

# **INDEX TO THE U.S. PATENT CLASSIFICATION SYSTEM**



**U.S. Patent and Trademark Office  
Office of Classification Support**

Send suggestions for new entries, changes to existing data, and errors and omissions identified in the Index to:

U.S. Patent and Trademark Office  
Office of Classification Support  
Chief, Editorial Division  
MDW/Room 8A65  
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# Preface

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The *Index to the US Patent Classification System*, referred to hereafter as the Index, is intended as an initial means of entry into the classification system. The Index should be particularly useful for those lacking experience in using the classification system and those unfamiliar with the particular technology under consideration. It is an alphabetical list of subject headings referring to specific classes and subclasses of the classification system.

There are continual changes in the classification system. New classes and subclasses are established due to new developments in science and technology, and old classes and subclasses are abolished when rendered obsolete by technological advances. In addition, changes to classes and subclasses may result from an effort to streamline and update the definitions.

An alphabetical list of the utility and design class titles follow this preface.

Searchers may find it useful to scan the titles for topics which may be of interest to them. As a first step in locating a field of search, the searcher should look in the Index for the term that best represents the subject matter of interest. If a match is not found, the user should look for terms of approximately the same meaning, for terms of either broader or narrower scope, or for terms which represent a different approach to the subject; i.e., the essential function or effect of the device or the use or application to which the device or composition of matter is put. On finding the identifying numbers of possibly pertinent classes and subclasses in the Index, the user should refer to the *Manual of Classification* and ascertain from among the existing choices the precise classification (that is, the class) of the subject of interest. The user should start with the first "mainline" subclass; i.e., any subclass depicted without indents and presented in all capitals, in the selected class, and proceed from one mainline subclass to another until the first one is found that appears to include the subject matter being investigated. Next, the user should scan all of the subordinate subclasses indented one place to the right under the selected mainline until the first one is found that indicates inclusion of the subject matter being investigated. Using this same technique, the searcher should scan the subclasses indented one additional place to the right under the previously identified subordinate subclass until no further levels of indentation are available. Whenever doubt arises as to the proper subclass choice, the user should consult the classification definition for the class under study. The *Classification Definitions* supplement the *Manual of Classification* in that they contain detailed definitions and illustrations of the kind of subject matter that can be found in each class and subclass, the lines of distinction among classes and subclasses, and references to other classes and subclasses having related subject matter.

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Subject headings in the Index are not an alphabetical inversion of the *Manual of Classification*. They are a subjective determination of relevant terms, phrases, synonyms, acronyms, and occasionally even trademarks that have been selected over the years as the best identifying description of products, processes, and apparatus of patent disclosures. The Index contains product-related entries, whereas the *Manual of Classification* is descriptive or nonspecific. For example, the Index entry for phonograph record molding apparatus is reflected in the *Manual of Classification* as a “press forming apparatus having opposed press members.” Some effort has been made to index current vocabulary usage when the classification system may contain technically general language; e.g., “water bed or “air mattress” for the concept “fluid-containing mattress.”

The Index is arranged alphabetically with subheadings that can have four levels of indentation. A complete reading of a subheading includes the title of the most adjacent higher heading, and so on until there are no more higher headings. Some headings will reference other related or preferred entries with a “(see...)” phrase. They may reference the notes to the *Classification Definitions* when these notes are particularly detailed or lucid on important distinctions not easily captured in the abbreviated entries of the Index.

The following symbols and abbreviations are used in this Index:

- A. . Z     **An** Alpha designation (i.e., one or two alphabetic characters following the numeric designator of a subclass) identifies a subclass as an Alpha subclass. Alpha subclasses are created to provide a logistically quick place for examiners to classify “hot art” (i.e., art where application filing activity is increasing). Usually, the **initial** patents used to populate **an** Alpha subclass when it is created come primarily from a single existing subclass. That “parent” subclass **then** receives the alpha designator “R” to indicate that it is now the residual subclass for patents **that** did not go into the Alpha subclass. Except for the residual subclass, Alpha subclasses have no definitions (the definition for the residual subclass is listed in numerical order, without the “R”, along with other subclass definitions for the class). For example, in Class 29, Metal Working, subclass 34R is the residual subclass for apparatus to forge metal combined with apparatus for bending, cutting, or punching not classifiable in subclasses 34A through 34D, which came out of 34R. Alpha subclass groupings are explicitly provided for examiners in their paper files and on their automated search systems. They are not available in the Public Search Room paper files.
- Ctg        “Containing” may be abbreviated “ctg” in long chemical phrases.
- D          A class number preceded by the letter D identifies a Design class.

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- DIG. The letters DIG. followed by a number identify an unofficial collection of patents based on a concept which relates to a class but not to any particular subclass of that class. For example, 123 DIG. 12 is a collection of hydrogen-fueled engines in Class 123, Internal-Combustion Engines. Digests have been created over the years by examiners to facilitate their searches within the arts under their jurisdiction. They are unofficial collections and are not available in the Public Search Room.
- PLT The letters PLT identify the Plant class.
- TM The letters TM identify a trademark name. These names have been included where a particular field of search could best be suggested by such.
- + The plus sign following a subclass indicates that the entry includes that subclass and all subclasses indented thereunder. (See the *Manual of Classification* for classification schedules.)
- X-art Cross-Reference **Art** Collections may be described in the text as “X-art” collections. These are digests for which written definitions have been provided.
- \* A subclass number followed by **an** asterisk identifies a Cross-Reference **Art** Collection.

Users are encouraged to submit change suggestions as well as id en^ errors and omissions contained in the Index. When recommending new entries, please include the classification with the descriptor, if possible. Send suggestions to U.S. Patent and Trademark Office, Office of Classification Support, Chief, Editorial Division, MDW/Room 8A65, Alexandria, VA 22315.

# Preface

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## CLASSES ARRANGED IN ALPHABETICAL ORDER

Generated by: Data Control Division

CLASS	TITLE OF CLASS	CLASS	TITLE OF CLASS
451	ABRADING	4	BATHS, CLOSETS, SINKS, AND SPITTOONS
51	ABRASIVE TOOL MAKING PROCESS, MATERIAL, OR COMPOSITION	136	BATTERIES: THERMOELECTRIC AND PHOTOELECTRIC
181	ACOUSTICS	384	BEARINGS
257	ACTIVE SOLID-STATE DEVICES (E.G., TRANSISTORS, SOLID- STATE DIODES)	5	BEDS
156	ADHESIVE BONDING AND MISCELLANEOUS CHEMICAL MANUFACTURE	449	BEE CULTURE
226	ADVANCING MATERIAL OF INDETERMINATE LENGTH	402	BINDER DEVICE RELEASABLY ENGAGING APERTURE OR NOTCH OF SHEET
244	AERONAUTICS AND ASTRONAUTICS	8	BLEACHING AND DYEING; FLUID TREATMENT AND CHEMICAL MODIFICATION OF TEXTILES AND FIBERS
366	AGITATING	412	BOOKBINDING: PROCESS AND APPARATUS
420	ALLOYS OR METALLIC COMPOSITIONS	281	BOOKS, STRIPS, AND LEAVES
86	AMMUNITION AND EXPLOSIVE- CHARGE MAKING	462	BOOKS, STRIPS, AND LEAVES FOR MANIFOLDING
102	AMMUNITION AND EXPLOSIVES	12	BOOT AND SHOE MAKING
330	AMPLIFIERS	36	BOOTS, SHOES, AND LEGGINGS
472	AMUSEMENT DEVICES	175	BORING OR PENETRATING THE EARTH
273	AMUSEMENT DEVICES: GAMES	215	BOTTLES AND JARS
446	AMUSEMENT DEVICES: TOYS	188	BRAKES
463	AMUSEMENT DEVICES: GAMES	14	BRIDGES
119	ANIMAL HUSBANDRY	300	BRUSH, BROOM, AND MOP MAKING
D30	ANIMAL HUSBANDRY	15	BRUSHING, SCRUBBING, AND GENERAL CLEANING
2	APPAREL	D4	BRUSHWARE
D2	APPAREL AND HABERDASHERY	24	BUCKLES, BUTTONS, CLASPS, ETC.
223	APPAREL APPARATUS	D25	BUILDING UNITS AND CONSTRUCTION ELEMENTS
D22	ARMS, PYROTECHNICS, HUNTING AND FISHING EQUIPMENT	441	BUOYS, RAFTS, AND AQUATIC DEVICES
221	ARTICLE DISPENSING	452	BUTCHERING
236	AUTOMATIC TEMPERATURE AND HUMIDITY REGULATION	79	BUTTON MAKING

## CLASSES ARRANGED IN ALPHABETICAL ORDER

Generated by: Data Control Division

CLASS	TITLE OF CLASS	CLASS	TITLE OF CLASS
40	CARD, PICTURE, OR SIGN EXHIBITING	510	CLEANING COMPOSITIONS FOR SOLID SURFACES, AUXILIARY COMPOSITIONS THEREFOR, OR PROCESSES OF PREPARING THE COMPOSITIONS
502	CATALYST, SOLID SORBENT, OR SUPPORT THEREFOR: PRODUCT OR PROCESS OF MAKING	292	CLOSURE FASTENERS
59	CHAIN, STAPLE, AND HORSESHOE MAKING	192	CLUTCHES AND POWER-STOP CONTROL
297	CHAIRS AND SEATS	118	COATING APPARATUS
194	CHECK-ACTUATED CONTROL MECHANISMS	401	COATING IMPLEMENTS WITH MATERIAL SUPPLY
422	CHEMICAL APPARATUS AND PROCESS DISINFECTING, DEODORIZING, PRESERVING, OR STERILIZING	427	COATING PROCESSES
260	CHEMISTRY OF CARBON COMPOUNDS	341	CODED DATA GENERATION OR CONVERSION
585	CHEMISTRY OF HYDROCARBON COMPOUNDS	372	COHERENT LIGHT GENERATORS
423	CHEMISTRY OF INORGANIC COMPOUNDS	453	COIN HANDLING
204	CHEMISTRY: ELECTRICAL AND WAVE ENERGY	516	COLLOID SYSTEMS AND WETTING AGENTS; SUBCOMBINATIONS THEREOF; PROCESSES OF MAKING, STABILIZING, BREAKING, OR INHIBITING
429	CHEMISTRY: ELECTRICAL CURRENT PRODUCING APPARATUS, PRODUCT, AND PROCESS	506	COMBINATORIAL CHEMISTRY TECHNOLOGY: METHOD, LIBRARY, APPARATUS
518	CHEMISTRY: FISCHER-TROPSCH PROCESSES; OR PURIFICATION OR RECOVERY OF PRODUCTS THEREOF	431	COMBUSTION
530	CHEMISTRY: NATURAL RESINS OR DERIVATIVES; PEPTIDES OR PROTEINS; LIGNINS OR REACTION PRODUCTS THEREOF	367	COMMUNICATIONS, ELECTRICAL: ACOUSTIC WAVE SYSTEMS AND DEVICES
436	CHEMISTRY: ANALYTICAL AND IMMUNOLOGICAL TESTING	342	COMMUNICATIONS: DIRECTIVE RADIO WAVE SYSTEMS AND DEVICES (E.G., RADAR, RADIO NAVIGATION)
71	CHEMISTRY: FERTILIZERS	340	COMMUNICATIONS: ELECTRICAL
435	CHEMISTRY: MOLECULAR BIOLOGY AND MICROBIOLOGY	343	COMMUNICATIONS: RADIO WAVE ANTENNAS
23	CHEMISTRY: PHYSICAL PROCESSES	252	COMPOSITIONS
279	CHUCKS OR SOCKETS	106	COMPOSITIONS: COATING OR PLASTIC
209	CLASSIFYING, SEPARATING, AND ASSORTING SOLIDS	501	COMPOSITIONS: CERAMIC
134	CLEANING AND LIQUID CONTACT WITH SOLIDS	7	COMPOUND TOOLS



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CLASS	TITLE OF CLASS	CLASS	TITLE OF CLASS
345	COMPUTER GRAPHICS PROCESSING AND SELECTIVE VISUAL DISPLAY SYSTEMS	702	DATA PROCESSING: MEASURING, CALIBRATING, OR TESTING
159	CONCENTRATING EVAPORATORS	717	DATA PROCESSING: SOFTWARE DEVELOPMENT, INSTALLATION, AND MANAGEMENT
193	CONVEYORS, CHUTES, SKIDS, GUIDES, AND WAYS	704	DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS, LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/DECOMPRESSION
406	CONVEYORS: FLUID CURRENT	701	DATA PROCESSING: VEHICLES, NAVIGATION, AND RELATIVE LOCATION
198	CONVEYORS: POWER-DRIVEN	329	DEMODULATORS
147	COOPERING	433	DENTISTRY
D28	COSMETIC PRODUCTS AND TOILET ARTICLES	232	DEPOSIT AND COLLECTION RECEPTACLES
460	CROP THRESHING OR SEPARATING	222	DISPENSING
380	CRYPTOGRAPHY	202	DISTILLATION: APPARATUS
30	CUTLERY	203	DISTILLATION: PROCESSES, SEPARATORY
407	CUTTERS, FOR SHAPING	201	DISTILLATION: PROCESSES, THERMOLYTIC
83	CUTTING	514	DRUG, BIO-AFFECTING AND BODY TREATING COMPOSITIONS
408	CUTTING BY USE OF ROTATING AXIALLY MOVING TOOL	424	DRUG, BIO-AFFECTING AND BODY TREATING COMPOSITIONS
707	DATA PROCESSING: DATABASE AND FILE MANAGEMENT OR DATA STRUCTURES	34	DRYING AND GAS OR VAPOR CONTACT WITH SOLIDS
716	DATA PROCESSING: DESIGN AND ANALYSIS OF CIRCUIT OR SEMICONDUCTOR MASK	369	DYNAMIC INFORMATION STORAGE OR RETRIEVAL
700	DATA PROCESSING: GENERIC CONTROL SYSTEMS OR SPECIFIC APPLICATIONS	360	DYNAMIC MAGNETIC INFORMATION STORAGE OR RETRIEVAL
715	DATA PROCESSING: PRESENTATION PROCESSING OF DOCUMENT, OPERATOR INTERFACE PROCESSING, AND SCREEN SAVER DISPLAY PROCESSING	720	DYNAMIC OPTICAL INFORMATION STORAGE OR RETRIEVAL
703	DATA PROCESSING: STRUCTURAL DESIGN, MODELING, SIMULATION, AND EMULATION	507	EARTH BORING, WELL TREATING, AND OIL FIELD CHEMISTRY
706	DATA PROCESSING: ARTIFICIAL INTELLIGENCE	172	EARTH WORKING
705	DATA PROCESSING: FINANCIAL, BUSINESS PRACTICE, MANAGEMENT, OR COST/PRICE DETERMINATION	D1	EDIBLE PRODUCTS
		434	EDUCATION AND DEMONSTRATION
		219	ELECTRIC HEATING

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CLASS	TITLE OF CLASS	CLASS	TITLE OF CLASS
313	ELECTRIC LAMP AND DISCHARGE DEVICES	310	ELECTRICAL GENERATOR OR MOTOR STRUCTURE
315	ELECTRIC LAMP AND DISCHARGE DEVICES: SYSTEMS	377	ELECTRICAL PULSE COUNTERS, PULSE DIVIDERS, OR SHIFT REGISTERS: CIRCUITS AND SYSTEMS
314	ELECTRIC LAMP AND DISCHARGE DEVICES: CONSUMABLE ELECTRODES	338	ELECTRICAL RESISTORS
445	ELECTRIC LAMP OR SPACE DISCHARGE COMPONENT OR DEVICE MANUFACTURING	307	ELECTRICAL TRANSMISSION OR INTERCONNECTION SYSTEMS
363	ELECTRIC POWER CONVERSION SYSTEMS	320	ELECTRICITY: BATTERY OR CAPACITOR CHARGING OR DISCHARGING
392	ELECTRIC RESISTANCE HEATING DEVICES	200	ELECTRICITY: CIRCUIT MAKERS AND BREAKERS
381	ELECTRICAL AUDIO SIGNAL PROCESSING SYSTEMS AND DEVICES	174	ELECTRICITY: CONDUCTORS AND INSULATORS
364	ELECTRICAL COMPUTERS AND DATA PROCESSING SYSTEMS	361	ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES
710	ELECTRICAL COMPUTERS AND DIGITAL DATA PROCESSING SYSTEMS: INPUT/OUTPUT	337	ELECTRICITY: ELECTROTHERMALLY OR THERMALLY ACTUATED SWITCHES
709	ELECTRICAL COMPUTERS AND DIGITAL PROCESSING SYSTEMS: MULTICOMPUTER DATA TRANSFERRING	335	ELECTRICITY: MAGNETICALLY OPERATED SWITCHES, MAGNETS, AND ELECTROMAGNETS
712	ELECTRICAL COMPUTERS AND DIGITAL PROCESSING SYSTEMS: PROCESSING ARCHITECTURES AND INSTRUCTION PROCESSING (E.G., PROCESSORS)	324	ELECTRICITY: MEASURING AND TESTING
713	ELECTRICAL COMPUTERS AND DIGITAL PROCESSING SYSTEMS: SUPPORT	318	ELECTRICITY: MOTIVE POWER SYSTEMS
719	ELECTRICAL COMPUTERS AND DIGITAL PROCESSING SYSTEMS: INTERPROGRAM COMMUNICATION OR INTERPROCESS COMMUNICATION (IPC)	388	ELECTRICITY: MOTOR CONTROL SYSTEMS
711	ELECTRICAL COMPUTERS AND DIGITAL PROCESSING SYSTEMS: MEMORY	323	ELECTRICITY: POWER SUPPLY OR REGULATION SYSTEMS
718	ELECTRICAL COMPUTERS AND DIGITAL PROCESSING SYSTEMS: VIRTUAL MACHINE TASK OR PROCESS MANAGEMENT OR TASK MANAGEMENT/CONTROL	322	ELECTRICITY: SINGLE GENERATOR SYSTEMS
708	ELECTRICAL COMPUTERS: ARITHMETIC PROCESSING AND CALCULATING	191	ELECTRICITY: TRANSMISSION TO VEHICLES
439	ELECTRICAL CONNECTORS	205	ELECTROLYSIS: PROCESSES, COMPOSITIONS USED THEREIN, AND METHODS OF PREPARING THE COMPOSITIONS
		326	ELECTRONIC DIGITAL LOGIC CIRCUITRY
		902	ELECTRONIC FUNDS TRANSFER
		399	ELECTROPHOTOGRAPHY
		187	ELEVATOR, INDUSTRIAL LIFT TRUCK, OR STATIONARY LIFT FOR VEHICLE
		227	ELONGATED-MEMBER-DRIVING APPARATUS

## CLASSES ARRANGED IN ALPHABETICAL ORDER

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CLASS	TITLE OF CLASS	CLASS	TITLE OF CLASS
474	ENDLESS BELT POWER TRANSMISSION SYSTEMS OR COMPONENTS	383	FLEXIBLE BAGS
229	ENVELOPES, WRAPPERS, AND PAPERBOARD BOXES	160	FLEXIBLE OR PORTABLE CLOSURE, PARTITION, OR PANEL
D23	ENVIRONMENTAL HEATING AND COOLING; FLUID HANDLING AND SANITARY EQUIPMENT	141	FLUENT MATERIAL HANDLING, WITH RECEIVER OR RECEIVER COACTING MEANS
D7	EQUIPMENT FOR PREPARING OR SERVING FOOD OR DRINK NOT ELSEWHERE SPECIFIED	137	FLUID HANDLING
D13	EQUIPMENT FOR PRODUCTION, DISTRIBUTION, OR TRANSFORMATION OF ENERGY	416	FLUID REACTION SURFACES (I.E., IMPELLERS)
D29	EQUIPMENT FOR SAFETY, PROTECTION, AND RESCUE	239	FLUID SPRINKLING, SPRAYING, AND DIFFUSING
371	ERROR DETECTION/CORRECTION AND FAULT DETECTION/RECOVERY	303	FLUID-PRESSURE AND ANALOGOUS BRAKE SYSTEMS
714	ERROR DETECTION/CORRECTION AND FAULT DETECTION/RECOVERY	426	FOOD OR EDIBLE MATERIAL: PROCESSES, COMPOSITIONS, AND PRODUCTS
216	ETCHING A SUBSTRATE: PROCESSES	99	FOODS AND BEVERAGES: APPARATUS
37	EXCAVATING	450	FOUNDATION GARMENTS
482	EXERCISE DEVICES	410	FREIGHT ACCOMMODATION ON FREIGHT CARRIER
411	EXPANDED, THREADED, DRIVEN, HEADED, TOOL-DEFORMED, OR LOCKED-THREADED FASTENER	476	FRICTION GEAR TRANSMISSION SYSTEMS OR COMPONENTS
92	EXPANSIBLE CHAMBER DEVICES	44	FUEL AND RELATED COMPOSITIONS
149	EXPLOSIVE AND THERMIC COMPOSITIONS OR CHARGES	110	FURNACES
442	FABRIC (WOVEN, KNITTED, OR NONWOVEN TEXTILE OR CLOTH, ETC.)	D6	FURNISHINGS
358	FACSIMILE AND STATIC PRESENTATION PROCESSING	473	GAMES USING TANGIBLE PROJECTILE
168	FARRIERY	D21	GAMES, TOYS, AND SPORTS GOODS
256	FENCES	261	GAS AND LIQUID CONTACT APPARATUS
182	FIRE ESCAPE, LADDER, OR SCAFFOLD	55	GAS SEPARATION
169	FIRE EXTINGUISHERS	96	GAS SEPARATION: APPARATUS
42	FIREARMS	95	GAS SEPARATION: PROCESSES
43	FISHING, TRAPPING, AND VERMIN DESTROYING	48	GAS: HEATING AND ILLUMINATING
		409	GEAR CUTTING, MILLING, OR PLANING
		33	GEOMETRICAL INSTRUMENTS

## CLASSES ARRANGED IN ALPHABETICAL ORDER

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CLASS	TITLE OF CLASS	CLASS	TITLE OF CLASS
65	GLASS MANUFACTURING	123	INTERNAL-COMBUSTION ENGINES
294	HANDLING: HAND AND HOIST-LINE IMPLEMENTS	477	INTERRELATED POWER DELIVERY CONTROLS, INCLUDING ENGINE CONTROL
54	HARNESS FOR WORKING ANIMAL	63	JEWELRY
56	HARVESTERS	D11	JEWELRY, SYMBOLIC INSIGNIA, AND ORNAMENTS
588	HAZARDOUS OR TOXIC WASTE DESTRUCTION OR CONTAINMENT	403	JOINTS AND CONNECTIONS
165	HEAT EXCHANGE	289	KNOTS AND KNOT TYING
432	HEATING	280	LAND VEHICLES
237	HEATING SYSTEMS	278	LAND VEHICLES: ANIMAL DRAFT APPLIANCES
218	HIGH-VOLTAGE SWITCHES WITH ARC PREVENTING OR EXTINGUISHING DEVICES	296	LAND VEHICLES: BODIES AND TOPS
108	HORIZONTALLY SUPPORTED PLANAR SURFACES	298	LAND VEHICLES: DUMPING
968	HOROLOGY	301	LAND VEHICLES: WHEELS AND AXLES
368	HOROLOGY: TIME MEASURING SYSTEMS OR DEVICES	69	LEATHER MANUFACTURES
903	HYBRID ELECTRIC VEHICLES (HEVS)	D26	LIGHTING
405	HYDRAULIC AND EARTH ENGINEERING	349	LIQUID CRYSTAL CELLS, ELEMENTS AND SYSTEMS
362	ILLUMINATION	122	LIQUID HEATERS AND VAPORIZERS
382	IMAGE ANALYSIS	210	LIQUID PURIFICATION OR SEPARATION
494	IMPERFORATE BOWL: CENTRIFUGAL SEPARATORS	70	LOCKS
254	IMPLEMENTS OR APPARATUS FOR APPLYING PUSHING OR PULLING FORCE	184	LUBRICATION
347	INCREMENTAL PRINTING OF SYMBOLIC INFORMATION	74	MACHINE ELEMENT OR MECHANISM
376	INDUCED NUCLEAR REACTIONS: PROCESSES, SYSTEMS, AND ELEMENTS	D15	MACHINES NOT ELSEWHERE SPECIFIED
336	INDUCTOR DEVICES	493	MANUFACTURING CONTAINER OR TUBE FROM PAPER; OR OTHER MANUFACTURING FROM A SHEET OR WEB
373	INDUSTRIAL ELECTRIC HEATING FURNACES	440	MARINE PROPULSION
726	INFORMATION SECURITY	414	MATERIAL OR ARTICLE HANDLING
725	INTERACTIVE VIDEO DISTRIBUTION SYSTEMS	D34	MATERIAL OR ARTICLE HANDLING EQUIPMENT

## CLASSES ARRANGED IN ALPHABETICAL ORDER

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CLASS	TITLE OF CLASS	CLASS	TITLE OF CLASS
73	MEASURING AND TESTING	800	MULTICELLULAR LIVING ORGANISMS AND UNMODIFIED PARTS THEREOF AND RELATED PROCESSES
D10	MEASURING, TESTING, OR SIGNALLING INSTRUMENTS	370	MULTIPLEX COMMUNICATIONS
124	MECHANICAL GUNS AND PROJECTORS	84	MUSIC
D24	MEDICAL AND LABORATORY EQUIPMENT	984	MUSICAL INSTRUMENTS
186	MERCHANDISING	D17	MUSICAL INSTRUMENTS
72	METAL DEFORMING	977	NANOTECHNOLOGY
164	METAL FOUNDING	163	NEEDLE AND PIN MAKING
228	METAL FUSION BONDING	976	NUCLEAR TECHNOLOGY
76	METAL TOOLS AND IMPLEMENTS, MAKING	D19	OFFICE SUPPLIES; ARTISTS` AND TEACHERS` MATERIALS
148	METAL TREATMENT	398	OPTICAL COMMUNICATIONS
29	METAL WORKING	385	OPTICAL WAVEGUIDES
266	METALLURGICAL APPARATUS	359	OPTICAL: SYSTEMS AND ELEMENTS
196	MINERAL OILS: APPARATUS	351	OPTICS: EYE EXAMINING, VISION TESTING AND CORRECTING
208	MINERAL OILS: PROCESSES AND PRODUCTS	353	OPTICS: IMAGE PROJECTORS
299	MINING OR IN SITU DISINTEGRATION OF HARD MATERIAL	356	OPTICS: MEASURING AND TESTING
D99	MISCELLANEOUS	352	OPTICS: MOTION PICTURES
327	MISCELLANEOUS ACTIVE ELECTRICAL NONLINEAR DEVICES, CIRCUITS, AND SYSTEMS	89	ORDNANCE
16	MISCELLANEOUS HARDWARE	532	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES
332	MODULATORS	534	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES
180	MOTOR VEHICLES	544	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES
185	MOTORS: SPRING, WEIGHT, OR ANIMAL POWERED	546	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES
91	MOTORS: EXPANSIBLE CHAMBER TYPE	540	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES
49	MOVABLE OR REMOVABLE CLOSURES	536	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES
		548	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES

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CLASS	TITLE OF CLASS	CLASS	TITLE OF CLASS
552	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	47	PLANT HUSBANDRY
568	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	504	PLANT PROTECTING AND REGULATING COMPOSITIONS
564	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	111	PLANTING
562	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	PLT	PLANTS
560	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	264	PLASTIC AND NONMETALLIC ARTICLE SHAPING OR TREATING: PROCESSES
558	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	425	PLASTIC ARTICLE OR EARTHENWARE SHAPING OR TREATING: APPARATUS
556	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	419	POWDER METALLURGY PROCESSES
554	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	60	POWER PLANTS
549	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	100	PRESSES
570	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	290	PRIME-MOVER DYNAMO PLANTS
987	ORGANIC COMPOUNDS CONTAINING A Bi, Sb, As, OR P ATOM OR CONTAINING A METAL ATOM OF THE 6TH TO 8TH GROUP OF THE PERIODIC SYSTEM	283	PRINTED MATTER
331	OSCILLATORS	101	PRINTING
224	PACKAGE AND ARTICLE CARRIERS	D18	PRINTING AND OFFICE MACHINERY
53	PACKAGE MAKING	623	PROSTHESIS (I.E., ARTIFICIAL BODY MEMBERS), PARTS THEREOF, OR AIDS AND ACCESSORIES THEREFOR
D9	PACKAGES AND CONTAINERS FOR GOODS	375	PULSE OR DIGITAL COMMUNICATIONS
162	PAPER MAKING AND FIBER LIBERATION	417	PUMPS
930	PEPTIDE OR PROTEIN SEQUENCE	150	PURSES, WALLETS, AND PROTECTIVE COVERS
512	PERFUME COMPOSITIONS	250	RADIANT ENERGY
355	PHOTOCOPYING	430	RADIATION IMAGERY CHEMISTRY: PROCESS, COMPOSITION, OR PRODUCT THEREOF
396	PHOTOGRAPHY	213	RAILWAY DRAFT APPLIANCES
D16	PHOTOGRAPHY AND OPTICAL EQUIPMENT	258	RAILWAY MAIL DELIVERY
285	PIPE JOINTS OR COUPLINGS	105	RAILWAY ROLLING STOCK
138	PIPES AND TUBULAR CONDUITS	246	RAILWAY SWITCHES AND SIGNALS
475	PLANETARY GEAR TRANSMISSION SYSTEMS OR COMPONENTS		

## CLASSES ARRANGED IN ALPHABETICAL ORDER

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CLASS	TITLE OF CLASS	CLASS	TITLE OF CLASS
295	RAILWAY WHEELS AND AXLES	271	SHEET FEEDING OR DELIVERING
104	RAILWAYS	413	SHEET METAL CONTAINER MAKING
238	RAILWAYS: SURFACE TRACK	270	SHEET-MATERIAL ASSOCIATING
220	RECEPTACLES	114	SHIPS
503	RECORD RECEIVER HAVING PLURAL INTERACTIVE LEAVES OR A COLORLESS COLOR FORMER, METHOD OF USE, OR DEVELOPER THEREFOR	116	SIGNALS AND INDICATORS
346	RECORDERS	117	SINGLE-CRYSTAL, ORIENTED- CRYSTAL, AND EPITAXY GROWTH PROCESSES; NON-COATING APPARATUS THEREFOR
D14	RECORDING, COMMUNICATION, OR INFORMATION RETRIEVAL EQUIPMENT	508	SOLID ANTI-FRICTION DEVICES, MATERIALS THEREFOR, LUBRICANT OR SEPARANT COMPOSITIONS FOR MOVING SOLID SURFACES, AND MISCELLANEOUS MINERAL OIL COMPOSITIONS
62	REFRIGERATION	241	SOLID MATERIAL COMMINATION OR DISINTEGRATION
235	REGISTERS	206	SPECIAL RECEPTACLE OR PACKAGE
152	RESILIENT TIRES AND WHEELS	75	SPECIALIZED METALLURGICAL PROCESSES, COMPOSITIONS FOR USE THEREIN, CONSOLIDATED METAL POWDER COMPOSITIONS, AND LOOSE METAL PARTICULATE MIXTURES
404	ROAD STRUCTURE, PROCESS, OR APPARATUS	267	SPRING DEVICES
901	ROBOTS	365	STATIC INFORMATION STORAGE AND RETRIEVAL
492	ROLL OR ROLLER	249	STATIC MOLDS
418	ROTARY EXPANSIBLE CHAMBER DEVICES	52	STATIC STRUCTURES (E.G., BUILDINGS)
415	ROTARY KINETIC FLUID MOTORS OR PUMPS	428	STOCK MATERIAL OR MISCELLANEOUS ARTICLES
464	ROTARY SHAFTS, GUDGEONS, HOUSINGS, AND FLEXIBLE COUPLINGS FOR ROTARY SHAFTS	125	STONE WORKING
109	SAFES, BANK PROTECTION, OR A RELATED DEVICE	126	STOVES AND FURNACES
D20	SALES AND ADVERTISING EQUIPMENT	127	SUGAR, STARCH, AND CARBOHYDRATES
277	SEAL FOR A JOINT OR JUNCTURE	505	SUPERCONDUCTOR TECHNOLOGY: APPARATUS, MATERIAL, PROCESS
234	SELECTIVE CUTTING (E.G., PUNCHING)	248	SUPPORTS
438	SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS		
225	SEVERING BY TEARING OR BREAKING		
112	SEWING		

## CLASSES ARRANGED IN ALPHABETICAL ORDER

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CLASS	TITLE OF CLASS	CLASS	TITLE OF CLASS
312	SUPPORTS: CABINET STRUCTURE	348	TELEVISION
211	SUPPORTS: RACKS	386	TELEVISION SIGNAL PROCESSING FOR DYNAMIC RECORDING OR REPRODUCING
128	SURGERY	135	TENT, CANOPY, UMBRELLA, OR CANE
600	SURGERY	D5	TEXTILE OR PAPER YARD GOODS; SHEET MATERIAL
606	SURGERY	19	TEXTILES: FIBER PREPARATION
604	SURGERY	68	TEXTILES: FLUID TREATING APPARATUS
601	SURGERY: KINESITHERAPY	38	TEXTILES: IRONING OR SMOOTHING
607	SURGERY: LIGHT, THERMAL, AND ELECTRICAL APPLICATION	66	TEXTILES: KNITTING
602	SURGERY: SPLINT, BRACE, OR BANDAGE	28	TEXTILES: MANUFACTURING
523	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES	57	TEXTILES: SPINNING, TWISTING, AND TWINING
520	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES	139	TEXTILES: WEAVING
521	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES	87	TEXTILES: BRAIDING, NETTING, AND LACE MAKING
524	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES	26	TEXTILES: CLOTH FINISHING
525	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES	374	THERMAL MEASURING AND TESTING
522	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES	470	THREADED, HEADED FASTENER, OR WASHER MAKING: PROCESS AND APPARATUS
526	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES	131	TOBACCO
527	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES	D27	TOBACCO AND SMOKERS' SUPPLIES
528	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES	132	TOILET
455	TELECOMMUNICATIONS	483	TOOL CHANGING
178	TELEGRAPHY	173	TOOL DRIVING OR IMPACTING
379	TELEPHONIC COMMUNICATIONS	81	TOOLS
		D8	TOOLS AND HARDWARE
		291	TRACK SANDERS
		D12	TRANSPORTATION
		D3	TRAVEL GOODS AND PERSONAL BELONGINGS



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CLASS	TITLE OF CLASS	CLASS	TITLE OF CLASS
212	TRAVERSING HOISTS	378	X-RAY OR GAMMA RAY SYSTEMS OR DEVICES
190	TRUNKS AND HAND-CARRIED LUGGAGE		
334	TUNERS		
82	TURNING		
199	TYPE CASTING		
276	TYPESETTING		
400	TYPEWRITING MACHINES		
27	UNDERTAKING		
171	UNEARTHING PLANTS OR BURIED OBJECTS		
251	VALVES AND VALVE ACTUATION		
293	VEHICLE FENDERS		
454	VENTILATION		
D32	WASHING, CLEANING, OR DRYING MACHINE		
333	WAVE TRANSMISSION LINES AND NETWORKS		
177	WEIGHING SCALES		
166	WELLS		
305	WHEEL SUBSTITUTES FOR LAND VEHICLES		
157	WHEELWRIGHT MACHINES		
231	WHIPS AND WHIP APPARATUS		
242	WINDING, TENSIONING, OR GUIDING		
245	WIRE FABRICS AND STRUCTURE		
140	WIREWORKING		
142	WOOD TURNING		
217	WOODEN RECEPTACLES		
144	WOODWORKING		
269	WORK HOLDERS		

