G02B	5/30 27/28
	488.01	G02B	5/30 27/28
	489.01	G02B	5/30 27/28
	489.02	G02B	5/30 27/28
	489.03	G02B	5/30 27/28
	489.04	G02B	5/30 27/28
	489.05	G02B	5/30 27/28
	489.06	G02B	5/30 27/28

FEBRUARY 1, 2011

PROJECT E-7372

C. CHANGES TO THE US-TO-IPC CONCORDANCE

<u>U. S. Class</u>	<u>Subclass</u>	<u>I. P. C. Subclass</u>	<u>Notation</u>
359	489.07	G02B	5/30 27/28
	489.08	G02B	5/30 27/28
	489.09	G02B	5/30 27/28
	489.1	G02B	5/30 27/28
	489.11	G02B	5/30 27/28
	489.12	G02B	5/30 27/28
	489.13	G02B	5/30 27/28
	489.14	G02B	5/30 27/28
	489.15	G02B	5/30 27/28
	489.16	G02B	5/30 27/28
	489.17	G02B	5/30 27/28
	489.18	G02B	5/30 27/28
	489.19	G02B	5/30 27/28
	489.2	G02B	5/30 27/28
	490.01	G02B	5/30 27/28
	490.02	G02B	5/30 27/28
	490.03	G02B	5/30 27/28

FEBRUARY 1, 2011

PROJECT E-7372

C. CHANGES TO THE US-TO-IPC CONCORDANCE

<u>U. S. Class</u>	<u>Subclass</u>	<u>I. P. C. Subclass</u>	<u>Notation</u>
359	491.01	G02B	5/30 27/28
	492.01	G02B	5/30 27/28
	493.01	G02B	5/30 27/28
	494.01	G02B	5/30 27/28

FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

CLASS 40 – CARD, PICTURE, OR SIGN EXHIBITING

Definitions Modified:

Subclass 434: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 359

Insert:

359, Optical: Systems and Elements, subclasses 483.01 through 494.01 for nonmodulating polarizing devices.

Subclass 541: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 359

Insert:

359, Optical: Systems and Elements, subclasses 483.01 through 494.01 for nonmodulating polarizing devices.

FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

CLASS 106 – COMPOSITIONS: COATING OR PLASTIC

Definitions Modified:

Class Definition: Under SECTION III, REFERENCES TO OTHER CLASSES, SEE OR SEARCH CLASS, directly under the reference to Class 349

Delete:

The first occurring reference to Class 359

Insert:

359, Optical: Systems and Elements, subclasses 321+ for an optical modulator with significant composition, subclasses 487.01-487.06 for polarizing by dichroic medium, and subclasses 489.01-489.19 for polarization by birefringent element of particular material. (For coating or plastic compositions elsewhere classified.)

FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

CLASS 250 – RADIANT ENERGY

Definitions Modified:

Subclass 341.3: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 359

Insert:

359, Optical: Systems and Elements, subclasses 483.01 through 494.01 for polarizers, per se.

Subclass 559.09: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 359

Insert:

359, Optical: Systems and Elements, subclasses 483.01 through 494.01 for polarizers, per se.

FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

CLASS 313 – ELECTRIC LAMP AND DISCHARGE DEVICES

Definitions Modified:

Subclass 112: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 359

Insert:

359, Optical: Systems and Elements, subclasses 483.01 through 494.01 for light polarizers and subclasses 350+ and 885+ for optical filters.

FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

CLASS 343 – COMMUNICATIONS: RADIO WAVE ANTENNAS

Definitions Modified:

Subclass 700: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 359

Insert:

359, Optical: Systems and Elements, subclasses 483.01 through 494.01 for optical polarizers, subclasses 642+ for optical lenses, subclasses 838+ for optical reflectors and subclasses 350+ and 885+ for optical filters.

Subclass 756: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 359

Insert:

359, Optical: Systems and Elements, subclasses 483.01 through 494.01 for optical polarizers.

Subclass 909: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 359

Insert:

359, Optical: Systems and Elements, subclasses 483.01 through 494.01 for optical polarizers, subclasses 642+ for optical lenses, and subclasses 350+ and 885+ for optical filters.



FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

## CLASS 351 – OPTICS: EYE EXAMINING, VISION TESTING AND CORRECTING

## Definitions Modified:

Subclass 44: In the (1) Note

Delete:

See Class 359, subclasses 483+ for polarizers, subclasses 601+ for optical elements and systems for reducing glare and subclasses 885+ for optical filters.

Under SEE OR SEARCH CLASS

Delete:

The reference to Class 359

Insert:

359, Optical: Systems and Elements, subclasses 483.01 through 494.01 for polarizers, subclasses 601+ for optical elements and systems for reducing glare and subclasses 885+ for optical filters.

Subclass 49: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 359

Insert:

359, Optical: Systems and Elements, subclass 465 for polarizing device used in viewing stereoscopic pictures; and subclasses 483.01 through 494.01 for polarizing devices generally.

Subclass 163: Under SEE OR SEARCH CLASS:

Delete:

FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

The reference to Class 359

Insert:

359, Optical: Systems and Elements, subclasses 483.01 through 494.01 for light polarizers and subclasses 885+ for optical filters. See also (1) Note above.

Subclass 215: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 359

Insert:

359, Optical: Systems and Elements, subclasses 483.01 through 494.01 for polarizing devices generally.

Subclass 232: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 359

Insert:

359, Optical: Systems and Elements, subclasses 483.01 through 494.01 for polarizing devices generally.

FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

CLASS 353 – OPTICS: IMAGE PROJECTORS

Definitions Modified:

Subclass 20: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 359

Insert:

359, Optical: Systems and Elements, subclasses 483.01 through 494.01 for polarizers, per se, and subclasses 577+ for interference filters, per se.

FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

## CLASS 356 – OPTICS: MEASURING AND TESTING

## Definitions Modified:

Class Definition: In Section IV, References to Other Classes, under SEE OR SEARCH CLASS:

Delete:

The first occurring reference to Class 359

Insert:

359, Optical: Systems and Elements, subclasses 350+ for optical elements usable in the infrared or ultraviolet range, subclasses 362+ for compound lens systems including telescopes, microscopes, or periscopes, subclasses 396+ for microscope slides, subclasses 436+ for scale or indicia reading, subclasses 483.01 through 494.01 for polarization type devices, subclasses 290+ for light control systems which alter an optical medium surface, or interface, subclasses 566+ for diffractions gratings subclasses 557+ for light interference systems, subclass 615 for light dispersion systems, subclasses 645+ lenses, particularly subclass 801 for lenses combined with illumination and a viewed object support, subclasses 227+ for light control systems using an opaque element or medium movable in or through the light path, subclasses 831+ for prisms and their mounts, subclasses 838+ for reflectors, and subclasses 885+ for optical filters. (See Lines With Other Classes, B, "Testing and Measuring Subcombinations Provided for Elsewhere.")

Subclass 33: In the (1) Note

Delete:

483

Insert:

483.01 through 494.01,

Subclass 34: Under SEE OR SEARCH CLASS:

Delete:

FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

The reference to Class 359

Insert:

359, Optical: Systems and Elements, subclasses 483.01 through 494.01 for polarizing structure generally. See also (1) Note of subclass 33.

Subclass 225: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 359

Insert:

359, Optical: Systems and Elements, subclasses 227+ for light control by opaque elements movable in a light path, subclasses 483.01 through 494.01 for light polarization devices, subclasses 558+ for light diffraction elements, subclass 615 for light dispersion elements, subclasses 642+ for lenses, subclass 831 for light reflectors, subclasses 885+ for light filters, and subclasses 894+ for optical apertures and tubes.

Subclass 364: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 359

Insert:

359, Optical: Systems and Elements, subclass 437 for scales or indicia reading which utilize a polarizer element; and subclasses 483.01 through 494.01 for optical elements of the polarizer type.

Subclass 366: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 359

FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONSInsert:

359, Optical: Systems and Elements, subclasses 483.01 through 494.01 which includes series polarizers relatively adjustable.

Subclass 368: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 359

Insert:

359, Optical: Systems and Elements, subclasses 246+, 281+, and 483.01 through 494.01 for electromagnetic and electrostatic type optical elements which rotate the plane of polarization of polarized light.

Subclass 450: Under SEE OR SEARCH CLASS:

Delete:

The reference to Class 359

Insert:

359, Optical: Systems and Elements, subclass 370 for an interference microscope; subclass 489.19 for an optical device using interference effects with polarized light, not limited to measuring or testing; and subclass 577 for an optical modifying device, in general, which utilizes the phenomenon of light interference.

FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

CLASS 359 - OPTICAL: SYSTEMS AND ELEMENTS

Definitions Abolished

Subclasses

483-502

Definitions Modified

Subclass 204.3: Under SEE OR SEARCH THIS CLASS, SUBCLASS

Delete:

483, through 502,

Insert:

483.01, through 494.01,

Subclass 250: Under SEE OR SEARCH THIS CLASS, SUBCLASS

Delete:

497,

Insert:

489.01, through 489.15, for polarization achieved by plural birefringent elements.

Subclass 252:

Delete:

488,

Insert:

485.01, through 489.15,

FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

Subclass 254: Under the (1) Note

Delete:

Also, see subclasses 488 and 500.

Subclass 255: Under SEE OR SEARCH THIS CLASS, SUBCLASS

Delete:

484,

Insert:

484.01, through 484.1

Subclass 282: Under SEE OR SEARCH THIS CLASS, SUBCLASS, in the reference to subclass 254, directly after 254,

Delete:

488, and 500,

Insert:

and 489.2,

Under SEE OR SEARCH THIS CLASS, SUBCLASS

Delete:

The entire reference to subclass 487

Insert:

485.03, for layered structure or plural mediums formed for polarization without modulation.



FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONSDelete:

The entire reference to subclass 490+

Insert:

487.01, through 487.06, for layered structures formed with at least one layer of dichroic material where additional layers may be provided for purposes such as protection or particular bonding and for layered structures formed for interference effects.

Delete:

The entire reference to subclass 497+

Insert:

489.15, through 489.19, for plural mediums including a birefringent medium which is not field responsive.

Subclass 301: Under SEE OR SEARCH THIS CLASS, SUBCLASS

Delete:

The entire reference to subclass 495

Insert:

489.08, through 489.13, for birefringent element beam deflection or splitting for polarization without modulation or external input.

Subclass 351: Under SEE OR SEARCH THIS CLASS, SUBCLASS

Delete:

The entire reference to subclass 495

Insert:

489.08, through 489.13, for birefringent element beam deflection or splitting for polarization without modulation or external input.

FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

Subclass 371: Under SEE OR SEARCH THIS CLASS, SUBCLASS

Delete:

The reference to Class 483+

Insert:

483.01, through 494.01, for optics, systems, and elements for polarization of light or using polarized light.

Subclass 386: Under SEE OR SEARCH THIS CLASS, SUBCLASS

Delete:

The reference to subclass 483+

Insert:

483.01, through 494.01, for systems and elements for the polarization of light without modulation.

Subclass 437: Under SEE OR SEARCH THIS CLASS, SUBCLASS

Delete:

The reference to subclass 485+

Insert:

483.01, through 494.01, for specific polarizing elements in polarization without modulation.

Subclass 465: Under SEE OR SEARCH THIS CLASS, SUBCLASS

Delete:

The reference to subclass 483+

FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONSInsert:

483.01, through 494.01, for optics, systems, and elements for polarization of light or using polarized light.

Subclass 573: Under SEE OR SEARCH THIS CLASS, SUBCLASS

Delete:

The reference to subclass 483+

Insert:

483.01, through 494.01, for polarization without modulation.

Subclass 577: Under SEE OR SEARCH THIS CLASS, SUBCLASS

Delete:

The entire reference to subclass 498

Insert:

489.19, for frequency filter or interference effect where the light is polarized.

Subclass 591: Under SEE OR SEARCH THIS CLASS, SUBCLASS

Delete:

The reference to subclass 483+

Insert:

483.01, through 494.01, for light control with polarizers.

Subclass 601: Under SEE OR SEARCH THIS CLASS, SUBCLASS

Delete:

FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

The entire reference to subclass 493

Insert:

488.01, for glare prevention by means of polarizers.

Subclass 603: Under SEE OR SEARCH THIS CLASS, SUBCLASS

Delete:

The entire reference to subclass 493

Insert:

488.01, for glare prevention by means of polarizers.

Subclass 885: Under SEE OR SEARCH THIS CLASS, SUBCLASS

Delete:

The entire reference to Class 502.

Insert:

491.01, for polarizers combined with color filter means.

Definitions Established

**483.01 POLARIZATION WITHOUT MODULATION:**

This subclass is indented under the class definition. Subject matter wherein a polarization of an incident light beam is produced or modified in a time invariant fashion as a result of passing through an optical device.

- (1) Note. Where both a polarizing device and a composition are claimed, the patent is classified here and cross-referenced to class 252, subclass 585.
- (2) Note. Where a method of making the polarizing device is claimed as well as the polarizing device, the patent is classified here and cross-referenced to any other class providing for the method.

FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

- (3) Note. The nominal recitation of a polarizing area in the form of a design, image, etc., or specifics of a polarization element (e.g., polarization light characteristics) is sufficient to include this subject matter in these subclasses. However, the nominal recitation of a polarization element in an optical system is not sufficient to include the subject matter in these subclasses and should be classified elsewhere where such combination meets the class requirements.

## SEE OR SEARCH THIS CLASS, SUBCLASS:

- 204.3, for polarized light to be deflected using moving element
- 246, through 258, for polarization with modulation by electro-optic devices with applied time variant electric signal.
- 281, through 289, for polarization with modulation by magneto-optic devices with applied time variant magnetic signal.
- 301, for light wave directional control of polarized light.
- 352, for a polarizing element having significant infrared or ultraviolet properties.
- 371, and 386, for compound lens systems combined with polarizers.
- 437, for polarizers used in a scale or indicia reading.
- 465, for polarizers used in stereoscopic systems.
- 484.01, for polarization using an applied external time-invariant electric, magnetic, or electromagnetic signal.
- 484.02, through 484.1, for polarization requires magneto rotation.
- 485.01, through 485.07, for polarization by reflection or refraction
- 486.01, through 486.03, for polarization direction or magnitude varied over surface of the medium.
- 487.01, through 487.06, for polarization by dichroism.
- 489.01, through 489.2, for polarization by birefringence.
- 601, through 614, for optical structure in general used to reduce unwanted light, not polarizing structure for reducing antiglare.

## SEE OR SEARCH CLASS:

- 40, Card, Picture, or Sign Exhibiting, particularly subclasses 434 and 548 for illuminated signs utilizing polarizers.
- 65, Glass Manufacturing, subclasses 30.1 and 32.1 for processes for forming polarizing glass material.
- 250, Radiant Energy, subclasses 225 and 559.09 for a light polarizer and a photocell and subclass 341.3 for invisible radiation energy response methods including polarization means.

FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

- 252, Compositions, subclass 585 for chemical compositions which produce polarized light.
- 264, Plastic and Nonmetallic Article Shaping or Treating: Processes, subclass 1.31 for light polarizing articles.
- 313, Electric Lamp and Discharge Devices, subclass 112 for electric lamps and electronic tubes combined with a polarizer.
- 343, Communications: Radio Wave Antennas, subclass 756 for antennas with a polarization converter and subclasses 909+ for radio wave polarizations, per se.
- 348, Television, subclasses 57 and 58 for stereoscopic displays with polarization.
- 349, Liquid Crystal Cells, Elements and Systems, subclass 9 for projectors with liquid crystal cell which produces S and P polarized light, subclass 80 for color polarizers in a liquid crystal cell, subclass 87 for variable polarizers in a liquid crystal cell, subclasses 96-103 for liquid crystal cell structure with polarizing element, and subclass 194 for liquid crystal polarizer.
- 351, Optics: Eye Examining, Vision Testing and Correcting, subclasses 49, 215, and 232 for light-polarizing devices used in eye examining vision testing and correcting means.
- 353, Optics: Image Projectors, subclasses 8 and 20 for polarizers used with image projectors.
- 355, Photocopying, subclass 71 for photocopy system having illumination system with a polarizer
- 356, Optics: Measuring and Testing, subclasses 30 and 31 for gem or crystal examining using polarized light; subclass 33 for material strain analysis with polarized light, subclasses 322 and 327 for spectrometers which utilize polarized light, subclasses 364-370 for polarized light examination devices generally, and subclasses 453, 487 and 491 for interferometers with polarizing elements.
- 362, Illumination, subclass 19 for illumination systems with a polarizing element.
- 365, Static Information Storage and Retrieval, subclasses 121 and 122 for polarization techniques used in the storage and retrieval of information.
- 369, Dynamic Information Storage or Retrieval, subclasses 13.29-13.31 for employing polarized light in a storage or retrieval device and subclasses 110.01-110.04 and 112.16-112.21 for polarizing optical elements in an optical pick-up device.
- 372, Coherent Light Generators, subclass 106 for a polarizer in a coherent light generator (i.e., laser).
- 385, Optical Waveguides, subclass 11 for polarization devices without modulation and including an optical waveguide.
- 398, Optical Communications, subclass 65 for polarization in multiplexing optical communication devices, subclass 152 for transmitter/receiver systems that include polarization.

FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

- 427, Coating Processes, subclasses 163.1-163.4 for coating processes, per se, where the product is an optical element.
- 428, Stock Material or Miscellaneous Articles, subclass 1.31 for liquid crystal layers including polarizer.
- 472, Amusement Devices, subclasses 57-84 for a theatrical stage device which may use a polarizer.
- 501, Compositions: Ceramic, subclasses 30 and 56 for polarizers with specified glass compositions.
- 977, Nanotechnology, subclass 834 for nanomaterials having optical properties that may include polarization.

**484.01 Polarization using a time invariant electric, magnetic, or electromagnetic field (e.g., electro-optical, magneto-optical):**

This subclass is indented under subclass 483.01. Subject matter wherein an electric, magnetic, or electromagnetic field, which is unchanging in time, is applied to the optical device to produce or alter the polarization.

## SEE OR SEARCH CLASS:

- 356, Optics: Measuring and Testing, subclass 368 for polarimeters which include electro-optical light rotation.
- 365, Static Information Storage and Retrieval, subclasses 121 and 122 for information masking using magneto-optical polarization.
- 369, Dynamic Information Storage or Retrieval, subclasses 13.01 through 13.55 for magneto-optical storage systems.
- 385, Optical Waveguides, subclass 11 for polarization devices without modulation and including an optical waveguide.

**484.02 Faraday effect:**

This subclass is indented under subclass 484.01. Subject matter wherein the applied field is a magneto-optic field in which the magneto-optic field interacts with the optical device to produce a rotation in the plane of polarization (i.e., Faraday effect).

- (1) Note. Included in this subclass are Faraday rotation devices without modulation. Faraday rotation devices that include modulation would be appropriate for subclasses 280-284.

## SEE OR SEARCH CLASS:

- 365, Static Information Storage and Retrieval, subclass 122 for information masking using magneto-optical polarization.
- 369, Dynamic Information Storage or Retrieval, subclasses 13.01 through 13.55 for magneto-optical storage systems.

FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

385, Optical Waveguides, subclass 11 for polarization devices without modulation and including an optical waveguide.

**484.03 Isolator:**

This subclass is indented under subclass 484.02. Subject matter wherein a Faraday effect element is used in an optical isolator.

(1) Note. An optical isolator is an optical device which allows the transmission of light in only one direction.

## SEE OR SEARCH CLASS:

372, Coherent Light Generators, subclass 703 for optical isolator in a coherent light generator (i.e., laser).

385, Optical Waveguides, subclass 11 for polarization devices without modulation and including an optical waveguide.

**484.04 With reflector:**

This subclass is indented under subclass 484.03. Subject matter wherein the optical isolator includes at least one reflective element (e.g., mirror, retroreflector, etc).

**484.05 Circulator:**

This subclass is indented under subclass 484.02. Subject matter wherein a Faraday effect element is used in an optical circulator.

(1) Note. An optical circulator is an at least three-port device that allows light to travel in only one direction (e.g., light travels from port 1 to port 2, then from port 2 to port 3).

## SEE OR SEARCH CLASS:

385, Optical Waveguides, subclass 11 for polarization devices without modulation and including an optical waveguide.

398, Optical Communications, subclass 65 for polarization in multiplexing optical communication devices, subclass 152 for transmitter/receiver systems that include polarization, subclass 205 for heterodyne receiver including polarization.

**484.06 Optical switch:**

This subclass is indented under subclass 484.02. Subject matter wherein a Faraday effect element is used in an optical switch.

(1) Note. An optical switch is an optical device which enables light to be selectively switched from one port to another.

## SEE OR SEARCH CLASS:



FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

- 385, Optical Waveguides, subclasses 16-23 for optical switches utilizing an optical waveguide.
- 398, Optical Communications, subclasses 45-57 for optical switching in multiplexing optical communication devices.

**484.07 Interleaver:**

This subclass is indented under subclass 484.02. Subject matter wherein a Faraday effect element is used in an optical interleaver.

- (1) Note. An optical interleaver is an at least 3-port device that is used to combine two sets of wavelength-division multiplexing (WDM) channels (e.g., odd and even channels) into a composite signal stream in an interleaving way.

## SEE OR SEARCH CLASS:

- 385, Optical Waveguides, subclass 11 for polarization devices without modulation and including an optical waveguide.
- 398, Optical Communications, subclass 65 for polarization in multiplexing optical communication devices, subclass 152 for transmitter/receiver systems that include polarization, subclass 205 for heterodyne receiver including polarization.

**484.08 Attenuator:**

This subclass is indented under subclass 484.02. Subject matter wherein a Faraday effect element is used in an optical attenuator.

- (1) Note. An optical attenuator is an optical device that reduces the amplitude or power of a signal.

## SEE OR SEARCH THIS CLASS, SUBCLASS:

337.1, through 337.13, for spectral gain flattening or equalization.

## SEE OR SEARCH CLASS:

- 356, Optics: Measuring and Testing, subclass 370 for measuring/testing of polarized light having light attenuation.
- 385, Optical Waveguides, subclass 140 for optical attenuators including an optical waveguide.

**484.09 Interference or comb filter:**

This subclass is indented under subclass 484.02. Subject matter wherein a Faraday effect element is used in an interference or comb filter.

- (1) Note. An interference or comb filter is an optical filter that selectively reflects or transmits light in a narrow band of wavelengths.

FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

SEE OR SEARCH THIS CLASS, SUBCLASS:

489.19, for frequency filters used for polarization by birefringence.  
589, and 590, for general interference filters.

SEE OR SEARCH CLASS:

353, Optics: Image Projectors, subclass 20 for polarizers used with image projectors.  
356, Optics: Measuring and Testing, subclasses 491-495 for interferometers having polarization.

**484.1 With particular Faraday effect material:**

This subclass is indented under subclass 484.02. Subject matter wherein details of materials that are involved in the generation of the Faraday effect are recited.

SEE OR SEARCH CLASS:

117, Single-Crystal, Oriented-Crystal, and Epitaxy Growth Processes; Non-Coating Apparatus Therefor, subclass 54 for the process of growing magnetic compositions.  
252, Compositions, subclass 585 for chemical compositions which produce polarized light and subclasses 62.51+ for the magnet material composition.  
335, Electricity: Magnetically Operated Switches, Magnets, and Electromagnets, subclasses 209-306 for the magnet structure.

**485.01 Polarization by reflection or refraction:**

This subclass is indented under subclass 483.01. Subject matter wherein a light beam is polarized as a result of either (1) by striking a surface and returning into the originating medium of an optical element or (2) by redirecting as it passes through media of differing indices of refraction of the optical element.

(1) Note. The reflection or refraction phenomena must follow Snell's Law to be appropriate for this subclass.

SEE OR SEARCH CLASS:

349, Liquid Crystal Cells, Elements and Systems, subclass 9 for projectors with liquid crystal cell which produces S and P polarized light, subclasses 96-103 for liquid crystal cell structure with polarizing element and subclass 194 for liquid crystal polarizer.  
353, Optics: Image Projectors, subclass 20 for polarizers used with image projectors.  
362, Illumination, subclass 19 for illumination systems with a polarizing element.

**485.02 Brewster angle polarizer (reflective or transmissive):**

FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

This subclass is indented under subclass 485.01. Subject matter wherein the polarizing optical element reflects or transmits light at Brewster's angle.

- (1) Note. Since the reflection coefficient for light which has an electric field parallel to the plane of incidence goes to zero at some incidence angle between  $0^\circ$  and  $90^\circ$ , the reflected light at that angle (Brewster's angle) is linearly polarized with its electric field vectors perpendicular to the plane of incidence and parallel to the plane of the surface from which it is reflecting.

SEE OR SEARCH CLASS:

- 372, Coherent Light Generators, subclass 106 for a polarizer in a coherent light generator (i.e., laser).

**485.03 Multilayer polarizer:**

This subclass is indented under subclass 485.01. Subject matter wherein the polarizing optical element includes a plurality of layers, at least one of which is reflective or refractive.

- (1) Note. Multilayer optical elements which operate using optical interference are appropriate for this subclass.
- (2) Note. Multilayer optical elements that include one or more birefringent layers should be classified in 489.19 and are not appropriate for this subclass.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 371, for interference microscopes which may utilize polarized light.  
580, through 590, for general optical inference elements.

**485.04 Pile-of-plates polarizer:**

This subclass is indented under subclass 485.03. Subject matter wherein a polarization is reflected or transmitted from a stack of plates (e.g., dielectric plates).

**485.05 Wire grid polarizer:**

This subclass is indented under subclass 485.01. Subject matter wherein the polarizing optical element includes metallic conductors in the form of a reflective grid (i.e., each grid opening forms a half wavelength of the applied light) to produce a polarization of the applied light.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 352, for a polarizing element having significant infrared or ultraviolet properties.  
569, through 576, for diffractive optical elements.

SEE OR SEARCH CLASS:

FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

216, Etching a substrate: Processes, subclass 24 for general etching processes

**485.06 Prism:**

This subclass is indented under subclass 485.01. Subject matter wherein the polarizing optical element has at least two plane surfaces inclined relative to each other, from which light is reflected or through which light is refracted.

- (1) Note. A prism may be employed for refracting or reflecting light. Prism reflections are considered to be internal reflections; that is, the light is inside the prism body both before and immediately after the reflection.
- (2) Note. The prismatic element may include a plurality or an array of prisms (e.g., crossed prisms, x-prisms or kernel prisms).

SEE OR SEARCH THIS CLASS, SUBCLASS:

489.09, and 489.1, for prisms used for polarization by birefringence.

629, through 638, for general beam splitting elements.

831, through 837, for prisms, per se.

SEE OR SEARCH CLASS:

349, Liquid Crystal Cells, Elements and Systems, subclasses 8-9 for projectors with liquid crystal cell which produces S and P polarized light.

353, Optics: Image Projectors, subclass 20 for polarizers used with image projectors.

**485.07 Mirror:**

This subclass is indented under subclass 485.01. Subject matter wherein the reflective element is a mirror.

- (1) Note. The reflective element may include a plurality or an array of mirrors.

**486.01 Polarization (direction or magnitude) variation over surface of the medium:**

This subclass is indented under subclass 483.01. Subject matter comprising a surface which transmits or reflects light and whose ability to polarize light is not uniform across the surface.

- (1) Note. This variation in polarizing ability may be continuous or discontinuous and may form any type of pattern. For example, the different areas of a surface may form an image or design as in a "vectograph".

**486.02 Linear variation:**

This subclass is indented under subclass 486.01. Subject matter wherein the polarization varies along a single direction or two orthogonal directions (e.g., matrix or checkerboard).

FEBRUARY 1, 2011

PROJECT E-7273

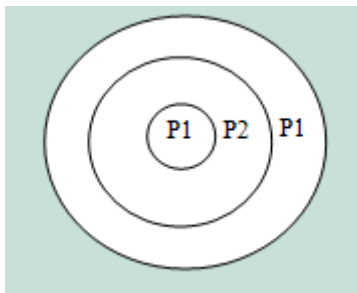
D. CHANGES TO THE DEFINITIONS

P1	P2	P1	P2	P1

A typical example of the subject matter.

P1				
P2				
P1				
P2				

A typical example of the subject matter.



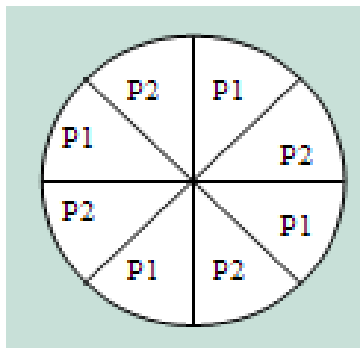
A typical example of the subject matter.

**486.03 Radial variation:**

This subclass is indented under subclass 486.01. Subject matter wherein the polarization varies around an optical axis.

FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

A typical example of the subject matter.

**487.01 Polarization by dichroism:**

This subclass is indented under subclass 483.01. Subject matter including an optical element made of dichroic materials which have different absorption for different incident polarization planes of light.

- (1) Note. Included here are elements where the medium comprises a lamination or a coating on a supporting structure and where the supporting structure is significant or the means to form the lamination or coating is significant.

## SEE OR SEARCH THIS CLASS, SUBCLASS:

- 352, for a polarizing element having significant infrared or ultraviolet properties.  
580, for general dichroic elements without polarization properties.

## SEE OR SEARCH CLASS:

- 156, Adhesive Bonding and Miscellaneous Chemical Manufacture, subclasses 99-108 for processes of adhesively bonding laminae.  
252, Compositions, subclass 585 for chemical compositions which produce polarized light.  
427, Coating Processes, subclasses 163.1-163.4 for coating processes, per se, where the product is an optical element.

**487.02 With stain or dye:**

This subclass is indented under subclass 487.01. Subject matter wherein the polarizing optical element is made of dichroic coloring agent, such as a dye or stain (e.g., Polaroid H or K sheets or dichroic iodine-based films).

## SEE OR SEARCH CLASS:

- 428, Stock material or miscellaneous articles, subclass 1.31 for liquid crystal layers including polarizer.

FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS**487.03 Wire grid polarizer:**

This subclass is indented under subclass 487.01. Subject matter wherein the polarizing optical element includes metallic conductors in the form of an absorptive grid (i.e., each grid opening forms a half wavelength of the applied light) to produce polarization of the applied light.

SEE OR SEARCH THIS CLASS, SUBCLASS:

569, through 576, for diffractive optical elements.

SEE OR SEARCH CLASS:

216, Etching a substrate: Processes, subclass 24 for general etching processes

**487.04 Wavelength-selective beamsplitter:**

This subclass is indented under subclass 487.01. Subject matter wherein the polarizing dichroic optical element is used to selectively separate or split the light beam into components of different wavelengths.

SEE OR SEARCH THIS CLASS, SUBCLASS:

634, for wavelength-selective, dichroic reflectors.

SEE OR SEARCH CLASS:

349, Liquid Crystal Cells, Elements and Systems, subclasses 8-9 for projectors with liquid crystal cell which produces S and P polarized light.

353, Optics: Image Projectors, subclass 20 for polarizers used with image projectors.

**487.05 Having plural elements:**

This subclass is indented under subclass 487.01. Subject matter wherein the polarizing optical device includes a plurality of dichroic elements.

(1) Note. The plurality of dichroic elements may include a plurality of layers, films, coatings or optical devices.

**487.06 Oriented particles:**

This subclass is indented under subclass 487.01. Subject matter wherein the polarization of the applied light is dependent upon the spatial positioning of microscopic particles embedded in the dichroic medium of the polarizing optical element.

SEE OR SEARCH THIS CLASS, SUBCLASS:

487.01, for polarization caused by the molecular orientation of the matrix material or of a reaction product.

487.02, for stain or dye molecules acting as oriented particles.

FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS**488.01 Glare prevention by discriminating against polarized light:**

This subclass is indented under subclass 483.01. Subject matter wherein unwanted glare-producing polarized light is eliminated by a polarizing structure.

SEE OR SEARCH THIS CLASS, SUBCLASS:

490.01, through 490.03, for two superimposed relatively adjustable polarizers mounted as a unit and used to reduce or control light intensity.

601, through 614, for glare reduction not utilizing a polarizer.

**489.01 Polarization by birefringence:**

This subclass is indented under subclass 483.01. Subject matter wherein the polarizing optical element includes crystalline materials having two distinct indices of refraction associated with different crystallographic directions, i.e. birefringent materials.

- (1) Note. A birefringent element has the property of dividing a ray or beam of energy into two polarized rays or beams (known as the ordinary and extraordinary rays), the directions of polarization being at right angles to each other.

SEE OR SEARCH THIS CLASS, SUBCLASS:

489.09, for a birefringent element in the form of a Nicol prism where the unwanted ray is deflected.

SEE OR SEARCH CLASS:

65, Glass Manufacturing, subclasses 30.1 and 32.1 for processes for forming polarizing glass material.

356, Optics: Measuring and Testing, subclass 365 for measuring/testing of polarized light having a birefringent element.

501, Compositions: ceramic, subclasses 30 and 56 for polarizers with specified glass compositions.

**489.02 With compensation techniques:**

This subclass is indented under subclass 489.01. Subject matter wherein the birefringent element corrects for unwanted effects.

SEE OR SEARCH CLASS:

349, Liquid Crystal Cells, Elements and Systems, subclasses 117-121 for liquid crystal cell including compensation.

**489.03 Intrinsic birefringence or photoelastic (stress) effect:**

This subclass is indented under subclass 489.02. Subject matter wherein the unwanted effect is intrinsic birefringence or photoelastic (stress) effect.



FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

## SEE OR SEARCH CLASS:

349, Liquid Crystal Cells, Elements and Systems, subclass 120 for liquid crystal cell including compensation for negative intrinsic birefringence (i.e., negative refractive index anisotropy).

**489.04 Temperature:**

This subclass is indented under subclass 489.02. Subject matter wherein the unwanted effect is temperature.

**489.05 Path length:**

This subclass is indented under subclass 489.02. Subject matter wherein the unwanted effect is changes in optical or physical path length.

(1) Note. Included in this subclass are optical delay lines.

**489.06 Form birefringent element:**

This subclass is indented under subclass 489.01. Subject matter wherein the optical element exhibits different refractive indices as a result of an anisotropic physical structure on a scale much larger than molecular but much smaller than the wavelength of light.

(1) Note. Examples of such elements may include polarizing dielectric diffraction gratings or polarizing lattice grids.

(2) Note. Form birefringence is also known as structural birefringence or structure-induced birefringence.

## SEE OR SEARCH THIS CLASS, SUBCLASS:

566, through 576, for diffractive optical elements.

## SEE OR SEARCH CLASS:

369, Dynamic Information Storage or Retrieval, subclasses 112.03-112.15 for optical pick-up devices having a diffractive element.

**489.07 Waveplate or retarder:**

This subclass is indented under subclass 489.01. Subject matter wherein the birefringent element is used to alter the polarization state of a light wave traveling through it by shifting the phase between the two perpendicular polarization components of the incident light beam, i.e., birefringent waveplate or retarder.

(1) Note. Included in this subclass are waveplates or retarders that are EXPLICITLY birefringent, i.e. the waveplate or retarder is birefringent, anisotropic, uniaxial, biaxial or double (doubly) refractive; the waveplate or retarder is made from a birefringent crystalline material such as quartz, calcite,

FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

tourmaline, rutile, sodium nitrate, magnesium fluoride, sapphire, etc.; or the waveplate or retarder has been specified to have two distinct indices of refraction associated with different crystallographic directions, such as those producing ordinary and extraordinary rays.

## SEE OR SEARCH CLASS:

349, Liquid Crystal Cells, Elements and Systems, subclass 18 for projectors with liquid crystal cell that includes a variable or rotatable retarder and subclasses 117-118 for specific liquid crystal cell structures with birefringent retarders.

**489.08 Beam deflector or splitter:**

This subclass is indented under subclass 489.01. Subject matter wherein the birefringent element is used to change the direction of the entire beam or a portion of the beam for positioning purposes or is used to split the beam into two or more portions.

(1) Note. The polarization splitter may include a plurality or an array of splitters.

## SEE OR SEARCH THIS CLASS, SUBCLASS:

485.01, through 485.07, and 487.04, for polarized beam deflection and splitting using nonbirefringent medium.

489.09, for prism structures which could be used for beam splitting.

629, through 638, for general beam splitting elements.

**489.09 Prism:**

This subclass is indented under subclass 489.08. Subject matter wherein the birefringent element has at least two plane surfaces inclined relative to each other, from which light is reflected or through which light is refracted.

(1) Note. A prism may be employed for refracting or reflecting light. Prism reflections are considered to be internal reflections; that is, the light is inside the prism body both before and immediately after the reflection.

(2) Note. The prismatic element may include a plurality or an array of prisms (e.g., crossed prisms, x-prisms or kernel prisms).

(3) Note. The prismatic element may also be doubly refractive, wherein light incident on the prismatic element undergoes decomposition into two rays, the ordinary ray and the extraordinary ray (e.g., Glan prism, Wollaston prism, Rochon prism, Sernarmont prism, Nicol prism, Feussner polarizer, etc.). This phenomena occurs when the optic axis of the element is at an arbitrary angle with respect to the incident beam direction (i.e., not parallel).

## SEE OR SEARCH THIS CLASS, SUBCLASS:

FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

- 485.06, for prisms used for polarization by reflection or refraction.
- 639, and 640, for refraction at the beam splitting or combining surface of a prismatic element.
- 831, through 837, for prisms, per se.

## SEE OR SEARCH CLASS:

- 349, Liquid Crystal Cells, Elements and Systems, subclasses 8-9 for projectors with liquid crystal cell which produces S and P polarized light.
- 353, Optics: Image Projectors, subclass 20 for polarizers used with image projectors.

**489.1 Adjustable element(s):**

This subclass is indented under subclass 489.09. Subject matter wherein the prismatic element is movable to adjust the optical characteristics of the prismatic element (e.g., Soleil-Babinet compensators).

**489.11 Film or layer:**

This subclass is indented under subclass 489.08. Subject matter wherein the polarization splitter includes at least one thin film, layer, or coating of birefringent materials.

## SEE OR SEARCH CLASS:

- 427, Coating Processes, subclasses 163.1-163.4 for coating processes, per se, where the product is an optical element.

**489.12 Uniaxial:**

This subclass is indented under subclass 489.11. Subject matter including birefringent materials wherein the refractive indices of two of the three orthogonal directions are the same.

- (1) Note. Included in this subclass are both positive and negative birefringent uniaxial materials.

**489.13 Biaxial:**

This subclass is indented under subclass 489.11. Subject matter including birefringent materials wherein the refractive indices of all three orthogonal directions are different.

**489.14 Lens:**

This subclass is indented under subclass 489.01. Subject matter wherein the birefringent element is a lens.

- (1) Note. A birefringent lens is defined as either a single transparent mass of birefringent refractive material having opposed refracting surfaces or a plurality of such masses arranged along an optical axis with their opposed refracting surfaces disposed transversely of such axis.

FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

SEE OR SEARCH THIS CLASS, SUBCLASS:

489.18, for optical systems with lenses and plural birefringent elements.

**489.15 Plural birefringent elements:**

This subclass is indented under subclass 489.01. Subject matter wherein beam polarization is achieved by multiple birefringent elements.

SEE OR SEARCH THIS CLASS, SUBCLASS:

371, and 386, for microscopes using polarized light which may utilize birefringent elements.

465, for stereoscopic systems with polarizing elements which may be birefringent.

489.09, through 489.1, for prism structures made up of plural elements.

486.01, for elements where the polarization varies over surface of the medium.

SEE OR SEARCH CLASS:

349, Liquid Crystal Cells, Elements and Systems, subclasses 8-9 for projectors with liquid crystal cell which produces S and P polarized light.

353, Optics: Image Projectors, subclass 20 for polarizers used with image projectors.

362, Illumination, subclass 19 for illumination systems with polarizing elements.

**489.16 Three or more birefringent elements:**

This subclass is indented under subclass 489.15. Subject matter wherein beam polarization is achieved by at least three birefringent elements.

**489.17 In parallel:**

This subclass is indented under subclass 489.15. Subject matter wherein the birefringent elements are arranged transverse to the light propagation direction, i.e., positioned in parallel.

**489.18 With lenses:**

This subclass is indented under subclass 489.15. Subject matter wherein the optical system also includes a plurality of lenses in series or in a lens array.

(1) Note. Included in this subclass are optical systems with plural birefringent elements including lens (or lenses) that are NOT birefringent.

**489.19 Frequency filter or interference effects:**

This subclass is indented under subclass 489.15. Subject matter wherein plural elements act to pass a particular frequency or band of frequencies, or wherein interference effects are used to produce effects such as color or an interference pattern.

SEE OR SEARCH THIS CLASS, SUBCLASS:

FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

370, and 371, for interference microscopes which may utilize birefringent elements.  
487.01, for color effects using dichroic medium.  
580, through 590, for general optical inference elements.  
634, for wavelength selective beam splitting systems.  
885, through 892, for an absorption filter.

**489.2 Mounting structure:**

This subclass is indented under subclass 489.01. Subject matter wherein detailed structures for mounting the birefringent element are recited.

SEE OR SEARCH THIS CLASS, SUBCLASS:

819, through 830, for generic lens mounts.

SEE OR SEARCH CLASS:

349, Liquid Crystal Cells, Elements and Systems, subclasses 58-60 for generic mounting structures to hold liquid crystal cells.

**490.01 By relatively adjustable superimposed or in series polarizers:**

This subclass is indented under subclass 483.01. Subject matter wherein the polarizers are positioned one on top of another or arranged in a row and their positions are adjustable.

SEE OR SEARCH THIS CLASS, SUBCLASS:

489.2, for mounting structure of superimposed birefringent elements.

SEE OR SEARCH CLASS:

349, Liquid Crystal Cells, Elements and Systems, subclass 18 for projectors with liquid crystal cell that includes a variable or rotatable retarder.

**490.02 Rotating elements:**

This subclass is indented under subclass 490.01. Subject matter wherein the elements are adjustable by rotation.

**490.03 Translating or sliding elements:**

This subclass is indented under subclass 490.01. Subject matter wherein the elements are adjustable by translation or sliding.

**491.01 With color filter:**

This subclass is indented under subclass 483.01. Subject matter where a polarizing structure is combined with structure to selectively absorb or transmit specific light wavelengths.

FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

SEE OR SEARCH THIS CLASS, SUBCLASS:

485.03, for similar subject matter where the only color produced is a result of interference.

487.01, through 487.06, for similar subject matter where the color is produced by a dichroic medium. (See (1) Note under subclass 487.01 for the definition of dichroic.)

489.19, for similar subject matter where the only color produced is a result of interference between the ordinary and extraordinary light rays.

SEE OR SEARCH CLASS:

349, Liquid Crystal Cells, Elements and Systems, subclasses 80 and 97 for liquid crystal cell structure with color filter.

**492.01 Polarization by optical activity:**

This subclass is indented under subclass 483.01. Subject matter wherein the material of the optical element naturally rotates the plane of polarization of the incident light beam without the application of any external applied fields (e.g., electrical, magnetic, stress or pressure).

SEE OR SEARCH CLASS:

252, Compositions, subclass 585 for chemical compositions which produce polarized light.

**493.01 Polarization by scattering:**

This subclass is indented under subclass 483.01. Subject matter wherein a light beam is polarized as a result of scattering or diffusing from an optical medium.

(1) Note. The scattering or diffusing phenomena must NOT follow Snell's Law to be appropriate for this subclass.

SEE OR SEARCH THIS CLASS, SUBCLASS:

599, for general optical elements that diffuse incident light.

**494.01 Depolarization:**

This subclass is indented under subclass 483.01. Subject matter wherein the optical element converts an incident polarized light beam to produce an unpolarized, depolarized or randomly polarized output light beam.

**FOR 131 POLARIZATION WITHOUT MODULATION (359/483):**

This foreign art collection is indented under the class definition. Foreign art collection wherein the polarization of an incoming light beam is modified in a time invariant fashion as a result of passing through some optical device.

FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

- (1) Note. Where both a polarizing device and a composition are claimed, the patent is classified here and cross-referenced to Class 252, subclass 585.
- (2) Note. Where a method of making the polarizing device is claimed as well as the polarizing device, the patent is classified here and cross-referenced to any other class providing for the method.
- (3) Note. The nominal recitation of a polarizing area in the form of a design, image, etc., is sufficient to include this subject matter in this subclass.

**FOR 132 Time invariant electric, magnetic or electromagnetic field responsive (e.g., electro-optical, magneto-optical) (359/484):**

This foreign art collection is indented under FOR 131. Foreign art collection wherein an electrical, magnetic, or electromagnetic field, which is unchanging in time, is applied to the device producing the polarization.

- (1) Note. This would include optical isolators and circulators.

**FOR 133 Light polarization without any external input (359/485):**

This foreign art collection is indented under FOR 131. Foreign art collection wherein an optical device causes optical energy to vibrate in accordance with a regular pattern that differs from the input without the application of any supplemental energy.

**FOR 134 By grid or dipoles (359/486):**

This foreign art collection is indented under FOR 133. Foreign art collection wherein electrical conductors in the form of a grid (i.e., each grid opening forms a half wavelength of the applied light) or half wavelength dipoles embedded in the medium produce polarization of the applied light.

**FOR 135 By reflection or refraction (e.g., Brewster angle) (359/487):**

This foreign art collection is indented under FOR 133. Foreign art collection wherein a light beam is polarized as a result of either (1) striking a surface and returning into the originating medium or (2) redirection as it passes through media of differing optical densities.

**FOR 136 With particular medium (359/488):**

This foreign art collection is indented under FOR 135. Foreign art collection wherein details of the reflecting or refracting medium are recited (e.g., physical composition, structure, specific indexes of refraction, or thickness of layers).

- (1) Note. Physical shape (other than layered mediums) or arrangement of elements or mediums is not considered a particular medium for this subclass.

**FOR 137 Polarization (direction or magnitude) varies over surface of the medium (e.g., vectograph) (359/489):**

This foreign art collection is indented under FOR 133. Foreign art collection comprising a surface which transmits or reflects light and whose ability to polarize light is not uniform across the surface.

FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

- (1) Note. This variation in polarizing ability may be continuous or discontinuous and may form any type of pattern. For example, the different areas of a surface may form an image or design as in a "vectograph".

**FOR 138 By dichroic medium (359/490):**

This foreign art collection is indented under FOR 133. Foreign art collection including an optical element which effects the degree of polarization dependent upon the relative absorption therein of the two components or vectors of light.

- (1) Note. A dichroic element will transmit light of one color and reflect light of the complementary color with little light being absorbed. These elements are composed of superimposed strata of dielectric material, which are classified in subclass 580.
- (2) Note. Included here are elements where the medium comprises a lamination or a coating on a supporting structure and where the supporting structure is significant or the means to form the lamination or coating is significant.

**FOR 139 Stain or dye (359/491):**

This foreign art collection is indented under FOR 138. Foreign art collection wherein a coloring agent is absorbed by the polarization medium to affect the polarization of the applied light beam.

**FOR 140 Oriented particles (359/492):**

This foreign art collection is indented under FOR 138. Foreign art collection wherein the polarization of the applied light is dependent upon the spatial positioning of microscopic particles embedded in the dichroic medium.

**FOR 141 Glare prevention by discriminating against polarized light (359/493):**

This foreign art collection is indented under FOR 133. Foreign art collection wherein unwanted glare-producing light, having a particular polarization, is eliminated by a polarizing structure.

**FOR 142 By birefringent element (359/494):**

This foreign art collection is indented under FOR 133. Foreign art collection including an element having the property of dividing a ray or beam of energy into two polarized rays or beams (known as the ordinary and extraordinary rays), the directions of polarization being at right angles to each other.

- (1) Note. A birefringent material which has been treated with a dichroic dye to absorb the ordinary or extraordinary ray is no longer considered to be birefringent within the meaning of this definition. A birefringent element in the form of a Nicol prism where the unwanted ray is deflected is classified here.

**FOR 143 For beam deflection or splitting (359/495):**



FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

This foreign art collection is indented under FOR 142. Foreign art collection wherein the entire beam or a portion of the beam is caused to change direction for positioning purpose or wherein the beam is split into two or more portions.

**FOR 144 Prisms (359/496):**

This foreign art collection is indented under FOR 142. Foreign art collection wherein the birefringent element is formed into a structure bound in part by two plane faces that are not parallel and combinations of the structure.

**FOR 145 Using plural elements (359/497):**

This foreign art collection is indented under FOR 142. Foreign art collection wherein beam polarization is achieved by multiple birefringent elements.

**FOR 146 Frequency filter or interference effects (359/498):**

This foreign art collection is indented under FOR 145. Foreign art collection wherein plural elements act to pass a particular frequency or band of frequencies, or wherein interference effects are used to produce effects such as color or an interference pattern.

**FOR 147 Using compensation techniques 359/499):**

This foreign art collection is indented under FOR 145. Foreign art collection wherein at least one of the elements corrects for unwanted effects, such as those due to temperature.

**FOR 148 With particular material or mounting structure (359/500):**

This foreign art collection is indented under FOR 142. Foreign art collection wherein details of the birefringent material, such as the type, size, shape, crystal cut, or treatment thereof or detailed structures for mounting the material are recited.

**FOR 149 By relatively adjustable superimposed or in series polarizers (359/501):**

This foreign art collection is indented under FOR 133. Foreign art collection wherein the polarizers are positioned one on top of another or arranged in a row and their positions are adjustable.

**FOR 150 With color filter (359/502):**

This foreign art collection is indented under FOR 133. Foreign art collection where a polarizing structure is combined with structure to selectively absorb or transmit specific light wavelengths.

FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

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 359

Insert:

359, Optical: Systems and Elements, subclasses 281+ and 484.01 through 484.1, magneto-optical polarization devices usable in magnetic signal reproduction.

FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

CLASS 362 – ILLUMINATION

Definitions Modified:

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

Delete:

The first occurring reference to Class 359

Insert:

359, Optical: Systems and Elements, subclass 885 for optical filters, and subclasses 484.01 through 494.01 for polarizers. (See Lines With Other Classes, "Special Applications.")

Subclass 19: Under SEE OR SEARCH CLASS

Delete:

The reference to Class 359

Insert:

359, Optical: Systems and Elements, subclasses 484.01 through 494.01 for (a) light polarizing compositions, (b) light polarizing devices, and (c) polarizing systems not provided for in some other optical class.

FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

## CLASS 365 – STATIC INFORMATION STORAGE AND RETRIEVAL

## Definitions Modified:

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

Delete:

The first occurring reference to Class 359

Insert:

359, Optical: Systems and Elements, subclasses 350+ for infrared and ultraviolet optical elements, subclasses 1+ for holographic records, subclasses 484.01 through 494.01 for polarization devices, and subclasses 290+ for light control by altering an optical medium, surface, or interface (See Lines With Other Classes, F.)

Subclass 10: Under SEE OR SEARCH CLASS

Delete:

The reference to Class 359

Insert:

359, Optical: Systems and Elements, subclasses 281+ and subclasses 484.01 through 484.1 where the properties of the polarized light beam are changed as a result of a magnetic field.

Subclass 65: Under SEE OR SEARCH CLASS

Delete:

The reference to Class 359

Insert:

FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

359, Optical: Systems and Elements, subclasses 245+ for light control with ferroelectric devices and subclasses 484.01 through 484.1 for polarization using ferroelectric devices.

Subclass 117: Under SEE OR SEARCH CLASS

Delete:

The reference to Class 359

Insert:

359, Optical: Systems and Elements, subclasses 245+ for light control with ferroelectric devices and subclasses 484.01 through 484.1 for polarization using ferroelectric devices.

Subclass 121: Under SEE OR SEARCH CLASS

Delete:

The reference to Class 359

Insert:

359, Optical: Systems and Elements, subclasses 240+ and subclasses 484.01 through 484.1 for changing the properties of polarized light by an applied field.

Subclass 145: Under SEE OR SEARCH CLASS

Delete:

The reference to Class 359

Insert:

359, Optical: Systems and Elements, subclasses 245+ for light control with ferroelectric devices and subclasses 484.01 through 484.1 for polarization using ferroelectric devices.

FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

CLASS 369 – DYNAMIC INFORMATION STORAGE OR RETRIEVAL

Definitions Modified:

Subclass 110.01: Under SEE OR SEARCH CLASS

Delete:

The reference to Class 359

Insert:

359, Optical: Systems and Elements, subclasses 483.01 through 494.01 for polarized or polarizing optical elements, per se.

Subclass 112.16: Under SEE OR SEARCH CLASS

Delete:

The reference to Class 359

Insert:

359, Optical: Systems and Elements, subclasses 483.01 through 494.01 for polarized or polarizing optical elements, per se.

Subclass 275.2: Under SEE OR SEARCH CLASS

Delete:

The reference to Class 359

Insert:

359, Optical: Systems and Elements, subclasses 280+ and subclasses 484.01 through 484.1 for magneto-optical polarization.

FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

CLASS 385 – OPTICAL WAVEGUIDES

Definitions Modified:

Subclass 11: Under SEE OR SEARCH CLASS

Delete:

The reference to Class 359

Insert:

359, Optical: Systems and Elements, subclasses 483.01 through 494.01 for light polarization without modulation outside of a waveguide.

FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

CLASS 386 – MOTION VIDEO SIGNAL PROCESSING FOR RECORDING OR REPRODUCING

Definitions Modified:

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

Delete:

The reference to Class 359

Insert:

359, Optical: Systems and Elements, subclasses 281+ and subclasses 484.01 through 484.1 for magneto-optical polarization devices usable in magnetic signal reproduction.



FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

CLASS 396 – PHOTOGRAPHY

Definitions Modified:

Subclass 305: Under SEE OR SEARCH CLASS

Delete:

The reference to Class 359

Insert:

359, Optical: Systems and Elements, subclass 491.01 for polarization elements with color filters, subclasses 618+ for light dividing, combining or plural image forming and subclasses 885+ for absorption filters, per se.

FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

CLASS 398 – OPTICAL COMMUNICATIONS

Definitions Modified:

Subclass 65: Under SEE OR SEARCH CLASS

Delete:

The reference to Class 359

Insert:

359, Optical: Systems and Elements, subclass 246 for electro-optical modulation of polarized light, subclass 281 for magneto-optical modulation of polarized light, subclass 301 for light wave directional modulation acting on polarized light, and subclasses 483.01 through 494.01 for polarization without modulation.

Subclass 205: Under SEE OR SEARCH CLASS

Delete:

The reference to Class 359

Insert:

359, Optical: Systems and Elements, subclasses 246 through 258 for electro-optic modulation of polarized light, subclasses 281 through 283 for magneto-optic modulation of polarized light, subclasses 301 through 304 for light wave directional modulation acting on polarized light, and subclasses 483.01 through 494.01 for polarization without modulation.

FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

CLASS 427 – COATING PROCESSES

Definitions Modified:

Subclass 163.1: Under SEE OR SEARCH CLASS

Delete:

The reference to Class 359

Insert:

359, Optical: Systems and Elements, subclasses 483.01-494.01 for polarization, per se.

FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

## CLASS 428 – STOCK MATERIAL OR MISCELLANEOUS ARTICLES

## Definitions Modified:

Subclass 438: In the (2) Note

Delete:

483+

Insert:

483.01 through 494.01

Under SEE OR SEARCH CLASS

Delete:

The reference to Class 359

Insert:

359, Optical: Systems and Elements, subclasses 483.01-494.01 for a laminated polarizer and subclasses 885+ for optical filters. See (2) Note above.

Subclass 910: Under SEE OR SEARCH CLASS

Delete:

The reference to Class 359

Insert:

359, Optical: Systems and Elements, subclasses 483.01-494.01 for an optical system (e.g., filters, etc.) in which the molecules are oriented for an optical purpose (e.g., polarization, etc.).

FEBRUARY 1, 2011

PROJECT E-7273

D. CHANGES TO THE DEFINITIONS

CLASS 430 – RADIATION IMAGERY CHEMISTRY: PROCESS, COMPOSITION, OR PRODUCT THEREOF

Definitions Modified:

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

Delete:

The first occurring reference to Class 359

Insert:

359, Optical: Systems and Elements, subclasses 478+ for relief illusion device; subclasses 885+ for nonchemically defined filter; subclass 893 for screen or mask; subclasses 36+ for elements using liquid crystal material; subclasses 1+ for holographic element; and subclasses 483.01-494.01 for polarizers. (See Lines With Other Classes, “Lines With And Search Notes To Articles or Product Classes” above).