M	A01B	SOIL WORKING IN AGRICULTURE OR FORESTRY; PARTS, DETAILS, OR ACCESSORIES OF AGRICULTURAL MACHINES OR IMPLEMENTS, IN GENERAL (making or covering furrows or holes for sowing, planting or manuring A01C 5/00; machines for harvesting root crops A01D; mowers convertible to soil working apparatus or capable of soil working A01D 42/04; mowers combined with soil working implements A01D 43/12; soil working for engineering purposes E01, E02, E21)
M	A01B 1/22	Attaching the blades or the like to handles (handles for tools, or their attachment, in general B25G); Interchangeable or adjustable blades [1,2006.01]
М	A01B 3/74	 Use of electric power for propelling ploughs (electric current collectors B60L 5/00) [1,2006.01]
М	A01B 5/00	Ploughs with rolling non-driven tools, e.g. discs (with rotary driven tools A01B 9/00) [1,2006.01]
M M	A01B 15/12 A01B 15/16	 Beams; Handles (handles for tools or their attachment in general B25G) [1,2006.01] Discs (bearings therefor A01B 71/04); Scrapers for cleaning discs; Sharpening attachments (sharpening in general B24) [1,2006.01]
М	A01B 17/00	Ploughs with special additional arrangements, e.g. means for putting manure under the soil, clod-crushers (A01B 49/00 takes precedence; ploughs for working subsoil A01B 13/08) [1,2,2006.01]
М	A01B 21/00	Harrows with rotary non-driven tools (tilling implements with rotary driven tools A01B 33/00) [1,2006.01]
М	A01B 23/06	• Discs-(A01B 15/16 takes precedence;); Scrapers for cleaning discs; Sharpening attachments-(sharpening in general B24) bearings therefor A01B 71/04 [1,2,2006.01]
М	A01B 33/16	• with special additional arrangements (A01B 49/00 takes precedence; for sowing or fertilising A01B 49/06) [1,2,2006.01]
М	A01B 35/30	• • Undercarriages (A01B 23/04 takes precedence) [1,2,2006.01]
М	A01B 39/00	Other machines Machines specially adapted for working soil on which crops are growing [1,2006.01]
М	A01B 39/24	• • Undercarriages (A01B 23/04 takes precedence) [1,2,2006.01]
M	A01B 39/28	• with special additional arrangements (A01B 49/00 takes precedence) [1,2,2006.01]
M	A01B 51/00	Undercarriages specially adapted for mounting - on various kinds of agricultural tools or apparatus (general vehicle aspects, see the relevant subclass of class B60 or B62) [1,2006.01]
М	A01B 59/00	Devices specially adapted for connection between animals or tractors and agricultural machines or implements (A01B-63/00 takes precedence; vehicle connections in general B60D; draught assemblies for animal drawn vehicles, in general B62C 5/00) [1,3,2006.01]
М	A01B 61/00	Devices for, or parts of, agricultural machines or implements for preventing overstrain (preventing overstrain in vehicle connections, in general B60D; preventing overstrain in couplings per se F16D) [1,3,2006.01]
М	A01B 63/00	Lifting or adjusting devices or arrangements for agricultural machines or implements (lifting mechanisms for the cutter-bar of a mower A01D 34/24; adjusting devices for the cutter-bar of a mower A01D 34/28 ; constructional features of lifting devices per sc B66F) [1,3,2006.01]
M	A01B 63/118	• • • Mounting implements on power-lift linkages (-A01B 59/043 takes precedence; preventing or limiting side-play of implements A01B 59/041 ; preventing overstrain A01B 61/00) [1,2,2006.01]
M	A01B 67/00	Devices for controlling the tractor motor by resistance of tools (preventing overstrain A01B 61/00) [1,2006.01]
М	A01B 71/04	 Bearings of rotating parts, e.g. for soil-working discs (bearings in general F16C) [1,2006.01]
М	A01B 71/06	 Special adaptations of coupling means between power take-off and transmission shaft to the implement or machine (couplings for transmitting rotation F16D) [1,2006.01]
M	A01B 71/08	 Means for protecting against dust or the like, or for cleaning agricultural implements (A01B 15/16, A01B 19/10, A01B 23/06 take precedence discs for ploughs A01B 15/16; lifting or cleaning apparatus for harrows A01B 19/10; discs for harrows A01B 23/06; screening of rotary driven tilling tools A01B 33/12; screening of rotary parts in general F16P 1/00) [1,2,2006.01]

Means or arrangements to facilitate transportation of agricultural machines or implements, e.g. folding frames to reduce overall width (arrangements of lifting devices for soil working implements A01B 63/00 ; vehicles adapted for load transportation or to transport, to carry or to comprise special loads or objects B60P; meter vehicles, retieller 9629 [1,4,2006.01] M A01B 77/00		•	
growth regulators A01N 25:00 A01N 65:00 (1) (2006.01) M A01J MANUFACTURE OF DAIRY PRODUCTS (for chemical matters, see subclass A23C) N A01J Note(s) [2026.01] 1. This subclass covers mechanical treatment of milk or cream for making butter or cheese. 2. This subclass does not cover chemical aspects of dairy product manufacturing, which include apparatus for chemical processes such as concentration, evaporation or drying, and which are covered by subclass A23C. M A01J 27/00 After-treatment of cheese; Coating the of cheese [1,2006.01] A01M L A01M 29/18 -• using ultrasonic signals [2011.01] A01N A01P Note(s) [2006.01,2012.01,2026.01] 1. This subclass is for secondary classification in the sense of paragraph 107bis of the Guide to the IPC. Therefore, the classification symbols of this subclass are not listed first when assigned to patent documents. Secondary classification symbols may be assigned for either invention information or additional information, as appropriate. 2. This subclasses A01N or C12N, or in classes C01, C07 or C08. 3. Attention is drawn to the notes following the trible of subclass A01N, which are also applicable to this subclass. 4. In this euchelase, activity is classified in all apprepriate places. 5. Attention is drawn to cases where the subject of the invention concerns only biocidal, pest repellant, pest attractant or composition of chemical compounds or preparations already classified as such in subclasses. 4. In this euchelase, activity is classified in all apprepriate places. 5. Attention is drawn to cases where the subject of the invention concerns only biocidal, pest repellant, pest attractant or plant growth regulatory activity of chemical compounds or preparations, and the chemical structure, compound, mixture or composition is drawn to cases where the subject of the invention is known. In such cases, classification is made in both subclass are not listed first when assigned to represent information. 6. The classification symbols of this subclass are not listed first when	M	A01B 73/00	implements, e.g. folding frames to reduce overall width (arrangements of lifting devices for soil working implements A01B 63/00 ; vehicles adapted for load transportation or to transport, to carry or to comprise special loads or objects B60P;
Note(s) [2026.01] 1. This subclass <u>covers</u> mechanical aspects of dairy product manufacturing, e.g. apparatus for the mechanical treatment of milk or cream for making butter or cheese. 2. This subclass <u>does not cover</u> chemical aspects of dairy product manufacturing, which include apparatus for chemical processes such as concentration, evaporation or drying, and which are covered by subclass A23C. M A01J 27/00 A1ter-treatment of cheese; Coating the of cheese [1,2006.01] A01M A01M A01M A01M A01N 29/12 • Loading the cheese, e.g. with paraffin wax Devices for coating of cheese [1,2006.01] A01N A01N A01P Note(s) [2006.01,2012.01,2026.01] 1. This subclass is for secondary classification in the sense of paragraph 107bis of the Guide to the IPC. Therefore, the classification symbols of this subclass are not listed first when assigned to patent documents. Secondary classification symbols may be assigned for either invention information or additional information, as appropriate. 2. This subclass covers biocidal, pest repellant, pest attractant or plant growth regulatory activity of chemical compounds or preparations already classified as such in subclasses A01N or C12N, or in classes C01, or C08. 3. Attention is drawn to the notes following the title of subclass A01N, which are also applicable to this subclass. 4. In this subclass, activity is classified in all appropriate places. 5. Attention is drawn to cases where the subject of the invention concerns only biocidal, pest repellant, pest attractant or plant growth regulatory activity of chemical compounds or preparations, and the chemical structure, compound, mixture or composition of this subject of the invention is known. In such cases, classification is made in both subclass A01N and subclass A01P as invention information. In addition, if the chemical structure, compound, mixture or composition or any individual ingredient of a mixture or composition is considered to represent information. 6. The classification of interest for search, it may als	M	A01B 77/00	growth regulators A01N 25/00-A01N 65/00 ; fertilisers C05 ; soil-conditioning or soil-
1. This subclass covers mechanical aspects of dairy product manufacturing, e.g. apparatus for the mechanical treatment of milk or cream for making butter or cheese. 2. This subclass does not cover chemical aspects of dairy product manufacturing, which include apparatus for chemical processes such as concentration, evaporation or drying, and which are covered by subclass A23C. M A01J 27/00 A Atter-treatment of cheese; Coating the of cheese [1,2006.01] **Coating the cheese, e.g. with paraffin wax Devices for coating of cheese [1,2006.01] **A01M** A01M** **Using ultrasonic signals [2011.01] **A01N** **A01P** **Note(s) [2006.01,2012.01,2026.01] 1. This subclass is for secondary classification in the sense of paragraph 107bis of the Guide to the IPC. Therefore, the classification symbols of this subclass are not listed first when assigned to patent documents. Secondary classification symbols may be assigned for either invention information or additional information, as appropriate. 2. This subclass covers blocidal, pest repellant, pest attractant or plant growth regulatory activity of chemical compounds or preparations already classified as such in subclasses A011 nor C12N, or in classes C017 or C08. 3. Attention is drawn to the notes following the title of subclass A01N, which are also applicable to this subclass. 4. In this dubclase, eativity is classified in all appropriate places. 5. Attention is drawn to cases where the subject of the invention concerns only biocidal, pest repellant, pest attractant or plant growth regulatory activity of chemical compounds or preparations, and the chemical structure, compound, mixture or composition of any individual ingredient of a mixture or composition is made in both subclass A01N and subclass A01P as invention information. In addition, if the chemical structure, compound, mixture or composition or any individual ingredient of a mixture or composition is considered to represent information. 6. The classification in interest for search, it may also be classifi	M	A01J	MANUFACTURE OF DAIRY PRODUCTS (for chemical matters, see subclass A23C)
M A01J 27/02 *Ceating the cheese, e.g. with paraffin wax-Devices for coating of cheese [1,2006.01] A01M L A01M 29/18 ***using ultrasonic signals [2011.01] A01N L A01N 29/12 ***1,1-Di- or 1,1,1-tri-halo-2-aryl-ethane or -ethene or derivatives thereof, e.g. DDT [3,2006.01] A01P M A01P Note(s) [2006.01,2012.01,2026.01] 1. This subclass is for secondary classification in the sense of paragraph 107bis of the Guide to the IPC. Therefore, the classification symbols of this subclass are not listed first when assigned to patent documents. Secondary classification symbols may be assigned for either invention information or additional information, as appropriate. 2. This subclass covers biocidal, pest repellant, pest attractant or plant growth regulatory activity of chemical compounds or preparations already classified as such in subclasses A01N or C12N, or in classes C01, C07 or C08. 3. Attention is drawn to the notes following the title of subclass A01N, which are also applicable to this subclass. 4. In this subclass, activity is classified in all appropriate places. 5. Attention is drawn to cases where the subject of the invention concerns only biocidal, pest repellant, pest attractant or plant growth regulatory activity of chemical compounds or preparations, and the chemical structure, compound, mixture or composition is made in both subclass A01N and subclass A01P as invention information. In addition, if the chemical structure, compound, mixture or composition or any individual ingredient of a mixture or composition is considered to represent information of interest for search, it may also be classified as additional information. 6. The classification symbols of this subclass are not listed first when assigned to patent documents.	N	A01J	 This subclass <u>covers</u> mechanical aspects of dairy product manufacturing, e.g. apparatus for the mechanical treatment of milk or cream for making butter or cheese. This subclass <u>does not cover</u> chemical aspects of dairy product manufacturing, which include apparatus for chemical processes such as concentration,
A01M L A01N 29/18 A01N L A01N 29/12	M	A01J 27/00	After-treatment of cheese; Coating the of cheese [1,2006.01]
A01N A01N 29/12 A01P Note(s) [2006.01,2012.01,2026.01] 1. This subclass is for secondary classification in the sense of paragraph 107bis of the Guide to the IPC. Therefore, the classification symbols of this subclass are not listed first when assigned to patent documents. Secondary classification symbols may be assigned for either invention information or additional information, as appropriate. 2. This subclasss covers biocidal, pest repellant, pest attractant or plant growth regulatory activity of chemical compounds or preparations already classified as such in subclasses A01N or C12N, or in classes C01, C07 or C08. 3. Attention is drawn to the notes following the title of subclass A01N, which are also applicable to this subclass. 4. In this subclass, activity is classified in all appropriate places. 5. Attention is drawn to cases where the subject of the invention concerns only biocidal, pest repellant, pest attractant or plant growth regulatory activity of chemical compounds or preparations, and the chemical structure, compound, mixture or composition of this subject of the invention is known. In such cases, classification is made in both subclass A01N and subclass A01P as invention information. In addition, if the chemical structure, compound, mixture or composition or any individual ingredient of a mixture or composition is considered to represent information of interest for search, it may also be classified as additional information. 6. The classification symbols of this subclass are not listed first when assigned to patent documents.	М	A01J 27/02	• Coating the cheese, e.g. with paraffin wax Devices for coating of cheese [1,2006.01]
A01N L A01N 29/12 *• 1,1-Di- or 1,1,1-tri-halo-2-aryl-ethane or -ethene or derivatives thereof, e.g. DDT [3,2006.01] A01P Note(s) [2006.01,2012.01,2026.01] 1. This subclass is for secondary classification in the sense of paragraph 107bis of the Guide to the IPC. Therefore, the classification symbols of this subclass are not listed first when assigned to patent documents. Secondary classification symbols may be assigned for either invention information or additional information, as appropriate. 2. This subclass covers biocidal, pest repellant, pest attractant or plant growth regulatory activity of chemical compounds or preparations already classified as such in subclasses A01N or C12N, or in classes C01, C07 or C08. 3. Attention is drawn to the notes following the title of subclass A01N, which are also applicable to this subclass. 4. In this subclaes, activity is classified in all appropriate places. 5. Attention is drawn to cases where the subject of the invention concerns only biocidal, pest repellant, pest attractant or plant growth regulatory activity of chemical compounds or preparations, and the chemical structure, compound, mixture or composition of this subject of the invention is known. In such cases, classification is made in both subclass A01N and subclass A01P as invention information. In addition, if the chemical structure, compound, mixture or composition or any individual ingredient of a mixture or composition is considered to represent information of interest for search, it may also be classified as additional information. 6. The classification symbols of this subclass are not listed first when assigned to patent documents.		A01M	
A01P Note(s) [2006.01,2012.01,2026.01] 1. This subclass is for secondary classification in the sense of paragraph 107bis of the Guide to the IPC. Therefore, the classification symbols of this subclass are not listed first when assigned to patent documents. Secondary classification symbols may be assigned for either invention information or additional information, as appropriate. 2. This subclass govers biocidal, pest repellant, pest attractant or plant growth regulatory activity of chemical compounds or preparations already classified as such in subclasses A01N or C12N, or in classes C01, C07 or C08. 3. Attention is drawn to the notes following the title of subclass A01N, which are also applicable to this subclass. 4. In this subclass, activity is classified in all appropriate places. 5. Attention is drawn to cases where the subject of the invention concerns only biocidal, pest repellant, pest attractant or plant growth regulatory activity of chemical compounds or preparations, and the chemical structure, compound, mixture or composition of this subject of the invention is known. In such cases, classification is made in both subclass A01N and subclass A01P as invention information. In addition, if the chemical structure, compound, mixture or composition or any individual ingredient of a mixture or composition is considered to represent information of interest for search, it may also be classified as additional information. 6. The classification symbols of this subclass are not listed first when assigned to patent documents.	L	A01M 29/18	• • using ultrasonic signals [2011.01]
M A01P Note(s) [2006.01,2012.01,2026.01] 1. This subclass is for secondary classification in the sense of paragraph 107bis of the Guide to the IPC. Therefore, the classification symbols of this subclass are not listed first when assigned to patent documents. Secondary classification symbols may be assigned for either invention information or additional information, as appropriate. 2. This subclass covers biocidal, pest repellant, pest attractant or plant growth regulatory activity of chemical compounds or preparations already classified as such in subclasses A01N or C12N, or in classes C01, C07 or C08. 3. Attention is drawn to the notes following the title of subclass A01N, which are also applicable to this subclass. 4. In this subclass, activity is classified in all appropriate places. 5. Attention is drawn to cases where the subject of the invention concerns only biocidal, pest repellant, pest attractant or plant growth regulatory activity of chemical compounds or preparations, and the chemical structure, compound, mixture or composition of this subject of the invention is known. In such cases, classification is made in both subclass A01N and subclass A01P as invention information. In addition, if the chemical structure, compound, mixture or composition or any individual ingredient of a mixture or composition is considered to represent information of interest for search, it may also be classified as additional information. 6. The classification symbols of this subclass are not listed first when assigned to patent documents.		A01N	
M A01P Note(s) [2006.01,2012.01,2026.01] 1. This subclass is for secondary classification in the sense of paragraph 107bis of the Guide to the IPC. Therefore, the classification symbols of this subclass are not listed first when assigned to patent documents. Secondary classification symbols may be assigned for either invention information or additional information, as appropriate. 2. This subclass covers biocidal, pest repellant, pest attractant or plant growth regulatory activity of chemical compounds or preparations already classified as such in subclasses A01N or C12N, or in classes C01, C07 or C08. 3. Attention is drawn to the notes following the title of subclass A01N, which are also applicable to this subclass. 4. In this subclass, activity is classified in all appropriate places. 5. Attention is drawn to cases where the subject of the invention concerns only biocidal, pest repellant, pest attractant or plant growth regulatory activity of chemical compounds or preparations, and the chemical structure, compound, mixture or composition of this subject of the invention is known. In such cases, classification is made in both subclass A01N and subclass A01P as invention information. In addition, if the chemical structure, compound, mixture or composition or any individual ingredient of a mixture or composition is considered to represent information of interest for search, it may also be classified as additional information. 6. The classification symbols of this subclass are not listed first when assigned to patent documents.	L	A01N 29/12	· · · · · · · · · · · · · · · · · · ·
 This subclass is for secondary classification in the sense of paragraph 107bis of the Guide to the IPC. Therefore, the classification symbols of this subclass are not listed first when assigned to patent documents. Secondary classification symbols may be assigned for either invention information or additional information, as appropriate. This subclass covers biocidal, pest repellant, pest attractant or plant growth regulatory activity of chemical compounds or preparations already classified as such in subclasses A01N or C12N, or in classes C01, C07 or C08. Attention is drawn to the notes following the title of subclass A01N, which are also applicable to this subclass. In this subclass, activity is classified in all appropriate places. Attention is drawn to cases where the subject of the invention concerns only biocidal, pest repellant, pest attractant or plant growth regulatory activity of chemical compounds or preparations, and the chemical structure, compound, mixture or composition of this subject of the invention is known. In such cases, classification is made in both subclass A01N and subclass A01P as invention information. In addition, if the chemical structure, compound, mixture or composition or any individual ingredient of a mixture or composition is considered to represent information of interest for search, it may also be classified as additional information. The classification symbols of this subclass are not listed first when assigned to patent documents. 			
A23B	M		 This subclass is for secondary classification in the sense of paragraph 107bis of the Guide to the IPC. Therefore, the classification symbols of this subclass are not listed first when assigned to patent documents. Secondary classification symbols may be assigned for either invention information or additional information, as appropriate. This subclass covers biocidal, pest repellant, pest attractant or plant growth regulatory activity of chemical compounds or preparations already classified as such in subclasses A01N or C12N, or in classes C01, C07 or C08. Attention is drawn to the notes following the title of subclass A01N, which are also applicable to this subclass. In this subclass, activity is classified in all appropriate places. Attention is drawn to cases where the subject of the invention concerns only biocidal, pest repellant, pest attractant or plant growth regulatory activity of chemical compounds or preparations, and the chemical structure, compound, mixture or composition of this subclass A01N and subclass A01P as invention information. In addition, if the chemical structure, compound, mixture or composition or any individual ingredient of a mixture or composition is considered to represent information of interest for search, it may also be classified as additional information. The classification symbols of this subclass are not listed first when assigned to
		A23B	

М	A23B	Subclass index
M	A23B	PRESERVATION OF FOODS, FOODSTUFFS OR NON-ALOCHOLIC ALCOHOLIC BEVERAGES in general of specific products meat, sausages, fish or fish products eggs or egg products fruit or vegetables edible seeds, e.g. cereals milk or dairy products A23B 7/00 edible oils or fats A23B 11/00 edible oils or fats A23B 20/00 flour or dough before baking finished bakery products non-alcoholic beverages pulses or products from legumes cocoa or cocoa products tea, tea substitutes or herbal tea coffee or coffee substitutes CHEMICAL RIPENING OF FRUIT OR VEGETABLES A23B 20/00 A23B 20/00 A23B 20/00 A23B 30/00 A23B 85/00 A23B 85/00 A23B 90/00 CHEMICAL RIPENING OF FRUIT OR VEGETABLES
L L	A23B 2/57 A23B 2/97	SUBJECT MATTER NOT PROVIDED FOR IN OTHER GROUPS OF A23B 99/00 THIS SUBCLASS • by treatment with ultrasonic waves [2025.01] • using irradiation or electric treatment, e.g. ultrasonic waves [2025.01]
M	A23C	DAIRY PRODUCTS, e.g. MILK, BUTTER OR CHEESE; MILK OR CHEESE SUBSTITUTES; MAKING OR TREATMENT PREPARATION THEREOF (preservation thereof A23B 11/00)
М	A23C	Note(s) [3] This subclass <u>covers</u> : • the chemical aspects of making dairy products; • the apparatus used for performing techniques provided for therein, e.g. for concentration, evaporation —or drying—or sterilisation, unless such apparatus is specifically provided for in another subclass, e.g. in subclass A01J for treatment of milk or cream for manufacture of butter or cheese.
L	A23C 19/00	Cheese; Cheese preparations; Making thereof (cheese substitutes A23C 20/00; preservation of cheese or cheese preparations A23B 11/60) [1,2006.01]
M	A23C 19/14	 Treating cheese after having reached its definite form, e.g. ripening —or smoking [1,2006.01]
M	A23C 19/16	• • Covering the cheese surface, e.g. with paraffin wax coating compositions [1,2006.01]
	A23L	
C	A23L 15/00	Egg products; Preparation or treatment thereof [2016.01,2026.01]
T M	A23L 15/10 A24D	• Egg rolls products with specific shapes or structures, e.g. rolled [2016.01,2026.01] CIGARS; CIGARETTES; TOBACCO SMOKE FILTERS; MOUTHPIECES FOR OF CIGARS OR CIGARETTES; MANUFACTURE OF TOBACCO SMOKE FILTERS OR MOUTHPIECES
M M	A24D 1/04 A24D 1/08	 with mouthpieces or filter-tips (mouthpieces, filter-tips per se A24D 3/00) [1,2006.01] with lighting means (pyrophoric compositions C06C 15/00 ; lighters per se F23Q) [1,2006.01]
M	A24D 1/16	• Bands for cigars or cigarettes (machines for applying bands B65C) [1,2006.01]
М	A24D 3/00	Tobacco smoke filters, e.g. filter - tips —or filtering inserts; Filters specially adapted for simulated smoking devices; Mouthpieces for cigars or cigarettes (for pipes, for cigar or cigarette holders A24F 7/00) [3,2006.01,2020.01]
M	A24D 3/02	 Manufacture of tobacco smoke filters (manufacture of paper or cellulosic materials for filters D21) [3,2006.01]

M	A24D 3/18	• Mouthpieces for of cigars or cigarettes; Manufacture thereof (-A24D 3/02 takes precedence; making tipping materials for, or attaching them to mouthpieces of, cigars or cigarettes A24C 5/56; producing cigar or cigarette holders from plastics or from substances in a plastic state B29D 23/14; manufacture from metal, see the relevant subclasses of section B of tobacco smoke filters A24D 3/02) [3,2006.01]
	A24F	
M M	A24F 7/04 A24F 13/02	 with smoke filters (filters therefor A24D 3/00) [1,2006.01] Cigar or cigarette holders (mouthpieces A24F 7/00; producing tubular cigar or cigarette holders from plastics or from substances in a plastic state B29D 23/14) [1,2006.01]
	A41B	
М	A41B 9/00	Undergarments (corsets A41C 1/00; brassières brassieres A41C 3/00) [1,2006.01]
М	A41C	CORSETS; BRASSIÈRES BRASSIERES
М	A41C 1/06	• with brassières brassieres [1,2006.01]
M	A41C 3/00	Brassières Brassieres [1,2006.01]
М	A41C 3/06	• Strapless brassieres [1,2006.01]
M	A41C 5/00	Machines, appliances, or methods for manufacturing corsets or brassières brassières [1,2006.01]
M	A46B	BRUSHES (handles not integral with brushware B25G)
M	A46B 3/00	Brushes characterised by the way in which the bristles are fixed or joined in or on the brush body or carrier (machines or appliances therefor A46D) [1,2006.01]
M	A46B 11/00	Brushes with reservoir or other means for applying substances, e.g. paints, pastes , or water (<i>brushes with power</i> -driven brush bodies A46B 13/00; applying liquids or other fluent materials to surfaces by liquid carrying members in general, e.g. by pads, B05C 1/00, B05D 1/28 with reservoir or other means for supplying substances A46B 13/04) [1,2006.01]
М	A46B 13/00	Brushes with driven brush bodies (power-driven toothbrushes A61C 17/16 A61C 17/22) [1,5,2006.01]
	A46D	
М	A46D 1/00	Bristles; Selection of materials for bristles (making artificial bristles D01D , D01F) [1,2006.01]
М	A46D 9/02	• Cutting; Trimming (machines or apparatus for cutting bristles A46D 1/06) [1,2006.01]
	A47J	
L	A47J 27/092	• • • Devices for automatically releasing pressure before opening [1,2006.01]
М	A47K	SANITARY EQUIPMENT-NOT OTHERWISE PROVIDED FOR (connecting to water supply or waste pipe, sinks E03C; water-closets E03D); TOILET ACCESSORIES (cosmetic equipment A45D); ACCESSORIES THEREFOR, e.g. TOILET ACCESSORIES
М	A47K 1/00	Wash-stands; Appurtenances therefor (devices for washing the hair or scalp A45D 19/00; basins used in manual washing or cleaning of crockery, table-ware, cooking-ware, or the like A47L 17/02; with appurtenances for curative purposes A61H) [1,2006.01]
М	A47K 1/02	• Portable toilet tables; Wash cabinets or stands (for automobiles B60R; for railway cars B61D; for ships B63B; for aircraft B64D; connected to waste pipe E03C) [1,2006.01]
М	A47K 1/12	 Wash-basins attachable to sinks; Collapsible washing stands attachable to sinks -(supports attachable to sinks in general A47J 47/20) [1,2006.01]
M	A47K 3/00	Baths; Showers; Appurtenances therefor (for curative purposes A61H, A61M, e.g. bathing devices for special therapeutic or hygienic purposes A61H 33/00) [1,2006.01]
M M	A47K 3/02 A47K 3/022	 Baths (combined with showers A47K 3/20; heatable F24H) [1,7,2006.01] specially adapted for particular use, e.g. for washing the feet, for bathing in sitting position (collapsible baths specially adapted for particular use A47K 3/062) [1,2006.01]
М	A47K 3/03	• • attachable to other baths, sinks, wash-basins —or the like (collapsible baths attachable to other basins or the like A47K 3/07) [1,2006.01]
M M	A47K 3/08 A47K 3/12	 Cabinet baths (shower cabinets A47K 3/30) [1,2006.01] Separate seats or body supports (seats for chairs A47C 7/02) [1,2006.01]

M	A47K 3/14	 Replaceable separating walls for baths (sinks with separating walls E03C 1/18)
	4.4714.0/00	[1,2006.01]
M	A47K 3/26	 Bidets without upward spraying means (bidets with upward spraying means A61H 35/00 E03D 9/08) [7,2006.01]
M	A47K 3/28	• Showers (combined with baths A47K 3/20 ; nozzles, spray heads B05B 1/00) [7,2006.01]
M	A47K 3/38	• • Curtain arrangements (curtains, curtain suspension devices A47H) Arrangements for
		curtains [7,2006.01]
M	A47K 5/00	Holders or dispensers for soap, toothpaste , or the like (lather making devices for
		shaving A45D 27/02; specially adapted for shaving soap or cosmetics
M	A47K 5/16	A45D 33/00-A45D 40/00) [1,2006.01] • • with mechanical drive (feed mixers A47J 43/04) [1,2006.01]
		`
M	A47K 7/00	Body washing or cleaning implements (bathing devices for special therapeutic or
		hygienic purposes A61H 33/00; baths for specific parts of the body A61H 35/00) [1,2006.01]
М	A47K 7/02	 Bathing sponges, brushes, gloves - or similar cleaning or rubbing implements - the brushes in the
		general A46B; sponges for domestic cleaning A47L 13/16; specially for massage
	A 471/ 10/00	A61H 7/00) [1,2006.01]
M	A47K 10/02	 Towels (made of paper A47K 10/16; woven fabrics D03D; non woven fabrics D04H towels A47K 10/16) [1,2006.01]
М	A47K 10/16	• Paper towels; Toilet paper; Holders therefor (dispensers A47K 10/32) [1,2006.01]
M	A47K 10/22	••• for rolled-up webs (drawing off paper from a roll in general B65H) [1,2006.01]
M	A47K 10/24	• Towel dispensers; Toilet paper dispensers (sheet or web dispensers in general B65H)
N //	A47K 10/26	[1,2006.01]
M	A4/K 10/20	• • Mechanically-driven towel dispensers (A47K 10/28 takes precedence; for paper towels
		or toilet-paper from a web A47K 10/34; for paper towels or toilet paper from a store of
M	A 471/ 10/40	single sheets, e.g. stacked, A47K 10/44) [1,2006.01]
IVI	A47K 10/48	 Drying by means of hot air - (hair drying devices A45D 20/00; curative hot air baths A61H 33/06; electric heating elements H05B) [1,2006.01]
М	A47K 11/00	Closets without flushing (closets with recirculation of bowl-cleaning fluid
		E03D 5/016); Urinals without flushing (urinals for bed-ridden persons A61G 9/00;
		closets for railway-cars B61D ; for ships B63B ; for aircraft B64D ; urinals with
		flushing arrangements E03D 13/00); Chamber pots; Chairs with toilet conveniences
	A 4717 4 4 /00	or specially adapted for use with toilets for vehicles in general B60R; [1,5,2006.01]
M	A47K 11/06	• Chamber-pots (bed pans or other sanitary devices for bed ridden persons A61G 9/00)
М	A47K 11/08	[1,2006.01] • Night cabinets or tables with closets or bidet equipment - bedside cabinets per se
IVI	A47K 11/08	A47B 79/00) [1,2006.01]
M	A47K 13/10	Devices for raising and lowering-(thereby controlling flushing valves E03D 5/04)
		[1,2006.01]
M	A47K 13/26	• • Mounting devices for seats or covers (hinges A47K 13/12) [1,2006.01]
M	A47K 17/00	Other equipment (devices for receiving spittle A61J 19/00) sanitary equipment not covered by the other groups of this subclass [1,2006.01]
	A47L	
L	A47L 15/13	• • using sonic or ultrasonic waves [5,2006.01]
	A61B	
		Instruments for performing medical examinations of the interior of societies or to be
L	A61B 1/00	Instruments for performing medical examinations of the interior of cavities or tubes
		of the body by visual or photographical inspection, e.g. endoscopes (examination of body cavities or body tracts using ultrasonic, sonic or infrasonic waves A61B 8/12;
		endoscopic instruments for taking cell samples or for biopsy A61B 10/04);
		Illuminating arrangements therefor (for the eyes A61B 3/00) [1,4,2006.01]
	AC4D 0/00	
L	A61B 3/00	Apparatus for testing the eyes; Instruments for examining the eyes (eye inspection using ultrasonic, sonic or infrasonic waves A61B 8/10) [1,4,5,2006.01]
L	A61B 5/00	Measuring for diagnostic purposes (radiation diagnosis A61B 6/00; diagnosis by
	70150100	ultrasonic, sonic or infrasonic waves A61B 8/00); Identification of persons [1,2006.0
	AC4 D 0/00	Diagnosis using ultrasonic, sonic or infrasonic waves [4,2006.01]
L	A61B 8/00	Diagnosis using antrasonio, sonio or initasonio waves [4,2000.01]
	A61B 17/225	• for extracorporeal shock wave lithotripsy [ESWL], e.g. by using ultrasonic waves
L L	A61B 17/225	 for extracorporeal shock wave lithotripsy [ESWL], e.g. by using ultrasonic waves [6,2006.01]
		 for extracorporeal shock wave lithotripsy [ESWL], e.g. by using ultrasonic waves

	•	
	A61C	
M	A61C 1/07	• • with vibratory drive, e.g. ultrasonic waves [1,2006.01]
M	A61C 17/20	• • using ultrasonics ultrasonic waves [5,2006.01]
	A61D	
М	A61D 3/00	Appliances Arrangements for supporting or fettering animals for operative veterinary purposes [1,2006.01]
	A61F	
M	A61F 2/82	 Devices providing patency to, or preventing collapsing of, tubular structures of the body, e.g. stents (stent-grafts for tubular structures of the body other than blood vessels A61F 2/04; stent-grafts for blood vessels A61F 2/07 ; dilators A61M 29/00) [2006.01,2013.01]
L	A61F 11/00	Methods or devices for treatment of the ears or hearing sense (implantable prostheses that substitute or replace internal ear parts, e.g. ear-drums, A61F 2/18; methods or devices to cause a change in the state of auditory consciousness A61M 21/00; electrotherapy applying electrical stimulation of the auditory system, or circuits therefor A61N 1/36; radiotherapy using optical stimulation of the auditory system A61N 5/06; electro-acoustic hearing aids H04R 25/00); Non-electric hearing aids; Methods or devices for enabling ear patients to achieve auditory perception through physiological senses other than hearing sense; Protective devices for the ears, carried on the body or in the hand (headwear, e.g. caps or helmets, with means for protecting the ears A42B 1/0188, A42B 3/16) [1,2006.01,2022.01]
M	A61H	PHYSICAL THERAPY APPARATUS, e.g. DEVICES FOR LOCATING OR STIMULATING REFLEX POINTS IN THE BODY; ARTIFICIAL RESPIRATION; MASSAGE; BATHING DEVICES FOR SPECIAL THERAPEUTIC OR HYGIENIC PURPOSES OR SPECIFIC PARTS OF THE BODY (electrotherapy, magnetotherapy, radiation therapy —or ultrasound therapy A61N)
	A61K	
L M	A61K 41/13 A61K 47/55	 • by ultrasonic waves [2020.01] • • • the modifying agent being also a pharmacologically or therapeutically active agent, i.e. the entire conjugate being a codrug, i.e. a dimer, eligomer or polymer of pharmacologically or therapeutically active compounds [2017.01]
М	A61K 49/22	• Echographic preparations; Ultrasound Ultrasonic imaging preparations [7,2006.01]
	A61L	
M	A61L 2/00	Note(s) [2026.01] In groups A61L 2/00 A61L 12/00 this group, it is desirable to add the indexing codes of group A61L 101/00 A61L 103/00.
M	A61L 2/00	Methods or apparatus for disinfecting or sterilising—Disinfection or sterilisation of materials or objects—other than foodstuffs or contact lenses; Accessories therefor (atomisers for disinfecting agents—A61M; sterilisation of packages or package contents in association with packaging B65B 55/00; treatment of water, waste water, sewage or sludge C02F; disinfecting paper D21H 21/36; disinfecting devices for water closets E03D; articles having provision for disinfection, see the relevant subclasses for these articles, e.g. H04R 1/12), in general; Accessories therefor [3,5,7,2006.01]
С	A61L 2/02	• using physical phenomena processes [3,2006.01,2026.01]
N	A61L 2/022	• Filtration [2026.01]
M	A61L 2/025	• • Ultrasonics Ultrasonic waves [7,2006.01]
C N	A61L 2/03 A61L 2/035	• • Electric current, e.g. electrolysis [7,2006.01,2026.01] • • • Electrolysis [2026.01]
M	A61L 2/035	•• Heat (<i>radiation</i> A61L 2/08 takes precedence) [3,2006.01]
_		••• Hot gas [3,2006.01]
L	A61L 2/06	110t gas [0;200:01]
L	A61L 2/06 A61L 2/07	•••• Steam [7,2006.01]
_		
L C N	A61L 2/07 A61L 2/08 A61L 2/081	•••• Steam [7,2006.01] •• Radiation [3,2006.01,2026.01] ••• Gamma radiation [2026.01]
L C N	A61L 2/07 A61L 2/08 A61L 2/081 A61L 2/082	•••• Steam [7,2006.01] •• Radiation [3,2006.01,2026.01] ••• Gamma radiation [2026.01] ••• X-rays [2026.01]
L C N N	A61L 2/07 A61L 2/08 A61L 2/081 A61L 2/082 A61L 2/084	 Steam [7,2006.01] Radiation [3,2006.01,2026.01] Gamma radiation [2026.01] X-rays [2026.01] Visible light [2026.01]
L C N	A61L 2/07 A61L 2/08 A61L 2/081 A61L 2/082	•••• Steam [7,2006.01] •• Radiation [3,2006.01,2026.01] ••• Gamma radiation [2026.01] ••• X-rays [2026.01]

Compilation of amendments between 2025.01 and 2026.01 IPC Ν A61L 2/088 • • • using photocatalysts or photosensitisers [2026.01] C• • • Ultraviolet [UV] radiation [3,2006.01,2026.01] A61L 2/10 Ν •••• Ultraviolet A [UVA] [2026.01] A61L 2/101 •••• Ultraviolet B [UVB] [2026.01] Ν A61L 2/102 Ν A61L 2/104 • • • • Ultraviolet C [UVC] [2026.01] A61L 2/108 • • • • Multiple UV ranges in combination [2026.01] Ν A61L 2/12 ••• Microwaves [3,2006.01] L • • Plasma, i.e. ionised gases [3,2006.01] L A61L 2/14 CA61L 2/18 • • Liquid substances [3,2006.01,2026.01] Ν A61L 2/183 • • • Ozone dissolved in a liquid [2026.01] Ν • • • Peroxide solutions [2026.01] A61L 2/186 CA61L 2/20 • • Gaseous substances, e.g. vapours [3,2006.01,2026.01] Ν A61L 2/202 • • • Ozone [2026.01] Ν A61L 2/204 • • • Formaldehyde [2026.01] Ν A61L 2/206 • • • Ethylene oxide [2026.01] A61L 2/208 • • • Hydrogen peroxide [2026.01] Ν A61L 2/22 M • • Phase substances, e.g. smokes —or aerosols [3,2006.01] M A61L 2/23 Solid substances materials, e.g. granules, powders, blocks -or tablets [7,2006.01] L A61L 2/232 ••• layered or coated [7,2006.01] L A61L 2/235 ••• cellular, porous or foamed [7,2006.01] M A61L 2/28 • • Devices for testing the effectiveness or completeness of sterilisation or disinfection, e.g. indicators which change colour-(apparatus involving enzymes or microorganisms C12M 1/34) [7,2006.01] M A61L 12/02 using physical phenomena, e.g. electricity, ultrasonies ultrasound or ultrafiltration [7,2006.01] Indexing scheme associated with groups A61L 2/00-A61L 12/00, relating to the A61L 101/00 M chemical composition of the materials used in disinfecting, sterilising or deodorising. [7] Indexing scheme associated with group A61L 2/00, relating to materials or objects N A61L 103/00 being the target of disinfection or sterilisation [2026.01] Ν A61L 103/00 Materials or objects being the target of disinfection or sterilisation [2026.01] • Living organisms or biological materials [2026.01] Ν A61L 103/05 • • The human body [2026.01] Ν A61L 103/06 Ν • • • Hands [2026.01] A61L 103/07 Ν A61L 103/09 • • Blood or products thereof [2026.01] Ν A61L 103/10 • Medicinal preparations other than biologicals [2026.01] Ν A61L 103/15 Laboratory, medical or dentistry appliances, e.g. catheters or sharps [2026.01]

Ν	A61L 103/20	• • Containers, e.g. vials or flasks [2026.01]
Ν	A61L 103/25	 Personal electronic items, e.g. mobile phones [2026.01]
Ν	A61L 103/30	 Tableware or kitchen utensils [2026.01]
Ν	A61L 103/35	 Baby products, e.g. pacifiers or feeding bottles [2026.01]
Ν	A61L 103/40	 Furniture, e.g. seats, tables or beds [2026.01]
Ν	A61L 103/45	 Toiletry or cosmetic articles [2026.01]
Ν	A61L 103/50	Textiles, e.g. bedwear or towels [2026.01]
Ν	A61L 103/55	• Footwear [2026.01]
Ν	A61L 103/60	Cards or paper money [2026.01]
Ν	A61L 103/65	 Personal protective equipment, e.g. facial masks [2026.01]
Ν	A61L 103/70	 Trolleys, e.g. supermarket trolleys [2026.01]
Ν	A61L 103/75	Room floors or walls [2026.01]
Ν	A61L 103/80	 Gates, doors or parts thereof, e.g. handles [2026.01]
Ν	A61L 103/85	 Animal houses [2026.01]
Ν	A61L 103/90	 Temporarily isolated areas, e.g. mobile tents [2026.01]
Ν	A61L 103/95	 Vehicles, e.g. cars or aeroplanes [2026.01]
Ν	A61L 103/97	• Passenger compartments of vehicles [2026.01]
	A61M	

L	A61M	 Note(s) [5,2006.01] This subclass <u>covers</u> suction, pumping or atomising devices for medical use (e.g. cups, breast relievers, irrigators, sprays, powder insufflators, atomisers, inhalers), apparatus for general or local anaesthetics, devices or methods for causing a change in the state of consciousness, catheters, dilators, apparatus for introducing medicines into the body other than orally. In this subclass, group A61M 36/00, which relates to the application of radioactive material to the body, takes precedence over other groups. When classifying in this subclass, classification is also made in group B01D 15/08 insofar as subject matter of general interest relating to chromatography is concerned. 	
L	A61M	Subclass index	
		SUCTION OR PUMPING DEVICES SYRINGES; IRRIGATORS; BATHS FOR THE INTESTINES	A61M 1/00, A61M 60/00 A61M 3/00, A61M 5/00;
		SPRAYERS, ATOMISERS; INSUFFLATORS	A61M 9/00 A61M 11/00; A61M 13/00
		INHALING DEVICES	A61M 15/00, A61M 16/00
		DEVICES FOR PRODUCING OR ENDING SLEEP OR ANAESTHESIA	A61M 16/00, A61M 19/00, A61M 21/00
		PROBES, CATHETERS; DRAINS; DILATORS	A61M 25/00; A61M 27/00; A61M 29/00
		TUBES, TUBE CONNECTORS, TUBE COUPLINGS, VALVES, ACCESS SITES OR THE LIKE, SPECIALLY ADAPTED FOR MEDICAL USE	A61M 39/00
		OTHER DEVICES FOR INTRODUCING OR RETAINING REMEDIES IN THE BODY OTHER DEVICES FOR SPREADING REMEDIES ON THE BODY APPLYING PARIOACTIVE MATERIAL TO THE BODY	A61M 37/00 A61M 35/00
L	A61M 16/08	APPLYING RADIOACTIVE MATERIAL TO THE BODY • Bellows; Connecting tubes [4,2006.01]	A61M 36/00
M	A61M 29/00	Dilators with or without means for introducing media, e.g. remedia A61F-2/82) [1,2,2006.01]	es (stents
L	A61M 36/00	Applying radioactive material to the body [5,2006.01]	
M	A61M 60/816	•••• Sensors arranged on or in the housing, e.g. ultrasound ultrasonic [2021.01]	c flow sensors
	A61N		
L	A61N 5/00	Radiation therapy (devices or apparatus applicable to both therapy A61B 6/00; applying radioactive material to the body A61M 36/00)	
	A61P		

M A61P

Note(s) [7,2012.01,2026.01]

- This subclass is for secondary classification in the sense of paragraph 107bis of the Guide to the IPC. Therefore, the classification symbols of this subclass are not listed first when assigned to patent documents. Secondary classification symbols may be assigned for either invention information or additional information, as appropriate.
- 2. This subclass covers therapeutic activity of chemical compounds or medicinal preparations already classified as such in subclasses A61K or C12N, or in classes C01, C07 or C08.
- 3. In this subclass, the term "drugs" includes <u>covers</u> chemical compounds or compositions with therapeutic activity.
- 4. In this subclass, therapeutic activity is classified in all appropriate places.
- 5. Attention is drawn to cases where the subject of the invention concerns only specific therapeutic activity of chemical compounds or medical preparations, and the chemical structure, compound, mixture or composition of this subject of the invention is known. In such cases, classification is made in both subclass A61K and subclass A61P as invention information. In addition, if the chemical structure, compound, mixture or composition or any individual ingredient of a mixture or composition is considered to represent information of interest for search, it may also be classified as additional information The classification symbols of this subclass are not listed first when assigned to patent documents.

A61Q

M A61Q

Note(s) [2006.01,2012.01,2026.01]

- 1. This subclass is for secondary classification in the sense of paragraph 107bis of the Guide to the IPC. Therefore, the classification symbols of this subclass are not listed first when assigned to patent documents. Secondary classification symbols may be assigned for either invention information or additional information, as appropriate.
- 2. This subclass covers the use of cosmetics or similar toiletry preparations already classified as such in main group A61K 8/00, in subclasses C11D or C12N, or in classes C01, C07 or C08.
- 3. When classifying in this subclass, classification is also made in subclass A61P if the preparation is stated to have therapeutic activity.
- 4. In this subclass, the use of cosmetics or similar toiletry preparations is classified in all appropriate places.
- 5. Attention is drawn to cases where the subject of the invention concerns only the specific use of cosmetics or toiletry preparations, and the chemical structure, compound, mixture or composition of this subject of the invention is known. In such cases, classification is made in main group A61K 8/00 or in subclass C11D, and also in subclass A61Q as invention information. In addition, if the chemical structure, compound, mixture or composition or any individual ingredient of a mixture or composition is considered to represent information of interest for search, it may also be classified as additional information.
- 6. The classification symbols of this subclass are not listed first when assigned to patent documents.

		patent documents.
	A62C	
L	A62C 27/00	Fire-fighting land vehicles (vehicle aspects, see the appropriate subclasses of classes B60-B62) [1,2006.01]
	A63B	
L	A63B 49/00	 Note(s) [2015.01] When classifying in groups A63B 49/00, A63B 53/00 or A63B 59/00, subject matter related to details or accessories of golf clubs, bats, rackets or the like are further classified in group A63B 60/00. When classifying in groups A63B 49/00-A63B 60/00, it is desirable to add the indexing codes of group A63B 102/00.
	A63F	
M	A63F 1/00	Card games (aspects of games using an electronically generated display having two or more dimensions showing representations related to the game A63F 13/00) [1,7,2006.01]

M M	A63F 1/02 A63F 1/18	 Cards; Special shapes of cards (card printing methods B41K, B41M) [1,2006.01] Scoring or registering devices; Indicators (A63F 1/16 takes precedence; time testing devices G07C) [1,2006.01]
M	A63F 3/00	Board games; Raffle games (racing games, traffic games, or obstacle games characterised by figures moved by action of the players A63F 9/14; aspects of games using an electronically generated display having two or more dimensions showing representations related to the game A63F 13/00; [1,7,2006.01]
M	A63F 5/00	Roulette games (aspects of games using an electronically generated display having two or more dimensions showing representations related to the game A63F 13/00) [1,7,2006.01]
M	A63F 7/00	Indoor games using small moving playing bodies, e.g. balls, discs or blocks (board games , or raffle games A63F 3/00; roulette games A63F 5/00; aspects of games using an electronically generated display having two or more dimensions showing representations related to the game A63F 13/00; miniature bowling games A63D 3/00; bagatelle or similar games A63D 13/00; billiards , or pocket billiards
M	A63F 7/06	A63D 15/00) [1,7,2006.01] • Games simulating outdoor ball games, e.g. hockey (if-table games physically beneficial for
M	A63F 7/24	the human body A63B 67/00, modelled on outdoor sports, e.g. table tennis, A63B 67/04) [1,2006.01] • Devices controlled by the player to project or roll-off the playing bodies (arrangement of such devices in table alleys, miniature bowling-alleys or bowling games A63D 3/02; in bogotalle or billiards A63D 12/00, A63D 15/00 billiards area A63D 15/00 12 2006 011
	4.00E.0/00	bagatelle or billiards A63D 13/00 , A63D 15/00 billiard cues A63D 15/08) [3,2006.01]
M	A63F 9/00	Games not otherwise provided for (aspects of games using an electronically generated display having two or more dimensions showing representations related to the game A63F 13/00) [1,7,2006.01]
М	A63F 9/02	 Shooting or hurling games (throwing implements for sports or recreational use A63B 65/00; throwing or projecting toys per se A63H 33/18; targets, target ranges, bullet eatchers F41J) [1,3,2006.01]
M M	A63F 9/04 A63F 9/06	 Dice (dice tops A63F 5/04); Dice-boxes; Mechanical dice-throwing devices [1,2006.01] Patience; Other games for self-amusement (balls to be shaken in small boxes A63F 7/04) [1,2006.01]
М	A63F 9/10	•• Two-dimensional [2D] jig-saw puzzles [1,2006.01]
М	A63F 9/12	• • Three-dimensional [3D] jig-saw puzzles [1,2006.01]
M	A63F 9/14	 Racing games, traffic games —or obstacle games characterised by figures moved by action of the players (games using dice Λ63F 3/00) [1,2006.01]
M	A63F 13/213	• • • comprising photodetecting means, e.g. cameras, photodiodes or infrared cells (A63F 13/219 , A63F 13/655 take takes precedence) [2014.01]
M	A63F 13/28	 responding to control signals received from the game device for affecting ambient conditions, e.g. for vibrating players' seats, activating scent dispensers or affecting temperature or light (controlling the output signals based on the game progress A63F 13/50) [2014.01]
М	A63F 13/5378	•••• for displaying an additional top view, e.g. radar screens or maps -(using two or more virtual cameras concurrently A63F 13/5252) [2014.01]
М	A63F 13/798	••• for assessing skills or for ranking players, e.g. for generating a hall of fame -(computing the game score A63F 13/46) [2014.01]
М	A63F 13/833	• • Hand-to-hand fighting, e.g. martial arts competition (A63F 13/837 takes precedence) [2014.01]
M	A63G	MERRY-GO-ROUNDS; SWINGS; ROCKING-HORSES (swings or rocking horses as nursery furniture A47D 13/10); CHUTES; SWITCHBACKS; SIMILAR DEVICES FOR PUBLIC AMUSEMENT
M	A63G 31/12	• • with inflatable and movable substructures (connection of valves to inflatable elastic bodies B60C 29/00) [1,2006.01]
	A63H	
M	A63H 17/395	••• steered by programme program [4,2006.01]
М	A63K	RACING; RIDING SPORTS; EQUIPMENT OR ACCESSORIES THEREFOR (stop

B01D

COIII	phation of amenan	Herits between 2020.01 and 2020.01 ii C
L	B01D 29/075	Note(s) [5] If the subject matter classified in this group also contains relevant information covered by other subgroups of group B01D 29/00, it is also classified in the other appropriate subgroups of group B01D 29/00.
L	B01D 29/085	Note(s) [5] If the subject matter classified in this group also contains relevant information covered by other subgroups of group B01D 29/00, it is also classified in the other appropriate subgroups of group B01D 29/00.
L	B01D 46/762	•••• involving sonic or ultrasonic waves [2022.01]
M	B01D 51/08	••• by sound or ultrasonies ultrasound [1,2006.01]
М	B01D 71/36	••••• Polytetrafluoroethene Polytetrafluoroethylene [5,2006.01]
	B01J	
L M	B01J 19/10 B01J 29/00	• • employing sonic or ultrasonic vibrations [3,2006.01] Note(s) [6]
		In this group, the following term is used with the meaning indicated: • "zeolites" means:
		 i. crystalline aluminosilicates with base-exchange and molecular sieve properties, having three-dimensional [3D], microporous lattice framework structure of tetrahedral oxide units;
		ii. compounds isomorphous to those of the former category, wherein the aluminium or silicon atoms in the framework are partly or wholly replaced by atoms of other elements, e.g. by gallium, germanium, phosphorus or boron.
М	B01J 35/56	Foraminous structures having flow-through passages or channels, e.g. grids or three-dimensional [3D] monoliths [2024.01]
M	B01J 35/73	• • having a two-dimensional [2D] layered crystalline structure, e.g. layered double hydroxide [LDH] [2024.01]
L	B01J 37/34	 Irradiation by, or application of, electric, magnetic or wave energy, e.g. ultrasonic waves [2,2006.01]
	B02C	
M	B02C 19/18	 Use of auxiliary physical effects, e.g. <u>ultrasonics</u>, ultrasonic waves or irradiation, for disintegrating [1,2006.01]
	B03C	
L	B03C 3/016	• • by acoustic or electromagnetic energy, e.g. ultraviolet light [6,2006.01]
	B04B	
M	B04B 13/00	Control arrangements specially designed for centrifuges; Programme Program control of centrifuges (control arrangements for feed, charge —or discharge B04B 11/00) [1,2006.01]
	B05B	
L	B05B 17/06	• • using ultrasonic vibrations [1,2006.01]
	B06B	
L	B06B 1/00	Processes or apparatus for generating mechanical vibrations of infrasonic, sonic or ultrasonic frequency [1,2006.01]
L	B06B 3/00	Processes or apparatus specially adapted for transmitting mechanical vibrations of infrasonic, sonic or ultrasonic frequency [1,2006.01]

M B21 Note(s) [2015.01]

- 1. This class covers:
 - working of metallic materials;
 - working of non-metallic materials, provided that the methods applied are similar to those used in metal-working and not provided for elsewhere.
- 2. This class does not cover:
 - combinations of operations covered by different subclasses of class B21, which are covered by subclass B23P;
 - combinations of operations covered by any particular subclass of class B21 with operations covered by other classes, e.g. with operations involving removal of material, which are also covered by subclass B23P, except that if the operations covered by the other classes are subsidiary to the operations properly covered by a single subclass of B21 the combination is classified in that subclass.

		combination to state in that substates.
	B21B	
М	B21B 37/24	 Automatic variation of thickness according to a predetermined program [6,2006.01]
	B21D	
M	B21D 7/12	• with programme program control [1,2006.01]
М	B21F	WORKING OR PROCESSING OF METAL WIRE (rolling of metal B21B wire B21B 1/16; by drawing, auxiliary operations used in connection with metal-working without essentially removing material B21C ; bundling articles B65B 13/00)
М	B21F 5/00	Upsetting wire (in the manufacture of nails or pins B21G 3/12) [1,2006.01]
М	B21F 9/00	Straining wire (straining prestressing wires for concrete E04G 21/12 ; connections or attachments adapted for straining F16G 11/00) [1,2006.01]
M	B21F 11/00	Cutting wire (hand-held metal-shearing or metal-cutting devices B23D 29/00; hand cutting tools with two jaws which come into abutting contact B26B 17/00) [1,2006.01]
M	B21F 15/00	Connecting wire to wire or other metallic material or objects; Connecting parts by means of wire (tools for both straining and connecting B21F 9/00 B21F 9/02; jacketing or reinforcing B21F 17/00; manufacture of wire network B21F 27/00; in making bands B21F 43/00) [1,2006.01]
M	B21F 17/00	Jacketing or reinforcing articles with wire (by winding B65H 54/00 , B65H 81/00 ; by braiding D04C) [1,2006.01]
М	B21F 19/00	Metallic coating of wire (by extruding B21C 23/24; by soldering or welding, e.g. cladding or plating, B23K ; by other non-mechanical means C23 ; electroplating C25D) [1,2006.01]
М	B21F 23/00	Feeding wire in wire-working machines or apparatus (applicable also to feeding rods or strips B21D 43/00) [1,2006.01]
M	B21F 27/00	Making wire network, i.e. wire nets (<i>making</i> meshed-ring network <i>from wire</i> B21F 31/00; in making bands B21F 43/00 ; using looms D03D) [1,2006.01]
М	B21F 29/00	Making fencing or like material made partly of wire (B21F 25/00 , B21F 27/00 take takes precedence) [1,2,2006.01]
М	B21F 35/00	Making springs from wire (by coiling wire B21F 3/00; making resilient rings B21F 37/02) [1,2006.01]
М	B21F 37/00	Manufacture of rings from wire (in chain making B21L; producing bead-rings or bead-cores for tyres B29D 30/48) [1,2006.01]
M	B21F 37/02	• or of resilient rings, e.g. key-rings [1,2006.01]
М	B21F 43/00	Making bands, e.g. bracelets, or wire (making chains B21L; using looms D03D) from wire [1,2006.01]
	B23B	
L	B23B 37/00	Boring by making use of vibrations of ultrasonic frequency (working materials by subjecting the grinding tools or the abrading medium to vibration, e.g. grinding with ultrasonic frequency, B24B 1/04) [1,2006.01]
М	B23B 39/08	• • Devices for programme program control [1,2006.01]
M	B23B 39/24	• • designed for programme program control [1,2006.01]
	B23D	

	•	
L	B23D 51/00	Sawing machines or sawing devices working with straight blades, characterised only by constructional features of particular parts (constructional features of these parts per se B23Q; details or components, e.g. casings, bodies, of portable power-driven tools not particularly related to the operation performed B25F 5/00); Carrying or attaching means for tools, covered by this subclass, which are connected to a carrier at both ends [1,4,2006.01]
	B23H	
М	B23H 7/20	• • for programme program control, e.g. adaptive [4,2006.01]
L	B23H 7/38	 Influencing metal working by using specially adapted means not directly involved in the removal of metal, e.g. ultrasonic waves, magnetic fields or laser irradiation [4,2006.01]
M	B23K	SOLDERING OR UNSOLDERING; WELDING; CLADDING OR PLATING BY SOLDERING OR WELDING; CUTTING BY APPLYING HEAT LOCALLY, e.g. FLAME CUTTING; WORKING BY LASER BEAM-(making metal-coated products by extruding metal-B21C 23/22; building up linings or coverings by casting B22D 19/08; casting by dipping B22D 23/04; manufacture of composite layers by sintering metal-powder B22F 7/00; arrangements on machine tools for copying or controlling B23Q; covering metals or covering materials with metals, not otherwise provided for C23C; burners F23D)
M	B23K 1/00	Soldering, e.g. brazing, or unsoldering (B23K 3/00 takes precedence; characterised only by the use of special materials or media B23K 35/00; dip or wave soldering in the manufacture of printed circuits H05K 3/34) [1,5,2006.01]
М	B23K 1/14	• specially adapted for soldering seams (making tubes involving operations other than soldering B21C) [1,5,2006.01]
М	B23K 1/20	 Preliminary treatment of work or areas to be soldered, e.g. in respect of a galvanic coating (preparation of surfaces in particular ways, see the relevant classes for the treatments or the materials treated, e.g. C04B, C23C) [1,2006.01]
М	B23K 3/00	Tools, devices , or special appurtenances for soldering, e.g. brazing, or unsoldering, not specially adapted for particular methods (materials used for soldering B23K 35/00) [1,5,2006.01]
М	B23K 3/04	 Heating appliances (soldering lamps or blow-pipes F23D; electric heating in general H05B) [1,2006.01]
М	B23K 3/08	• Auxiliary devices therefor (cleaning pipes or tubes or systems of pipes or tubes, e.g. before soldering, B08B 9/02) [5,2006.01]
М	B23K 5/02	• Seam welding (making tubes involving operations other than welding B21C) [1,2006.01]
М	B23K 5/24	• • Arrangements for supporting torches (not restricted to flame welding B23K 37/02) [1,2006.01]
М	B23K 7/10	 Auxiliary devices, e.g. for guiding or supporting the torch – guiding means applicable to ether metal working machines B23Q) [1,2006.01]
М	B23K 9/00	Arc welding or cutting-(electro-slag welding B23K 25/00; welding transformers H01F
		; welding generators H02K) [1,2006.01]
М	B23K 9/032	• • for three-dimensional [3D] seams [5,2006.01]
М	B23K 9/038	• • using moulding means (not restricted to arc welding B23K 37/06) [5,2006.01]
M	B23K 9/127	• • Means for tracking lines during arc welding or cutting — (copying in general B23Q 35/00) [5,2006.01]
М	B23K 9/24	• Features related to electrodes (form or composition of electrodes B23K 35/00) [1,2006.01]
М	B23K 9/28	• • Supporting devices for electrodes (not restricted to arc welding or cutting B23K 37/02) [1,2006.01]
М	B23K 9/32	• Accessories (earthing connections H01R) [1,2006.01]
M	B23K 11/30	• Features relating to electrodes -(form or composition of electrodes B23K 35/00) [1,2006.01]
М	B23K 11/31	• Electrode holders— (not restricted to resistance welding or severing by resistance heating B23K 37/02) [5,2006.01]
М	B23K 13/06	• characterised by the shielding of the welding zone against influence of the surrounding atmosphere (selection of media B23K 35/38) [5,2006.01]
M	B23K 15/00	Electron-beam welding or cutting (electron- or ion-beam tubes H01J 37/00) [1,2006.01]
L	B23K 15/08	• Removing material, e.g. by cutting, by hole drilling [5,2006.01]
_		2, - 3 - , , ,

M	B23K 25/00	Slag welding, i.e. using a heated layer or mass of powder, slag , or the like in contact with the material to be joined (B23K 23/00 takes precedence; submerged-are welding B23K 9/18) [1,2006.01]
М	B23K 26/20	• Bonding (soldering by means of radiant energy B23K 1/005 ; joining of preformed plastics parts by heating using laser beam B29C 65/16) [7,2006.01,2014.01]
М	B23K 26/30	•••• of three-dimensional [3D] seams [7,2006.01,2014.01]
М	B23K 26/348	•• in combination with arc heating, e.g. TIG [tungsten inert gas [TIG], MIG [metal inert gas
		[MIG] or plasma welding -(laser beam for starting a welding or cutting are B23K 9/067) [2014.01]
M	B23K 28/00	Welding or cutting not covered by groups B23K 5/00-B23K 26/00 (joining workpieces by electrolysis C25D 2/00 ; electrolytic removal of materials C25F) [2,2006.01]
М	B23K 31/00	Processes relevant to this subclass, specially adapted for particular articles or
		purposes, but not covered by any single one of main groups B23K 1/00-B23K 28/00 (
		making tubes or profiled bars involving operations other than soldering or welding B21C 37/04, B21C 37/08) [1,2006.01]
М	B23K 31/02	• relating to soldering or welding - dip or wave soldering in the manufacture of printed
		circuits H05K 3/34) [1,2006.01]
М	B23K 35/04	• • specially designed for use as electrodes - (ignition tips for arc welding or cutting
М	B23K 35/36	B23K 9/26) [1,2006.01]
IVI	D23K 33/30	• • Selection of non-metallic compositions, e.g. coatings —or fluxes (B23K 35/34 takes precedence); Selection of soldering or welding materials, conjoint with selection of non-
		metallic compositions, both selections being of interest (selection of soldering or welding
		materials proper B23K 35/24) [1,2,2006.01]
М	B23K 35/40	 Making wire or rods for soldering or welding -(processes involving a single technical art, see the relevant subclasses, e.g. B05D, B21C) [1,2006.01]
М	B23K 37/00	Auxiliary devices or processes, not specially adapted for a procedure covered by
		only one of the other main groups of this subclass (eye-shields for welders worn on
		the operator's body or carried in the hand A61F 9/00; applicable to metal-working
		machines other than soldering, welding, or flame-cutting machines B23Q; other protective shields F16P 1/06) [1,2006.01,2025.01]
	B23P	,
М	B23P 21/00	Machines for assembling a multiplicity of different parts to compose units, with or
	D201 21/00	without preceding or subsequent working of such parts, e.g. with programme program control [1,2006.01]
	B23Q	
М	B23Q 35/12	• • • involving electrical means (programme program recording for copying purposes in a
		separate apparatus G05, G11) [1,2006.01]
	B24B	
L	B24B 1/04	• subjecting the grinding or polishing tools, the abrading or polishing medium or work to
		vibration, e.g. grinding with ultrasonic frequency (involving oscillating or vibrating containers B24B 31/06; superfinishing surfaces on work, e.g. by means of abrading blocks
		reciprocating with high frequency B24B 35/00) [1,4,2006.01]
	B25J	
М	B25J	Note(s)
		In this subclass, the following term is used with the meaning indicated:
		 "manipulator" covers handling tools, devices, or machines having a gripping or
		work head capable of bodily movement in space and of change of orientation,
		such bodily movement and change of orientation being controlled by means
		remote from the head, e.g. programme program-controlled industrial robots.
M	B25J 9/00	Programme Program-controlled manipulators [1,2006.01]
М	B25J 9/16	• Programme Program controls (total factory control, i.e. centrally controlling a plurality of
		machines, G05B 19/418) [4,2006.01]
	B26D	
L	B26D 5/34	••• scanning being effected by a photosensitive device [1,2006.01]
	B26F	

L	B26F 1/00	Perforating; Punching; Cutting-out; Stamping-out; Apparatus therefor (perforating by laser beam B23K 26/00; subjecting the grinding tools or the abrading medium to vibration, e.g. grinding with ultrasonic frequency, B24B 1/04; perforating by sand-blasting B24C; punching cards or tapes for statistical and record purposes
		G06K 1/00) [1,2006.01]
	B29C	
L	B29C 64/00	Additive manufacturing, i.e. manufacturing of three-dimensional [3D] objects by additive deposition, additive agglomeration or additive layering, e.g. by 3D printing, stereolithography or selective laser sintering [2017.01]
L	B29C 64/147 B29C 65/08	• • • using sheet material, e.g. laminated object manufacturing [LOM] or laminating sheet material precut to local cross sections of the 3D object [2017.01]
L M	B29C 70/22	• • using ultrasonic vibrations [4,2006.01] • • • • oriented in at least two directions forming a two -dimensional [2D] structure [6,2006.01]
M	B29C 70/24	••••• oriented in at least three directions forming a three -dimensional [3D] structure [6,2006.01]
	B29K	
М	B29K 27/18	• • PTFE, i.e. polytetrafluorethene polytetrafluoroethylene [4,2006.01]
М	B29K 227/18	• • PTFE, i.e. polytetrafluoroethene polytetrafluoroethylene [6,2006.01]
М	B29K 427/18	• • PTFE, i.e. polytetrafluoroethene polytetrafluoroethylene [6,2006.01]
М	B29K 627/18	• • PTFE, i.e. polytetrafluoroethene polytetrafluoroethylene [6,2006.01]
	B30B	
М	B30B 15/26	• Programme-Program-control arrangements [1,2006.01]
	B31D	
М	B31D 5/00	Multiple-step processes for making three-dimensional [3D] articles [1,2006.01,2017.01]
L	B33Y	ADDITIVE MANUFACTURING, i.e. MANUFACTURING OF THREE-DIMENSIONAL [3D] OBJECTS BY ADDITIVE DEPOSITION, ADDITIVE AGGLOMERATION OR ADDITIVE LAYERING, e.g. BY 3D PRINTING, STEREOLITHOGRAPHY OR SELECTIVE LASER SINTERING [2015.01]
M	B33Y	 Note(s) [2015.01,2026.01] This subclass is for obligatory secondary classification in the sense of paragraph 107bis of the Guide to the IPC. Therefore, the classification symbols of this subclass are not listed first when assigned to patent documents. Secondary classification symbols may be assigned for either invention information or additional information, as appropriate. This subclass covers additive manufacturing, irrespective of the process or material used. This subclass is intended to enable a comprehensive search of subject matter related to additive manufacturing by combination of classification symbols of this subclass with classification symbols from other subclasses. Therefore, this subclass covers aspects of additive manufacturing (e.g. three-dimensional [3D] printing) that might also be entirely or partially covered elsewhere in the IPC. This subclass is for obligatory supplementary classification of subject matter already classified as such in other classification places, when the subject matter contains an aspect of additive manufacturing. The classification symbols of this subclass are not listed first when assigned to patent documents.
	B41J	
M	B41J 11/44	• • • by devices, e.g. programme program tape or contact wheel, moved in correspondence with movement of paper-feeding devices, e.g. platen rotation [1,2006.01]
L	B41J 19/30	• • • Electromagnetically-operated mechanisms [1,2006.01]
L	B41J 19/50	• • • Electromagnetically-controlled escapements [1,2006.01]
L	B41J 19/92	• • • Electromagnetically-operated mechanisms [1,2006.01]
N /	B41L	Automotic collecting devices with an without accomiding an arrival and will
М	B41L 47/64	 Automatic selecting devices with or without overriding manual control, e.g. with scanning-fingers, with presetting controls operable by push-buttons—or with

programme program control by punched tapes [1,2006.01]

	B44B	
L	B44B 1/00	Artists' machines or apparatus equipped with tools or work holders moving, or able to be controlled, three-dimensionally for making single sculptures or models (copying devices for machine-tool use B23Q 35/00) [1,2006.01]
M M	B44B 1/02 B44B 11/02	 • wherein three-dimensional [3D] copies are made [1,2006.01] • for substantially two-dimensional [2D] carving, engraving, or guilloching [1,2006.01]
	B44F	
М	B44F 7/00	Designs imitating three-dimensional [3D] effects [1,2006.01]
M	B60D	VEHICLE CONNECTIONS (components of brake systems B60T 17/04)
M	B60D 1/00	Traction couplings; Hitches; Draw-gear; Towing devices (devices specially adapted for connection between tractors and agricultural machines or implements A01B 59/00; fifth-wheel traction couplings B62D B62D 53/08) [1,2,2006.01]
M	B60D 1/167	• • consisting of articulated or rigidly assembled bars or tubes forming a V-, Y- or U-shaped draw gear (B60D 1/173 takes precedence) [5,2006.01]
M M	B60D 1/52 B60D 1/54	 removably mounted (B60D 1/56 takes precedence) [5,2006.01] collapsible or retractable when not in use, e.g. hide-away hitches (B60D 1/52 takes precedence) [5,2006.01]
M	B60D 3/00	Fittings to facilitate pushing (B60D 1/00 takes precedence; vehicle bumpers B60R 19/02; steering arrangements for backing a normally-drawn trailer B62D 13/06) [1,2006.01]
	B60F	
M	B60F 3/00	Amphibious vehicles, i.e. vehicles capable of travelling both on land and on water; Land vehicles capable of travelling under water (buoyant wheels B60B) [1,2006.01]
M	B60F 5/00	Other vehicles capable of travelling in or on different media (vehicles having alternatively-usable runners and wheels B62B 13/18; flying-boats or seaplanes B64C 35/00) [1,2006.01]
M	B60F 5/02	• convertible into aircraft (convertible aircraft B64C 37/00; convertible unmanned aerial vehicle [UAV]-type aircraft, e.g. convertible into land vehicles, B64U 10/70) [1,2006.01]
	B60H	, , , , , , , , , , , , , , , , , , , ,
M	B60H 1/00	Heating, cooling or ventilating devices (heating, cooling or ventilating devices providing other air treatment, the other treatment being relevant, B60H 3/00; ventilating solely by opening windows, doors, roof parts, or the like B60J; heating or ventilating devices for vehicle seats B60N 2/56; vehicle window or windscreen cleaners using air, e.g. defrosters, B60S 1/54) [1,4,2006.01]
М	B60H 1/14	• • • otherwise other than from cooling liquid of the plant [1,2006.01]
М	B60H 1/22	• the heat <i>source</i> being derived otherwise <i>other</i> than from the propulsion plant [1,2006.01]
M	B60H 1/24	• Devices purely for ventilating or Ventilating devices where the heating or cooling is irrelevant (nozzles —or air-diffusers B60H 1/34) [1,4,2006.01]
M	B60H 1/32	 Cooling devices (vehicles adapted to transport refrigerated goods B60P 3/20) [4,2006.01]
	B60L	
M	B60L 15/22	• • with sequential operation of interdependent switches, e.g. relays, contactors - programme-or program drum [1,2006.01]
M	B61H	BRAKES OR OTHER RETARDING DEVICES SPECIALLY ADAPTED FOR RAIL VEHICLES; ARRANGEMENT OR DISPOSITION THEREOF IN RAIL VEHICLES (electrodynamic braking of vehicles B60L, in general H02K; arrangements in rail vehicles for adjusting wheel-braking force to meet varying vehicular or permanent-way conditions B60T 8/00; transmitting braking action from initiating means to ultimate brake actuator with power assistance or drive, brake systems incorporating such transmitting means, e.g. air-pressure brake systems, B60T 13/00; construction, arrangement or operation of valves incorporated in power brake systems B60T 15/00; component parts, details or accessories of brake systems B60T 17/00; brakes in general F16D)
M	B61H 1/00	Applications or arrangements of brakes with a braking member or members co- operating with the periphery of the wheel rim, a drum , or the like (self-applying brakes B61H 11/12; combinations of different types of brakes B61H 11/14; wheels
		B60B) [1,2006.01]

M	B61H 3/00	Applications or arrangements of brakes with an outwardly-movable braking member or members co-operating with the inner surface of a drum or the like (self-applying brakes B61H 11/02; combinations of different types of brakes B61H 11/14) [1,2006.01]
М	B61H 5/00	Applications or arrangements of brakes with substantially - radial braking surfaces pressed together in axial direction, e.g. disc brakes (self-applying brakes B61H 11/02; combinations of different types of brakes B61H 11/14) [1,2006.01]
L	B61H 11/10	• • Aerodynamic brakes with control flaps, e.g. spoilers, attached to the vehicles [1,2006.01]
M	B61H 13/00	Actuating rail-vehicle brakes (self-applying brakes B61H 11/02; wear-compensating mechanisms B61H 15/00) [1,2006.01]
M	B61H 13/06	 Actuating or influencing the brakes by backward —pressure of buffers or coupling gear, e.g buffer brakes [1,2006.01]
M M	B61H 13/20 B61H 13/38	 Transmitting mechanisms (wear compensating mechanisms B61H 15/00) [1,2006.01] Suspension of transmitting mechanisms (B61H 13/36 takes precedence) [1,2006.01]
М	B61K	AUXILIARY EQUIPMENT SPECIALLY ADAPTED FOR RAILWAYS, NOT OTHERWISE PROVIDED FOR (energy-storing brakes B61H; protection of permanent way against weather influences E01B; rail cleaning, snow ploughs E01H)
M	B61K 5/00	Apparatus for placing vehicles on the track; Derailers; Lifting or lowering rail vehicle axles or wheels (hoisting apparatus B66) [1,2006.01]
M	B61K 7/00	Railway stops fixed to permanent way; Track brakes or retarding apparatus fixed to permanent way; Sand tracks or the like (skids, wedges, vehicle-mounted scotch blocks B61H; operating mechanisms for track-mounted scotch-blocks B61L) [1,2006.01]
М	B61K 7/10	• • electrodynamic (on vehicles B60L) [1,2006.01]
М	B61K 9/08	 Measuring installations for surveying permanent way (applications of measuring apparatus or devices for track building purposes E01B 35/00; measuring techniques G01) [1,2006.01]
М	B61K 9/12	 Measuring or surveying wheel-rims (measuring techniques G01) [1,2006.01]
M	B61K 11/00	Serving peculiar to locomotives, e.g. filling with, or emptying of, water, sand, or the like at the depots-(lifting or lowering axles or wheels B61K 5/00; filling stations for steam or pneumatic accumulator locomotives B61C 8/00; water or fuel supply fittings on locomotives B61C 17/02; refuelling locomotives with solid fuels B65G 67/18; washing or cleaning boilers F28G) [1,2006.01]
M	B61K 13/00	Other auxiliaries or accessories for railways (safety belts or body harnesses A62B 35/00) [1,2006.01]
	B62D	
L	B62D 15/02	Steering position indicators [1,4,2006.01]
	B63B	
M	B63B 32/59	 Boards characterised by their manufacturing process, e.g. meulded-moulding or 3D printed three-dimensional [3D] printing [2020.01]
	B64D	
М	B64D 1/00	Dropping, ejecting, releasing or receiving articles, liquids, or the like, in flight (weapon sights or aiming F41G; refuelling during flight B64D 39/00; launching apparatus for projecting projectiles or missiles F41F 1/00, F41F 7/00; rocket or torpedo launchers F41F 3/00; weapon sights or aiming F41G) [1,2006.01]
	B65B	
М	B65B 43/08	• Forming three-dimensional [3D] containers from sheet material [1,2006.01]
L	B65B 51/22 B65C	•• by friction or ultrasonic or high-frequency electrical means [1,2006.01]
NΛ	B65C 3/26	• Affiving labels to man visid containing a manufacture was do of malurath and malurathy d
M		 Affixing labels to non-rigid containers, e.g. bottles made of polyethene polyethylene, boxes to be inflated by internal air pressure prior to labelling [1,2006.01]
	B65G	
М	B65G 57/20	••• three-dimensional [3D], e.g. cubiform —or cylindrical [1,2006.01]
	B66C	
М	B66C 13/48	• • Automatic control of crane drives for producing a single or repeated working cycle;
		Programme Program control [1,2006.01]

M B81

Note(s) [7]

- 1. This class <u>covers</u> microstructural devices or systems, including at least one essential element or formation characterised by its very small size, typically within the range of 10⁻⁴ to 10⁻⁷ meters, i.e. its significant features can not, in at least one dimension [1D], be completely discerned without the use of an optical microscope.
- 2. In this class, the following expressions are used with the meaning indicated:
 - "microstructural devices" covers:
 - i. micromechanical devices comprising movable, flexible or deformable elements; and
 - ii. three-dimensional [3D] structures without movable, flexible or deformable elements, comprising microformations designed to accomplish an essential structural function for interacting with their environment, as opposed to purely electronic or chemical functions, regardless of whether the structures are combined with microelectronic devices or formed from specific materials;
 - "microstructural systems" covers:
 - i. systems of cooperating microstructural devices; and
 - ii. microelectro-mechanical or microopto-mechanical systems, which combine on a common substrate the specific features of microstructural devices and electrical or optical components, e.g. for controlling, analysing or signalling the functioning of microstructural devices.

B81B

M B81B

Note(s) [7]

- 1. This subclass does not cover:
 - purely electrical or electronic devices <u>per se</u> which are covered by section H, e.g. <u>subclass H01L or class H10</u>;
 - purely optical devices <u>per se</u> which are covered by subclasses G02B or G02F;
 - essentially two-dimensional [2D] structures, e.g. layered products which are covered by subclass B32B;
 - chemical or biological structures per se which are covered by section C;
 - structures in atomic scale produced by manipulation of single atoms or molecules, which are covered by group B82B 1/00.
- 2. Devices or systems classified in this subclass are also classified in appropriate subclasses providing for their structural or functional features, if such features are of interest.

B81C

M B81C

Note(s) [7]

This subclass does not cover:

- processes or apparatus for the manufacture or treatment of purely electrical or electronic devices, which are covered by section H, e.g. group H01L 21/00 subclass H10P;
- processes or apparatus involving the manipulation of single atoms or molecules, which are covered by group B82B 3/00.

D B82

Note(s) [2011.01]

(deleted)

M B82B

NANOSTRUCTURES FORMED BY MANIPULATION OF INDIVIDUAL ATOMS —OR MOLECULES, OR LIMITED COLLECTIONS OF ATOMS OR MOLECULES AS DISCRETE UNITS; MANUFACTURE OR TREATMENT THEREOF [7]

M B82B

Note(s) [7,2011.01]

- 1. This subclass <u>does not cover</u> chemical or biological nanostructures per se, provided for elsewhere, e.g., in classes C08 or C12.
- 2. Attention is drawn to the Note following the title of class B82, which defines the meaning of the terms "nanosize", "nanoscale" and "nanostructure" in this subclass.
- Subject matter classified in this subclass is further classified in subclass B82Y, in order to enable a comprehensive search of nanostructure technology using classification symbols of *subclass* B82Y in combination with classification symbols of *subclass* B82B.
- 4. Nanostructures having specialised features or functions are further classified in appropriate places in other subclasses that provide for those features or functions, e.g. in *subclass* G01Q , or in groups G02F 1/017 , or H10D 30/43.

L B82B 1/00 Nanostructures formed by manipulation of individual atoms or molecules, or limited collections of atoms or molecules as discrete units [7,2006.01]

L B82B 3/00 Manufacture or treatment of nanostructures by manipulation of individual atoms or molecules, or limited collections of atoms or molecules as discrete units [7,2006.01]

B82Y

Note(s) [2011.01,2026.01]

- 1. This subclass is for secondary classification in the sense of paragraph 107bis of the Guide to the IPC. Therefore, the classification symbols of this subclass are not listed first when assigned to patent documents. Secondary classification symbols may be assigned for either invention information or additional information, as appropriate.
- 2. This subclass covers applications and aspects of nanostructures which are produced by any method, and is not restricted to those that are formed by manipulation of individual atoms or molecules.
- 3. Attention is drawn to the Note following the title of class B82, which defines the meaning of the terms "nanosize", "nanoscale" and "nanostructure" in this subclass.
- 4. This subclass is intended to enable a comprehensive search of subject matter related to nanostructures by combination of classification symbols of this subclass with classification symbols from other subclasses. Therefore, this subclass covers aspects of nanostructures that might also be entirely or partially covered elsewhere in the IPC.
- 5. This subclass is for obligatory supplementary classification of subject matter already classified as such in other classification places, e.g.:

B82B Nanostructures formed by individual manipulation of atoms, molecules, or limited collections of atoms or molecules as discrete units; manufacture or treatment thereof

A61K 9/51 Nanocapsules for medicinal preparations

B05D 1/20 Langmuir-Blodgett films

C01B 32/15Carbon nanostructures, e.g. bucky-balls, nanotubes, nanocoils, nanodoughnuts or nanoonions

G01Q Scanning probe techniques

G02F 1/017 Optical quantum wells or boxes

H01F 10/32 Nanostructured thin magnetic films

H01F 41/30 Molecular beam epitaxy [MBE]

H10D 30/43Quantum wire FETs

6. The classification symbols of this subclass are not listed first when assigned to patent documents.

	C01B	
С	C01B 3/00	Hydrogen; Gaseous mixtures containing hydrogen; Separation of hydrogen from mixtures containing it; Purification of hydrogen; Reversible storage of hydrogen (production of water-gas or synthesis gas from solid carbonaceous material C10J) [3,2006.01,2026.01]
N	C01B 3/0005	Note(s) [2026.01] In groups C01B 3/0005-C01B 3/0084, the last place priority rule is not applied.
Ν	C01B 3/0005	• Reversible storage of hydrogen, e.g. by hydrogen getters or electrodes [2026.01]

N COIB 3/0015			
Compounds; Solutions thereot [2026.01] N C018 3/0021 N C018 3/0026 N C018 3/0026 N C018 3/0026 N C018 3/0036 N C018 3/0036 N C018 3/0036 N C018 3/0037 N C018 3/0047 N C018 3/0047 N C018 3/0079 N C018 3/0089 N C018 3/0089 N C018 3/0089 N C018 3/0089 N C018 3/0094 N C018 3/0095 N C018 3/0094 N C018 3/0095 N C018 3/0094 N C018 3/0095 N C018 3/0096 N C018 3/00	Ν	C01B 3/001	• • characterised by the uptaking media; Treatment thereof [2026.01]
N C01B 3/0018 ***Inorganic elements or compounds, e.g. oxides, nitrides, borohydrides or zeolites; Southons thereof [2026.01] N C01B 3/0026 ***Coll 3/0027	Ν	C01B 3/0015	
N C018 3/0026 N C018 3/0031 N C018 3/0031 N C018 3/0031 N C018 3/0032 N C018 3/0042 N C018 3/0042 N C018 3/0047 N C018 3/0078 N C018 3/0078 N C018 3/0078 N C018 3/0078 N C018 3/0084 N C018 3/0084 N C018 3/0084 N C018 3/0089 N C018 3/0094 N C018 3/0095 N C018 3/0094 N C018 3/0095 N C018 3/0005 N C018 3/0095 N C018 3/0095 N C018 3/0005 N	N	C01B 3/0018	• • • Inorganic elements or compounds, e.g. oxides, nitrides, borohydrides or zeolites;
N C018 3/0036	N	C01B 3/0021	
N C018 3/0036			
N C018 3/0042			
N C01B 3/0042			
 N C01B 3/0073 N C01B 3/0078 N C01B 3/0078 N C01B 3/0084 N C01B 3/0084 N C01B 3/0084 N C01B 3/0089 Ortho-para conversion [2026.01] N C01B 3/0089 Production of hydrogen [2026.01] Proparation of purification of gas mixtures for ammonia synthesis [2026.01] Proparation or purification of gas mixtures for ammonia synthesis [2026.01] Proparation or purification of gas mixtures for ammonia (reversible storage of hydrogen C01B 3/048) Preparation of inorganic compounds — gammonia (reversible storage of hydrogen C01B 3/048) C01B 3/045 Decomposition of water (by electrolysis of water C25B 1/04) [2026.01] Decomposition of mammonia [2026.01] Decomposition of mammonia [2026.01] Decomposition of water with inorganic reducing agents — gammonia — water acids, bases, ammonia, with inorganic reducing agents — gammonia — water acids, bases, ammonia, with inorganic reducing agents — gammonia — water acids pages — gammonia — gammonia			
N C018 3/0073			
N C01B 3/0084 N C01B 3/0084 N C01B 3/0089 N C01B 3/008 N C01B 3			
solid compounds or structurally heterogeneous solid compounds [2026.01] N C01B 3/0084			
particles [2026.01] N C01B 3/0094 C C01B 3/02 Production of hydrogen—er.; Production of gaseous mixtures containing hydrogen [3,2006.01,2026.01] Production of hydrogen—er.; Production of gaseous mixtures containing hydrogen [3,2006.01,2026.01] Production of hydrogen—er.; Production of gaseous mixtures containing hydrogen [3,2006.01,2026.01] Production of mixtures for ammonia synthesis [2026.01] Production of inorganic compounds—e.g. ammonia (reversible storage of hydrogen C01B 3/001B) [3,2006.01,2026.01] N C01B 3/04 N C01B 3/04 N C01B 3/06 N C01B 3/07 Procecumposition of ammonia [2026.01] N C01B 3/06 N C01B 3/07 N C01B 3/08 N C01B 3/08 N C01B 3/08 N C01B 3/08 N C01B 3/30 N C01B 3/32 N C01B 3/32 N C01B 3/36 N C01B 3/36 N C01B 3/36 N C01B 3/38 N C01B 3/36 N C01B			solid compounds or structurally heterogeneous solid compounds [2026.01]
N C01B 3/094 C C01B 3/02 C C01B 3/02 Production of hydrogen er.; Production of gaseous mixtures containing hydrogen [3,2006.01,2026.01] N C01B 3/025 C C01B 3/04 Preparation or purification of gas mixtures for ammonia synthesis [2026.01] N C01B 3/042 Preparation or purification of gas mixtures for ammonia synthesis [2026.01] N C01B 3/042 Preparation or purification of gas mixtures for ammonia synthesis [2026.01] N C01B 3/042 Preparation or purification of gas mixtures for ammonia (reversible storage of hydrogen C01B 3/01B) [3,2006.01,2026.01] Preparation of water (by electrolysis of water C25B 1/04) [2026.01] Preparation of water (by electrolysis of water C25B 1/04) [2026.01] Preparation of morpanic compounds containing electro-positively bound hydrogen peg. water, acids, bases, ammonia, with inorganic reducing agents (by electrolysis of water C25B 1/04) [2026.01] Preparation of inorganic compounds containing electro-positively bound hydrogen peg. water, acids, bases, ammonia, with inorganic reducing agents (by electrolysis of water C25B 1/04) [2026.01] Preparation of inorganic compounds containing electro-positively bound hydrogen peg. water, acids, bases, ammonia, with inorganic reducing agents (by electrolysis of water C25B 1/04) [2026.01] Preparation of water with metal oxides [2026.01] Preparation of water vapour with metals [3,2006.01,2026.01] Preparation of water vapour with metals [3,2006	N	C01B 3/0084	
C C01B 3/02 Production of hydrogen er; Production of gaseous mixtures containing hydrogen [3,2006.01,2026.01] N C01B 3/025 Physical production of the production of gase mixtures for ammonia synthesis [2026.01] Proparation or purification of gas mixtures for ammonia synthesis [2026.01] Proparation or purification of gaseous mixtures for ammonia synthesis [2026.01] C C01B 3/042 Physical gaseous gaseous gaseous gaseous gaseous or hydrogen C01B 3/0018] [3,2006.01,2026.01] C C01B 3/045 Physical gaseous g	Ν	C01B 3/0089	Ortho-para conversion [2026.01]
[3,2006.01,2026.01] N C01B 3/04	Ν	C01B 3/0094	Atomic hydrogen [2026.01]
N C01B 3/025 C C01B 3/04 V preparation or purification of gas mixtures for ammonia synthesis [2026.01] V by decomposition of inorganic compounds e.g. ammonia (reversible storage of hydrogen C01B 3/048) [3,206.01,2026.01] V C01B 3/046 V C01B 3/047 V C01B 3/047 V C01B 3/047 V Decomposition of water (by electrolysis of water C25B 1/04) [2026.01] V C01B 3/06 V Decomposition of ammonia [2026.01] V Decomposition of inorganic compounds containing electro-positively bound hydrogen e.g. water, acids, bases, ammonia, with inorganic reducing agents (by electrolysis of water C25B 1/04) [3,2006.01,2026.01] V C01B 3/065 V Dy reaction of water with metal oxides [2026.01] V C01B 3/065 V Dy reaction of inorganic compounds with hydrides [2026.01] V Dy reaction of inorganic compounds with metals [3,2006.01,2026.01] V Dy reaction of inorganic compounds with metals [3,2006.01,2026.01] V Dy reaction of inorganic compounds with metals [3,2006.01,2026.01] V C01B 3/03 V Dy reaction of inorganic compounds with metals [3,2006.01,2026.01] V C01B 3/32 V Dy reaction of gaseous or liquid organic compounds with gasifying agents, e.g. water, carbon dioxide pro air [3,2006.01,2026.01] V C01B 3/32 V Dy reaction of gaseous or liquid organic compounds other than hydrocarbons with gasifying agents [2026.01] V C01B 3/36 V C01B 3/36 V C01B 3/38 V C01B 3/3	С	C01B 3/02	
hydrogen Co1B 3/0018 [3,2006.01,2026.01] N Co1B 3/046	Ν	C01B 3/025	
N C01B 3/042 N C01B 3/046 N C01B 3/047 C C01B 3/06 N C01B 3/06 N C01B 3/06 N C01B 3/06 D C01B 3/06 N C01B 3/06 N C01B 3/10 N C01B 3/28 N C01B 3/30 (transferred to C01B 3/28) N C01B 3/32 N C01B 3/32 N C01B 3/36 C C01B 3/36 N C01B 3/38 N C0	С	C01B 3/04	• • by decomposition of inorganic compounds , e.g. ammonia (reversible storage of
N C01B 3/046 N C01B 3/047 C C01B 3/06 Vision packets and properties of water compounds containing electro-positively bound hydrogen packets and partial packets and packets an	Ν	C01B 3/042	
N C01B 3/047 C C01B 3/06 ***Decomposition of ammonia [2026.01] ***Decomposition of ammonia [2026.01] ***Decomposition of inorganic compounds containing electro-positively bound hydrogen → e.g. water, acids, bases, ammonia, with inorganic reducing agents ← (by electrolysis of water €25B 1/04 → [3,2006.01,2026.01] N C01B 3/061 ***N C01B 3/065 ***Coll B 3/08 ***Decomposition of water with metal oxides [2026.01] ***Coll B 3/08 ***Decomposition of water with metal oxides [2026.01] ***Decomposition of water with metal oxides [2026.01] ***Coll B 3/08 ***Decomposition of inorganic compounds with hydrides [2026.01] ***Decomposition of inorganic compounds with metals [3,2006.01,2026.01] ***Decomposition of inorganic compounds with hydrides [2026.01] ***Decomposition of inorganic compounds with metals [3,2006.01,2026.01] ***Decomposition of inorganic compounds with hydrides [2026.01] ***Decomposition of inorganic compoun			
C C01B 3/06 * by reaction of inorganic compounds containing electro-positively bound hydrogene.g. water, acids, bases, ammonia, with inorganic reducing agents _{ by electrolycic-of-water			
water, acids, bases, ammonia, with inorganic reducing agents (by electrolysis of water C25B +/04) [3,2006.01,2026.01] N C01B 3/061			·
N C01B 3/061 N C01B 3/065 C C01B 3/08 C C01B 3/08 C C01B 3/08 C C01B 3/10 N C01B 3/10 C C01B 3/10 N C01B 3/10 N C01B 3/10 N C01B 3/10 C C01B 3/10 C C01B 3/10 C C01B 3/10 C C01B 3/28 C C01B 3/28 C C01B 3/30 C C01B 3/30 C C01B 3/30 C C01B 3/32 C C01B 3/36 C C01B 3/38 C C01B 3/39 C C01B 3/50 C C0			water, acids, bases, ammonia, with inorganic reducing agents (by electrolysis of water
N C01B 3/065	N	C01B 3/061	, - · · · · -
C C01B 3/08			
C C01B 3/10 N C01B 3/103 ··· by reaction of water vapour with metals [3,2006.01,2026.01] N C01B 3/103 ··· the hydrogen being generated from the water as a result of cycles of reactions, e.g. sulfur-iodine cycle [2026.01] T C01B 3/28 ··· using moving solid particles, e.g. fluidised bed technique [3,2006.01,2026.01] C C01B 3/30 C C01B 3/32 ·· by reaction of gaseous or liquid organic compounds with gasifying agents, e.g. water, carbon dioxide - or air [3,2006.01,2026.01] N C01B 3/323 ··· Catalytic reaction of gaseous or liquid organic compounds other than hydrocarbons with gasifying agents [2026.01] N C01B 3/323 ··· of alcohols, e.g. methanol or ethanol [2026.01] N C01B 3/36 ··· using oxygen-er; using mixtures containing oxygen as gasifying agents [3,2006.01,2026.01] N C01B 3/38 ··· characterised by the burner [2026.01] C C01B 3/38 ··· using catalysts [3,2006.01,2026.01] N C01B 3/382 ··· processes with two or more reaction steps, of which at least one is catalytic, e.g. steam reforming and partial oxidation [2026.01] N C01B 3/384 ··· with external heating of the catalyst [2026.01] C C01B 3/42 C C01B 3/44 C C01B 3/50 ··· using moving solid particles, e.g. fluidised bed technique [3,2006.01,2026.01] (transferred to C01B 3/42) ··· using moving solid particles, e.g. fluidised bed technique [3,2006.01,2026.01]			
 N C01B 3/103 ∴ the hydrogen being generated from the water as a result of cycles of reactions, e.g. sulfur-iodine cycle [2026.01] T C01B 3/28 ∴ using moving solid particles, e.g. fluidised bed technique [3,2006.01,2026.01] C C01B 3/30 (transferred to C01B 3/28) ∴ by reaction of gaseous or liquid organic compounds with gasifying agents, e.g. water, carbon dioxide ¬or air [3,2006.01,2026.01] N C01B 3/323 ∴ Catalytic reaction of gaseous or liquid organic compounds other than hydrocarbons with gasifying agents [2026.01] N C01B 3/326 ∴ of alcohols, e.g. methanol or ethanol [2026.01] ∴ characterised by the catalysts [2026.01] ∴ of alcohols, e.g. methanol or ethanol [2026.01]<!--</td--><td></td><td></td><td></td>			
sulfur-iodine cycle [2026.01] T C01B 3/28 C01B 3/30 C1 (transferred to C01B 3/28) C1 C01B 3/32 C2 coll 3/32 C3 coll 3/32 C4 coll 3/32 C5 coll 3/32 C5 coll 3/32 C5 coll 3/32 C6 coll 3/32 C6 coll 3/32 C6 coll 3/32 C7 coll 3/32 C7 coll 3/32 C7 coll 3/323 C7 coll 3/323 C8 coll 3/323 C9 coll 3/326 C9 coll 3/327 C9 coll 3/328 C9 coll 3/42 C9 coll 3/340 C9 coll 3/340 C9 coll 3/342 C9 coll 3/350 C9 coll 3/42 C9 coll 3/42 C9 coll 3/350 C9 coll 3/42 C9 coll 3/42 C9 coll 3/350 C9 coll 3/42			
D C01B 3/30 (transferred to C01B 3/28) C C01B 3/32 •• by reaction of gaseous or liquid organic compounds with gasifying agents, e.g. water, carbon dioxide—or air [3,2006.01,2026.01] N C01B 3/323 ••• Catalytic reaction of gaseous or liquid organic compounds other than hydrocarbons with gasifying agents [2026.01] N C01B 3/3231 •••• of alcohols, e.g. methanol or ethanol [2026.01] N C01B 3/326 •••• characterised by the catalysts [2026.01] C C01B 3/36 •••• characterised by the burner [2026.01] N C01B 3/363 •••• characterised by the burner [2026.01] C C01B 3/38 •••• characterised by the burner [2026.01] N C01B 3/382 •••• characterised by the burner reaction steps, of which at least one is catalytic, e.g. steam reforming and partial oxidation [2026.01] N C01B 3/384 •••• with external heating of the catalyst [2026.01] N C01B 3/386 •••• Catalytic partial combustion [2026.01] T C01B 3/42 •••• using moving solid particles, e.g. fluidised bed technique [3,2006.01,2026.01] C C01B 3/40 (transferred to C01B 3/42) • Separation of hydrogen or hydrogen containing gases from gaseous mixtures, e.g.			sulfur-iodine cycle [2026.01]
C C01B 3/32			
carbon dioxide—or air [3,2006.01,2026.01] N C01B 3/323			· ·
gasifying agents [2026.01] N C01B 3/3231	С	C01B 3/32	
 N C01B 3/326 characterised by the catalysts [2026.01] C C01B 3/36 using oxygen-or; using mixtures containing oxygen as gasifying agents [3,2006.01,2026.01] N C01B 3/363 characterised by the burner [2026.01] C C01B 3/38 using catalysts [3,2006.01,2026.01] N C01B 3/382 Processes with two or more reaction steps, of which at least one is catalytic, e.g. steam reforming and partial oxidation [2026.01] N C01B 3/384 with external heating of the catalyst [2026.01] N C01B 3/386 Catalytic partial combustion [2026.01] T C01B 3/42 using moving solid particles, e.g. fluidised bed technique [3,2006.01,2026.01] D C01B 3/44 (transferred to C01B 3/42) Separation of hydrogen or hydrogen containing gases from gaseous mixtures, e.g. 	Ν	C01B 3/323	
C C01B 3/36 "using oxygen-or; using mixtures containing oxygen as gasifying agents [3,2006.01,2026.01] N C01B 3/363 C C01B 3/38 N C01B 3/382 Processes with two or more reaction steps, of which at least one is catalytic, e.g. steam reforming and partial oxidation [2026.01] N C01B 3/384 N C01B 3/386 C C01B 3/42 D C01B 3/44 C C01B 3/50 C C01B 3/50 Using oxygen-or; using mixtures containing oxygen as gasifying agents [3,2006.01,2026.01] ***Characterised by the burner [2026.01] ***Wish external partial oxidation [2026.01] ***With external heating of the catalyst [2026.01] ***Catalytic partial combustion [2026.01] ***Using moving solid particles, e.g. fluidised bed technique [3,2006.01,2026.01] ***Using moving solid particles, e.g. fluidised bed technique [3,2006.01,2026.01] ***Using moving solid particles, e.g. fluidised bed technique [3,2006.01,2026.01] ***Using moving solid particles, e.g. fluidised bed technique [3,2006.01,2026.01] ***Using moving solid particles, e.g. fluidised bed technique [3,2006.01,2026.01] ***Using moving solid particles, e.g. fluidised bed technique [3,2006.01,2026.01] ***Using moving solid particles, e.g. fluidised bed technique [3,2006.01,2026.01] ***Using moving solid particles, e.g. fluidised bed technique [3,2006.01,2026.01] ***Using moving solid particles, e.g. fluidised bed technique [3,2006.01,2026.01] ***Using moving solid particles, e.g. fluidised bed technique [3,2006.01,2026.01]	Ν	C01B 3/3231	•••• of alcohols, e.g. methanol or ethanol [2026.01]
[3,2006.01,2026.01] N C01B 3/363 ···· characterised by the burner [2026.01] C C01B 3/38 ···· using catalysts [3,2006.01,2026.01] N C01B 3/382 ···· Processes with two or more reaction steps, of which at least one is catalytic, e.g. steam reforming and partial oxidation [2026.01] N C01B 3/384 ···· with external heating of the catalyst [2026.01] N C01B 3/386 ···· Catalytic partial combustion [2026.01] T C01B 3/42 ···· using moving solid particles, e.g. fluidised bed technique [3,2006.01,2026.01] D C01B 3/44 (transferred to C01B 3/42) C C01B 3/50 ·Separation of hydrogen or hydrogen containing gases from gaseous mixtures, e.g.	Ν	C01B 3/326	•••• characterised by the catalysts [2026.01]
 N C01B 3/363 C C01B 3/38 Using catalysts [3,2006.01,2026.01] Processes with two or more reaction steps, of which at least one is catalytic, e.g. steam reforming and partial oxidation [2026.01] W C01B 3/384 W C01B 3/386 W C01B 3/42 C C01B 3/44 C C01B 3/50 	С	C01B 3/36	
C C01B 3/38 N C01B 3/382 Processes with two or more reaction steps, of which at least one is catalytic, e.g. steam reforming and partial oxidation [2026.01] N C01B 3/384 N C01B 3/386 T C01B 3/42 D C01B 3/44 C C01B 3/50 Processes with two or more reaction steps, of which at least one is catalytic, e.g. steam reforming and partial oxidation [2026.01] *** with external heating of the catalyst [2026.01] *** Catalytic partial combustion [2026.01] *** using moving solid particles, e.g. fluidised bed technique [3,2006.01,2026.01] (transferred to C01B 3/42) Separation of hydrogen or hydrogen containing gases from gaseous mixtures, e.g.	Ν	C01B 3/363	
N C01B 3/382 ••••• Processes with two or more reaction steps, of which at least one is catalytic, e.g. steam reforming and partial oxidation [2026.01] N C01B 3/384 ••••• with external heating of the catalyst [2026.01] T C01B 3/42 D C01B 3/44 C C01B 3/50 ••••• Processes with two or more reaction steps, of which at least one is catalytic, e.g. steam reforming and partial oxidation [2026.01] ••••• with external heating of the catalyst [2026.01] ••••• Catalytic partial combustion [2026.01] ••••• using moving solid particles, e.g. fluidised bed technique [3,2006.01,2026.01] (transferred to C01B 3/42) • Separation of hydrogen or hydrogen containing gases from gaseous mixtures, e.g.			
steam reforming and partial oxidation [2026.01] N C01B 3/384			
N C01B 3/386 T C01B 3/42 D C01B 3/44 C C01B 3/50 •••• Catalytic partial combustion [2026.01] •••• Using moving solid particles, e.g. fluidised bed technique [3,2006.01,2026.01] (transferred to C01B 3/42) • Separation of hydrogen or hydrogen containing gases from gaseous mixtures, e.g.			steam reforming and partial oxidation [2026.01]
 C01B 3/42 Using moving solid particles, e.g. fluidised bed technique [3,2006.01,2026.01] C01B 3/44 C01B 3/50 Separation of hydrogen or hydrogen containing gases from gaseous mixtures, e.g. 			
D C01B 3/44 (transferred to C01B 3/42) C C01B 3/50 • Separation of hydrogen or hydrogen containing gases from gaseous mixtures, e.g.			
C C01B 3/50 • Separation of hydrogen or hydrogen containing gases from gaseous mixtures, e.g.			
			,
	C	C01B 3/50	

Compilation of amendments between 2025.01 and 2026.01 IPC • • by diffusion [2026.01] Ν C01B 3/501 Ν C01B 3/503 • • • characterised by membranes [2026.01] Ν C01B 3/505 • • • • Membranes containing palladium [2026.01] Ν C01B 3/506 • • at low temperatures [2026.01] • • by using hydrogen storage media (reversible storage of hydrogen C01B 3/0005) Ν C01B 3/508 [2026.01] M C01B 21/02 Preparation of nitrogen (by decomposition of ammonia CO1B 3/04 CO1B 3/047) [1,2006.01] C01B 39/00 M Note(s) [6] In this group, the following term is used with the meaning indicated: "zeolites" means: i. crystalline aluminosilicates with base-exchange and molecular sieve properties, having three-dimensional [3D], microporous lattice framework structure of tetrahedral oxide units; ii. compounds isomorphous to those of the former category, wherein the aluminium or silicon atoms in the framework are partly or wholly replaced by atoms of other elements, e.g. by gallium, germanium, phosphorus or boron. C01C C01C 1/04 M • • Preparation of ammonia by synthesis (preparation or purification of gas mixtures for ammonia synthesis CO1B 3/02 CO1B 3/025) [1,2006.01] C₀₂F C02F 1/36 • • ultrasonic vibrations [3,2006.01,2023.01] L C02F 11/131 • • • using electromagnetic or ultrasonic waves [2019.01] • • by treatment with electric, magnetic or electromagnetic fields; by treatment with ultrasonic C02F 11/15 waves (for the purpose of heating C02F 11/131) [2019.01] C03C C03C 4/04 • for photosensitive glass [4,2006.01] **C07C** C07C 11/04 •• Ethene [1,2006.01] C07C 21/10 M • • • Trichloro-ethylene Trichloroethene [1,2006.01] C07C 21/12 M • • • Tetrachloro-ethylene Tetrachloroethene [1.2006.01] L C07C 21/185 • • • Tetrafluoroethene [5,2006.01] **C07K** Ν C07K 16/00 Note(s) [2026.01] In this main group, where appropriate, after the virus or bacteria terminology, the indication of the order (O), family (F) or genus (G) is given in parentheses. М C07K 16/00 Immunoglobulins [IG], e.g. monoclonal or polyclonal antibodies [6,2006.01] CC07K 16/08 • against material from viruses [6,2006.01,2026.01] C07K 16/081 • • DNA viruses [2026.01] Ν Ν C07K 16/082 • • • Hepadnaviridae (F), e.g. hepatitis B virus [2026.01] Ν C07K 16/084 • • • Papillomaviridae (F); Polyomaviridae (F), e.g. SV40, BK virus or JC virus [2026.01] Ν C07K 16/085 • • Orthoherpesviridae (F), e.g. pseudorabies virus or Epstein-Barr virus [2026.01] Ν C07K 16/087 •••• Herpes simplex virus [2026.01] C C07K 16/10 • • from RNA viruses [6,2006.01,2026.01] • • • Coronaviridae (F) [2026.01] Ν C07K 16/102 Ν C07K 16/104 • • • • Severe acute respiratory syndrome coronavirus 2 [SARS-CoV-2] [2026.01] C07K 16/106 • • • Picornaviridae (F), e.g. hepatitis A virus [2026.01] Ν C07K 16/108 • • • Orthomyxoviridae (F), e.g. influenza virus [2026.01] Ν Ν C07K 16/11 • • • Paramyxoviridae (F); Pneumoviridae (F), e.g. respiratory syncytial virus [RSV] [2026.01] Ν C07K 16/112 • • • Retroviridae (F), e.g. leukemia viruses [2026.01] • • • Lentivirus (G), e.g. human immunodeficiency virus [HIV], feline immunodeficiency Ν C07K 16/114 virus [FIV] or simian immunodeficiency virus [SIV] [2026.01]

• • • Togaviridae (F); Matonaviridae (F); Flaviviridae (F) [2026.01]

· · · · Hepatitis C virus; GB virus C [GBV-C] [2026.01]

Ν

Ν

C07K 16/116

C07K 16/118

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C
      C07K 16/12
                           • against material from bacteria [6,2006.01,2026.01]
Ν
                           • • Gram-negative bacteria [2026.01]
     C07K 16/1203
Ν
                           • • • Helicobacter (G); Campylobacter (G) [2026.01]
     C07K 16/121
                           • • • Pseudomonadaceae (F) [2026.01]
Ν
     C07K 16/1214
Ν
     C07K 16/1217
                           • • • Neisseriaceae (F) [2026.01]
     C07K 16/1218
                           • • • Acinetobacter (G) [2026.01]
Ν
Ν
     C07K 16/1228
                           • • • Enterobacterales (O), e.g. Citrobacter (G), Serratia (G), Proteus (G), Providencia (G),
                               Morganella (G) or Yersinia (G) [2026.01]
                           •••• Escherichia (G) [2026.01]
Ν
     C07K 16/1232
Ν
     C07K 16/1235
                           •••• Salmonella (G) [2026.01]
                           • • • Rickettsiales (O) [2026.01]
Ν
     C07K 16/1246
Ν
     C07K 16/126
                           • • • Legionella (G) [2026.01]
     C07K 16/1267
                           • • Gram-positive bacteria [2026.01]
Ν
Ν
     C07K 16/1271
                           • • • Micrococcaceae (F); Staphylococcaceae (F), e.g. Staphylococcus (G) [2026.01]
Ν
     C07K 16/1275
                           • • • Streptococcus (G) [2026.01]
                           • • • Bacillus (G) [2026.01]
Ν
     C07K 16/1278
Ν
     C07K 16/1282
                           ••• Clostridium (G) [2026.01]
Ν
     C07K 16/1289
                           • • • Mycobacteriaceae (F) [2026.01]
     C08F
     C08F 2/56
                           • • by ultrasonic vibrations [2,2006.01]
L
     C08F 10/02
                           • Ethene [2,2006.01]
                           • • • 1, 2-Dichloroethene [2,2006.01]
     C08F 14/12
L
L
     C08F 14/24
                           • Trifluorochloroethene [2,2006.01]
L
     C08F 14/26
                           •• Tetrafluoroethene [2,2006.01]
L
     C08F 110/02
                           • Ethene [2,2006.01]
L
     C08F 114/12
                           ••• 1,2-Dichloroethene [2,2006.01]
                           • • Trifluorochloroethene [2.2006.01]
L
     C08F 114/24
     C08F 114/26
                           • • Tetrafluoroethene [2,2006.01]
L
     C08F 210/02
                           • Ethene [2,2006.01]
L
                           • Copolymers of ethene with alpha-alkenes, e.g. EP rubbers [2,2006.01]
L
     C08F 210/16
L
     C08F 214/12
                           • • • 1,2-Dichloroethene [2,2006.01]
                           • • Trifluorochloroethene [2,2006.01]
L
     C08F 214/24
L
                           • • Tetrafluoroethene [2,2006.01]
     C08F 214/26
M
     C08F 255/04
                           • • on to ethene-propene-onto ethylene-propylene copolymers [2,2006.01]
Μ
     C08F 255/06
                           • • on to ethene-propene onto ethylene-propylene-diene terpolymers [2,2006.01]
     C08L
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M C08L

Note(s) [2,2006.01]

- 1. In this subclass, the following term is used with the meaning indicated:
 - "rubber" includes:
 - a. natural or conjugated diene rubbers;
 - b. rubber in general (for a specific rubber, other than a natural rubber or a conjugated diene rubber, <u>see</u> the group provided for compositions of such macromolecular compounds).
- 2. In this subclass:
 - a. compositions are classified according to the mutual proportions by weight of only the macromolecular constituents;
 - compositions are classified according to the macromolecular constituent or constituents present in the highest proportion; if all these constituents are present in equal proportions the composition is classified according to each of these constituents.
- 3. Any macromolecular constituent of a composition which is not identified by the classification according to Note (2) above, and the use of which is determined to be novel and non-obvious, must also be classified in this subclass. For example, a composition containing 80 parts polyethene polyethylene and 20 parts polyvinyl chloride is classified in both groups C08L 23/06 and C08L 27/06, if the use of polyvinyl chloride is determined to be novel and non-obvious.
- 4. Any macromolecular constituent of a composition which is not identified by the classification according to Notes (2) or (3) above, and which is considered to represent information of interest for search, may also be classified in this subclass. This can, for example, be the case when it is considered of interest to enable searching of compositions using a combination of classification symbols. Such non-obligatory classification should be given as "additional information".

L	C08L 23/04	• • Homopolymers or copolymers of ethene [2,2006.01]
M	C08L 23/06	••• Polyethene Polyethylene [2,2006.01]
L	C08L 23/08	• • • Copolymers of ethene (C08L 23/16 takes precedence) [2,2006.01,2025.01]
M	C08L 23/0853	••••• Ethene Ethylene vinyl acetate copolymers [2025.01]
M	C08L 23/0861	••••• Saponified copolymers, e.g. ethene ethylene vinyl alcohol copolymers [2025.01]
M	C08L 23/16	• • Ethene Ethylene-propene propylene or ethene ethylene-propylene-diene copolymers [2,2006.01]
L	C08L 23/283	• • • Iso-olefin halogenated homopolymers or copolymers [2025.01]
M	C08L 23/286	• • • Chlorinated polyethene polyethylene [2025.01]
L	C08L 27/18	• • • Homopolymers or copolymers of tetrafluoroethene [2,2006.01]
	C09B	
M	C09B C09B 35/215	•••• of diarylethane or diarylethene diarylethylene [3,2006.01]
M M		 of diarylethane or diarylethene diarylethylene [3,2006.01] the reactive group being an ethylenimine ethylenamino or N-acylated ethylenimine ethylenamino group or a —CO—NH—CH₂—CH₂—X group, wherein X is a halogen atom, a quaternary ammonium group or O-acyl and acyl is derived from an organic or inorganic acid, or a beta-substituted ethylamine group [1,2006.01]
	C09B 35/215	• • the reactive group being an ethylenimine-ethylenamino or N-acylated ethylenimino ethylenamino group or a —CO—NH—CH ₂ —CH ₂ —X group, wherein X is a halogen atom, a quaternary ammonium group or O-acyl and acyl is derived from an organic or
	C09B 35/215 C09B 62/62	• • the reactive group being an ethylenimine-ethylenamino or N-acylated ethylenimino ethylenamino group or a —CO—NH—CH ₂ —CH ₂ —X group, wherein X is a halogen atom, a quaternary ammonium group or O-acyl and acyl is derived from an organic or

М C09D Note(s) [5]

- 1. In this subclass, the following terms or expressions are used with the meanings indicated:
 - "use of materials for coating compositions" means the use of known or new polymers or products;
 - "rubber" includes:
 - a. natural or conjugated diene rubbers;
 - b. rubber in general (for a specific rubber, other than a natural rubber or a conjugated diene rubber, see the group provided for coating compositions based on such macromolecular compounds);
 - "based on" is defined by means of Note (3), below;
 - "filling pastes" means materials used to fill up the holes or cavities of a substrate in order to smooth its surface prior to coating.
- 2. In this subclass, coating compositions, containing specific organic macromolecular substances are classified only according to the macromolecular substance, non-macromolecular substances not being taken into account.
 - Example: a coating composition containing polyethene-polyethylene and amino-propyltrimethoxysilane is classified in group C09D 123/06.
 - However, coating compositions containing combinations of organic nonmacromolecular compounds having at least one polymerisable carbon-tocarbon unsaturated bond with prepolymers or polymers other than unsaturated polymers of groups C09D 159/00-C09D 187/00 are classified according to the unsaturated non-macromolecular component in group C09D 4/00.
 - Example: a coating composition containing polyethene-polyethylene and styrene monomer is classified in group C09D 4/00.
 - Aspects relating to the physical nature of the coating compositions or to the effects produced, as defined in group C09D 5/00, if clearly and explicitly stated, are also classified in this subclass.
 - Coating compositions characterised by other features, e.g. additives, are classified in group C09D 7/00, unless the macromolecular constituent is specified.
- 3. In this subclass, coating compositions comprising two or more macromolecular constituents are classified according to the macromolecular constituent or constituents present in the highest proportion, i.e. the constituent on which the composition is based. If the composition is based on two or more constituents, present in equal proportions, the composition is classified according to each of these constituents.
 - Example: a coating composition containing 80 parts of polyethene polyethylene and 20 parts of polyvinylchloride is classified in group C09D 123/06. A coating composition containing 40 parts of polyethene polyethylene and 40 parts of polyvinylchloride is classified in groups C09D 123/06 and C09D 127/06.

L C09D 123/	04
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M C09D 123/06

Т C09D 123/08

M C09D 123/16

L C09D 127/18 • • Homopolymers or copolymers of ethene [5,2006.01]

••• Polyethene Polyethylene [5,2006.01]

• • • Copolymers of ethene (C09D 123/16 takes precedence) [5,2006.01]

• • Ethene Ethylene-propylene or ethene ethylene-propylene-diene copolymers [5,2006.01]

• • • Homopolymers or copolymers of tetrafluoroethene [5,2006.01]

C09J

M C09J

Note(s) [5]

- In this subclass, the following terms or expressions are used with the meanings indicated:
 - "use of materials as adhesives" means the use of known or new polymers or products;
 - "rubber" includes:
 - a. natural or conjugated diene rubbers;
 - b. rubber in general (for a specific rubber, other than a natural rubber or a conjugated diene rubber, <u>see</u> the group provided for adhesives based on such macromolecular compounds);
 - "based on" is defined by means of Note (3), below.
- 2. In this subclass, adhesives containing specific organic macromolecular substances are classified only according to the macromolecular substance, non-macromolecular substances not being taken into account.
 - Example: an adhesive containing polyethene polyethylene and aminopropyltrimethoxysilane is classified in group C09J 123/06.
 - However, adhesives containing combinations of organic non-macromolecular compounds having at least one polymerisable carbon-to-carbon unsaturated bond with prepolymers or polymers other than unsaturated polymers of groups C09J 159/00-C09J 187/00 are classified according to the unsaturated non-macromolecular component in group C09J 4/06.
 - Example: an adhesive containing polyethene polyethylene and styrene monomer is classified in group C09J 4/06.
 - Aspects relating to the physical nature of the adhesives or to the effects produced, as defined in group C09J 9/00, if clearly and explicitly stated, are also classified in this subclass.
 - Adhesives characterised by other features, e.g. additives, are classified in group C09J 11/00, unless the macromolecular constituent is specified.
- 3. In this subclass, adhesives comprising two or more macromolecular constituents are classified according to the macromolecular constituent or constituents present in the highest proportion, i.e. the constituent on which the adhesive is based. If the adhesive is based on two or more constituents, present in equal proportions, the adhesive is classified according to each of these constituents.
 - Example: an adhesive containing 80 parts of polyethene polyethylene and 20 parts of polyvinylchloride is classified in group C09J 123/06. An adhesive containing 40 parts of polyethene polyethylene and 40 parts of polyvinylchloride is classified in groups C09J 123/06 and C09J 127/06.

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a terials
each classified in
naterials are

materials [2026.01]

N	C09K 111/00	Perovskites, i.e. ABX ₃ [2026.01]
N	C09K 113/00	Quantum dots [2026.01]
	C10M	
М	C10M 107/04	••• Polyethene Polyethylene [4,2006.01]
М	C10M 143/02	• Polyethene Polyethylene [4,2006.01]
L	C12N	MICROORGANISMS OR ENZYMES; COMPOSITIONS THEREOF; PROPAGATING, PRESERVING, OR MAINTAINING MICROORGANISMS; MUTATION OR GENETIC ENGINEERING; CULTURE MEDIA (microbiological testing media C12Q 1/00) [3]
M	C12N 1/00	Microorganisms, e.g. protozoa; Compositions thereof (medicinal preparations containing material from protozoa, bacteria or viruses A61K 35/66, from algae A61K 36/02, from fungi A61K 36/06; preparing medicinal bacterial antigen or antibody compositions, e.g. bacterial vaccines, A61K 39/00); Processes of propagating, maintaining or preserving microorganisms or compositions thereof; Processes of preparing or isolating a composition containing a microorganism; Culture media therefor [3,2006.01]
L	C12N 1/02	Separating microorganisms from their culture media [3,2006.01]
L	C12N 1/04	 Preserving or maintaining viable microorganisms (immobilised microorganisms C12N 11/00) [3,2006.01]
C	C12N 1/06	• Lysis of microorganisms [3,2006.01,2026.01]
N	C12N 1/063	•• of yeast [2026.01]
Ν	C12N 1/066	•• by physical processes [2026.01]
C	C12N 1/10	• Protozoa; Culture media therefor [3,2006.01,2026.01]
N	C12N 1/105	• Protozoal isolates [2026.01]
C	C12N 1/12	• Unicellular algae; Culture media therefor (as new plants A01H 13/00) [3,2006.01,2026.01]
N	C12N 1/125	 • Unicellular algae isolates [2026.01] • modified by introduction of foreign genetic material [5,2006.01]
C	C12N 1/13 C12N 1/14	• Fungi (culture of mushrooms A01G 18/00; as new plants A01H 15/00); Culture media
Α./	O10N 1/14F	therefor [3,2006.01,2026.01]
N	C12N 1/145 C12N 1/16	• Fungi isolates [2026.01]
C N	C12N 1/16 C12N 1/165	• Yeasts; Culture media therefor [3,2006.01,2026.01]
C	C12N 1/18	••• Yeast isolates [2026.01] ••• Baker's yeast; Brewer's yeast [3,2006.01,2026.01]
N	C12N 1/185	•••• Saccharomyces isolates [2026.01]
L	C12N 1/19	• • • modified by introduction of foreign genetic material [5,2006.01]
C	C12N 1/20	Bacteria; Culture media therefor [3,2006.01,2026.01]
N	C12N 1/205	• • Bacterial isolates [2026.01]
Ĺ	C12N 1/21	• • modified by introduction of foreign genetic material [5,2006.01]
L	C12N 7/00	Viruses, e.g. bacteriophages; Compositions thereof; Preparation or purification thereof (medicinal preparations containing viruses A61K 35/76; preparing medicinal viral antigen or antibody compositions, e.g. virus vaccines, A61K 39/00) [3,2006.01]
L	C12N 9/00	Enzymes, e.g. ligases (6.); Proenzymes; Compositions thereof (preparations containing enzymes for cleaning teeth A61K 8/66, A61Q 11/00; medicinal preparations containing enzymes or proenzymes A61K 38/43; enzyme containing detergent compositions C11D); Processes for preparing, activating, inhibiting, separating, or purifying enzymes [3,2006.01]
	C12Q	
М	C12Q 1/6886	•••• for cancer (immunoassay for cancer G01N 33/574 G01N 33/575) [2018.01]
	C21D	
M	C21D 8/00	Modifying the physical properties <i>of ferrous metals or ferrous alloys</i> by deformation combined with, or followed by, heat treatment (hardening articles or materials formed by forging or rolling with no further heating beyond that required for the formation C21D 1/02) [3,2006.01]
С	C21D 8/02	 during manufacturing of plates or strips (C21D 8/12 takes precedence) [3,2006.01,2026.01]
Ν	C21D 8/021	• • involving particular fabrication steps or treatments of ingots or slabs [2026.01]
Ν	C21D 8/0221	• • characterised by the working steps [2026.01]

	•	
Ν	C21D 8/0247	• • characterised by the heat treatment [2026.01]
Ν	C21D 8/0278	• • involving a particular surface treatment (C21D 8/0294 takes precedence) [2026.01]
Ν	C21D 8/0294	• • involving a localised treatment [2026.01]
Τ	C21D 8/04	•• to produce plates or strips for drawing, e.g. for deep-drawing [3,2006.01,2026.01]
С	C21D 8/12	 during manufacturing of articles with special electromagnetic properties [3,2006.01,2026.01]
Ν	C21D 8/1205	• • involving particular fabrication steps or treatments of ingots or slabs [2026.01]
Ν	C21D 8/1216	• • characterised by the working steps [2026.01]
Ν	C21D 8/1244	• • characterised by the heat treatment [2026.01]
Ν	C21D 8/1277	• • involving a particular surface treatment (C21D 8/1294 takes precedence) [2026.01]
Ν	C21D 8/1294	• • involving a localised treatment [2026.01]
	C25B	
L	C25B 11/049	• • • Photocatalysts [2021.01]
L	C25B 11/087	••••• Photocatalytic compound [2021.01]
	C25D	
M M	C25D 5/20 C30B	• Electroplating using ultrasonics ultrasonic waves [2,2006.01] SINGLE-CRYSTAL GROWTH (by using ultra-high pressure, e.g. for the formation of
		diamonds, B01J 3/06); UNIDIRECTIONAL SOLIDIFICATION OF EUTECTIC MATERIAL OR UNIDIRECTIONAL DEMIXING OF EUTECTOID MATERIAL; REFINING BY ZONE-MELTING OF MATERIAL (zone-refining of metals or alloys C22B); PRODUCTION OF A HOMOGENEOUS POLYCRYSTALLINE MATERIAL WITH DEFINED STRUCTURE (casting of metals, casting of other substances by the same processes or devices B22D; working of plastics B29; modifying the physical structure of metals or alloys C21D, C22F); SINGLE CRYSTALS OR HOMOGENEOUS POLYCRYSTALLINE MATERIAL WITH DEFINED STRUCTURE; AFTER-TREATMENT OF SINGLE CRYSTALS OR A HOMOGENEOUS POLYCRYSTALLINE MATERIAL WITH DEFINED STRUCTURE (for producing semiconductor devices or parts thereof H01L, H10); APPARATUS THEREFOR [3]
	D04B	
L	D04B 21/14	 Fabrics characterised by the incorporation by knitting, in one or more thread, fleece, or fabric layers, of reinforcing, binding, or decorative threads; Fabrics incorporating small auxiliary elements, e.g. for decorative purposes (pile fabrics D04B 21/02; non-woven fabrics in general D04H) [1,2006.01]
L	D04B 23/10	 for knitting through thread, fleece, or fabric layers, or around elongated core material [1,2006.01]
	D04D	
M	D04D 7/04	 Three-dimensional [3D] articles (ornamental buttons A44B 1/04) [1,2006.01]
	D04H	
M	D04H 1/22	••• Three-dimensional [3D] articles formed by felting processes [1,2006.01]
М	D04H 1/24	• • • Covers felted on to three-dimensional [3D] articles [1,2006.01]
L	D04H 1/555	••• by ultrasonic heating [2012.01]
	D05B	

Subclass index

М

D05B

IVI	D03B	Subclass linex	
		TYPES OF MACHINES	
		General types for making thread seams without lateral movement	D05B 1/00
		Special-purpose or automatic machines	
		with lateral movement of needle or work	D05B 3/00
		for sewing quilts or mattresses, sacks —or leather goods	D05B 11/00, D05B 13/00,
		To so many quints of manifestory, eacher, of realisting	D05B 15/00
		for temporarily connecting articles	D05B 5/00
		linking machines; hem-stitch machines; for making thread	
		and welded seams	D05B 17/00
		programmeprogram-controlled	D05B 19/00, D05B 21/00
		Other types of sewing machines	D05B 23/00
		Combination of machines; machines incorporating	D05B 25/00; D05B 81/00
		devices for other purposes than sewing	D03B 23/00, D03B 01/00
		THE WORK; MACHINE ELEMENTS RELATING	
		THERETO	
		For feeding, pressing, holding, supplying or removing	D05B 27/00 D05B 29/00
		the work	D05B 31/00, D05B 33/00
		Devices for slitting, grooving -or cutting the work	D05B 37/00
		Work-piece carriers, work-collecting devices	D05B 39/00, D05B 41/00
		Other elements relating to the work	D05B 35/00 D05B 35/00
		SEWING-THREAD; MACHINE ELEMENTS RELATING	D03B 33/00
		THERETO	
		Needle thread	
		spool-pin assemblies	D05B 43/00
		measuring length of thread used; regulating tension;	D05B 45/00; D05B 47/00;
		severing thread	D05B 65/00
		take-up, needle-thread guard, break detectors, thread	D05B 49/00, D05B 51/00,
		laying; needle holders	D05B 53/00; D05B 55/00
		Lower thread	•
		loop takers; loop manipulators; tension; severing thread	D05B 57/00; D05B 61/00;
			D05B 63/00; D05B 65/00
		bobbin winding or changing	D05B 59/00
		Lubricating, waxing -or colouring thread	D05B 67/00
		OTHER ELEMENTS OF SEWING MACHINES;	
		ACCESSORIES	
		Driving or control; lubricating or cooling; lighting	D05B 69/00; D05B 71/00;
		equipment	D05B 79/00
		Accessories	
		guards for operator	D05B 83/00
		casings; frames or tables; covers or portable enclosures	D05B 73/00; D05B 75/00;
		HAND OF WING	D05B 77/00
		HAND SEWING	DOED 04/00: DOED 00/00
		Tools and accessories; stitches or stitch seams	D05B 91/00; D05B 93/00
		Preparatory or finishing operations	D05B 95/00
		Hand-sewing processes and apparatus for other special	D05B 97/00
		work —or not otherwise provided for NEEDLES; NEEDLE-THREADING DEVICES; SEAM-	DOED 95/00: DOED 97/00:
		RIPPING	D05B 85/00; D05B 87/00; D05B 89/00
D.4	D05D 2/00		
М	D05B 3/00	Sewing apparatus or machines with mechanism for later or the work or both for making ornamental pattern sea	
		for reinforcing openings , or for fastening articles, e.g	
		(programme program-controlled sewing machines D0:	
		automatically controlling movement of work-carrier DC	
N.A	D0ED 10/00	•	
M	D05B 19/00	Programme Program-controlled sewing machines (with	
		controlling movement of work-carrier D05B 21/00; dev	• • •
		sewing tools have reached a predetermined position I	09/22) [1,2006.01]

M	D05B 21/00	Sewing machines with devices for automatically controlling movement of work-carrier relative to stitch-forming mechanism in order to obtain particular configuration of seam, e.g. programme program-controlled for sewing collars , or for attaching pockets [1,2006.01]
	D06M	
M	D06M 10/00	Physical treatment of fibres, threads, yarns, fabrics or fibrous goods made from such materials, e.g. <i>by</i> ultrasonic <i>waves</i> , corona discharge, irradiation, electric currents or magnetic fields; Physical treatment combined with treatment with chemical compounds or elements [2,5,2006.01]
M M	D06M 10/02 D06M 23/14	 Sonic or ultrasonic or sonic waves; Corona discharge [5,2006.01] Processes for the fixation or treatment of textile materials in three-dimensional [3D] forms [5,2006.01]
	D06P	
L	D06P 5/20	 Physical treatments affecting dyeing, e.g. ultrasonic or electric [2,2006.01]
L	E01C E01C 23/07	• • Apparatus combining measurement of the surface configuration of paving with application of material in proportion to the measured irregularities (measuring means only E01C 23/01) [1,2006.01]
	E01F	
M	E01F 9/654	•••• in the form of three-dimensional [3D] bodies, e.g. cones; capable of assuming three-dimensional 3D form, e.g. by inflation or erection to form a geometric body [2016.01]
	E02D	
L	E02D 3/11	 by thermal, electrical or electrochemical means (freezing soil for interrupting passage of underground water E02D 19/14) [3,2006.01]
	E04B	
M	E04B 1/19	• • Three-dimensional [3D] framework structures [2,2006.01]
	E04C	
M	E04C 5/02	• • of low bending resistance, i.e. of essentially one- dimensional [1D] or two-dimensional [2D] extent [1,2006.01]
M	E04C 5/06	• • of high bending resistance, i.e. of essentially three-dimensional [3D] extent, e.g. lattice girders [1,2006.01]
M	E04G E04G 1/02	 composed essentially of members elongated in one dimension [1D] only, e.g. poles, lattice masts, with or without end portions of special form, connected together by any means [1,2006.01]
М	E04G 1/14	 Comprising essentially pre-assembled two-dimensional [2D] frame-like elements, e.g. of rods in L- or H-shape, with or without bracing (E04G 1/15 takes precedence) [1,2006.01]
M	E04G 1/17	 Comprising essentially pre-assembled three-dimensional [3D] elements, e.g. cubic elements [2006.01]
	E05B	
L	E05B 47/02 E05B 47/06	 Adaptation of locks, latches, or parts thereof, for movement of the bolt by electromagnetic means [1,2006.01] Controlling mechanically-operated bolts by electromagnetically-operated detents [1,2006.01]
L	E05C E05C 17/56	by magnetic or electromagnetic attraction (operation of locks or fasteners by electric or
L	E05C 19/16	magnetic means E05B 47/00) [1,2,2006.01] • Devices holding the wing by magnetic or electromagnetic attraction [1,2006.01]
	E21C	
M	E21C 37/20	• by ultrasonics ultrasonic waves [1,2006.01]
	F01D	Determinant them are existed to the second s
L	F01D 5/06	 Rotors for more than one axial stage, e.g. of drum or multiple-disc type; Details thereof, e.g. shafts, shaft connections [1,2006.01]
L	F01D 5/22 F01D 5/26	 Blade-to-blade connections, e.g. by shrouding [1,2006.01] Antivibration means not restricted to blade form or construction or to blade-to-blade connections [1,2006.01]
	F02D	

М	F02D	Subclass index	
		CONTROLLING COMBUSTION ENGINES IN GENERAL	
		Characterised characterised by action on engine operation	
		on injection: general; low pressure; other means	F02D 1/00; F02D 3/00;
			F02D 7/00
		by throttling air or fuel-and-air induction or exhaust	F02D 9/00
		on valve-operating cycle; varying compression ratio	F02D 13/00; F02D 15/00
		cutting-out cylinders, rendering engines inoperative or idling	F02D 17/00
		on delivery of fuel or combustion-air, not otherwise provided for	F02D 33/00
		on two or more associated functions not otherwise provided for	F02D 37/00
		Characterised characterised by initiating or actuating means	E00D 44/00
		non-automatic initiation, e.g. by operator initiation by speed-sensing governors or by interior or exterior	F02D 11/00 F02D 31/00,
		conditions, not otherwise provided for	F02D 35/00
		Programme Program control	F02D 28/00
		CONTROL OF PARTICULAR ENGINES	
		engines: characterised by fuel; by combustion medium used; by	F02D 19/00;
		supercharge	F02D 21/00; F02D 23/00
		co-operating engines; reversible engines; engines driving vehicle	
		or particular devices	F02D 27/00;
			F02D 29/00
		OTHER CONTROL Nonnon-electrical	F02D 39/00
		Electrical electrical	F02D 41/00-F02D 45/00
М	F02D 27/02	• by performing a programme program [1,2006.01]	1 025 11/00 1 025 10/00
		by performing a program [1,=000101]	
М	F02D 28/00	Programme-Program control of angines [2 2006 01]	
М	F02D 28/00	Programme-Program control of engines [2,2006.01]	
M	F02D 28/00 F02M F02M 27/08	Programme-Program control of engines [2,2006.01] • by sonic or ultrasonic waves [1,2006.01]	
M	F02M		
M L	F02M F02M 27/08	 by sonic or ultrasonic waves [1,2006.01] Combinations of two or more pumps, each being of rotary-pi 	
M L	F02M F02M 27/08 F04C	 by sonic or ultrasonic waves [1,2006.01] Combinations of two or more pumps, each being of rotary-pi piston type, specially adapted for elastic fluids; Pumping ins 	tallations specially
M L	F02M F02M 27/08 F04C	by sonic or ultrasonic waves [1,2006.01] Combinations of two or more pumps, each being of rotary-pi piston type, specially adapted for elastic fluids; Pumping ins adapted for elastic fluids; Multi-stage pumps specially adapted.	tallations specially
M L L	F02M F02M 27/08 F04C F04C 23/00	 by sonic or ultrasonic waves [1,2006.01] Combinations of two or more pumps, each being of rotary-pi piston type, specially adapted for elastic fluids; Pumping ins 	tallations specially
M L M	F02M F02M 27/08 F04C	by sonic or ultrasonic waves [1,2006.01] Combinations of two or more pumps, each being of rotary-pi piston type, specially adapted for elastic fluids; Pumping ins adapted for elastic fluids; Multi-stage pumps specially adapted.	tallations specially ed for elastic fluids (
L	F02M F02M 27/08 F04C F04C 23/00	• by sonic or ultrasonic waves [1,2006.01] Combinations of two or more pumps, each being of rotary-pi piston type, specially adapted for elastic fluids; Pumping ins adapted for elastic fluids; Multi-stage pumps specially adapter F04C 25/00 takes precedence) [1,2006.01]	tallations specially ed for elastic fluids (
L	F02M F02M 27/08 F04C F04C 23/00 F15B F15B 21/02	 by sonic or ultrasonic waves [1,2006.01] Combinations of two or more pumps, each being of rotary-pi piston type, specially adapted for elastic fluids; Pumping ins adapted for elastic fluids; Multi-stage pumps specially adapter F04C 25/00 takes precedence) [1,2006.01] Servomotor systems with programme program control derived for device; Control devices therefor [1,2006.01] 	tallations specially ed for elastic fluids (
L M	F02M F02M 27/08 F04C F04C 23/00 F15B F15B 21/02 F16D F16D 27/12	 by sonic or ultrasonic waves [1,2006.01] Combinations of two or more pumps, each being of rotary-pi piston type, specially adapted for elastic fluids; Pumping ins adapted for elastic fluids; Multi-stage pumps specially adapted F04C 25/00 takes precedence) [1,2006.01] Servomotor systems with programme program control derived for device; Control devices therefor [1,2006.01] Clutch systems with a plurality of electromagnetically-actuated of the control device. 	tallations specially ed for elastic fluids (rom a store or timing
L L	F02M F02M 27/08 F04C F04C 23/00 F15B F15B 21/02	 by sonic or ultrasonic waves [1,2006.01] Combinations of two or more pumps, each being of rotary-pi piston type, specially adapted for elastic fluids; Pumping ins adapted for elastic fluids; Multi-stage pumps specially adapter F04C 25/00 takes precedence) [1,2006.01] Servomotor systems with programme program control derived for device; Control devices therefor [1,2006.01] Clutch systems with a plurality of electromagnetically-actuated of Systems of clutches, or clutches and couplings, comprising 	rom a store or timing lutches [1,2006.01] devices of types
L M	F02M F02M 27/08 F04C F04C 23/00 F15B F15B 21/02 F16D F16D 27/12	 by sonic or ultrasonic waves [1,2006.01] Combinations of two or more pumps, each being of rotary-pi piston type, specially adapted for elastic fluids; Pumping ins adapted for elastic fluids; Multi-stage pumps specially adapter F04C 25/00 takes precedence) [1,2006.01] Servomotor systems with programme program control derived for device; Control devices therefor [1,2006.01] Clutch systems with a plurality of electromagnetically-actuated of Systems of clutches, or clutches and couplings, comprising grouped under at least two of the following sets of groups: F 	tallations specially ed for elastic fluids (rom a store or timing lutches [1,2006.01] devices of types 16D 1/00-F16D 9/00;
L M	F02M F02M 27/08 F04C F04C 23/00 F15B F15B 21/02 F16D F16D 27/12	 by sonic or ultrasonic waves [1,2006.01] Combinations of two or more pumps, each being of rotary-pipiston type, specially adapted for elastic fluids; Pumping insta adapted for elastic fluids; Multi-stage pumps specially adapted F04C 25/00 takes precedence) [1,2006.01] Servomotor systems with programme program control derived for device; Control devices therefor [1,2006.01] Clutch systems with a plurality of electromagnetically-actuated of Systems of clutches, or clutches and couplings, comprising grouped under at least two of the following sets of groups: F16D 11/00-F16D 23/00; F16D 25/00-F16D 29/00; F16D 31/0 	tallations specially ed for elastic fluids (rom a store or timing lutches [1,2006.01] devices of types 16D 1/00-F16D 9/00 ;, 00-F16D 39/00 ;,
L M	F02M F02M 27/08 F04C F04C 23/00 F15B F15B 21/02 F16D F16D 27/12	 by sonic or ultrasonic waves [1,2006.01] Combinations of two or more pumps, each being of rotary-pi piston type, specially adapted for elastic fluids; Pumping ins adapted for elastic fluids; Multi-stage pumps specially adapter F04C 25/00 takes precedence) [1,2006.01] Servomotor systems with programme program control derived for device; Control devices therefor [1,2006.01] Clutch systems with a plurality of electromagnetically-actuated of Systems of clutches, or clutches and couplings, comprising grouped under at least two of the following sets of groups: F 	tallations specially ed for elastic fluids (from a store or timing lutches [1,2006.01] devices of types 16D 1/00-F16D 9/00; 00-F16D 39/00; o lock the driving and
L M	F02M F02M 27/08 F04C F04C 23/00 F15B F15B 21/02 F16D F16D 27/12	 by sonic or ultrasonic waves [1,2006.01] Combinations of two or more pumps, each being of rotary-pipiston type, specially adapted for elastic fluids; Pumping instadapted for elastic fluids; Multi-stage pumps specially adapted F04C 25/00 takes precedence) [1,2006.01] Servomotor systems with programme program control derived find device; Control devices therefor [1,2006.01] Clutch systems with a plurality of electromagnetically-actuated of Systems of clutches, or clutches and couplings, comprising grouped under at least two of the following sets of groups: F16D 11/00-F16D 23/00; F16D 25/00-F16D 29/00; F16D 31/0F16D 41/00-F16D 45/00 (freewheels combined with a clutch to the set of the set of the set of the following sets of groups: F16D 41/00-F16D 45/00 (freewheels combined with a clutch to the set of t	tallations specially ed for elastic fluids (from a store or timing lutches [1,2006.01] devices of types 16D 1/00-F16D 9/00; 00-F16D 39/00; o lock the driving and
L M	F02M F02M 27/08 F04C F04C 23/00 F15B F15B 21/02 F16D F16D 27/12 F16D 47/00	 by sonic or ultrasonic waves [1,2006.01] Combinations of two or more pumps, each being of rotary-pipiston type, specially adapted for elastic fluids; Pumping instadapted for elastic fluids; Multi-stage pumps specially adapted F04C 25/00 takes precedence) [1,2006.01] Servomotor systems with programme program control derived find device; Control devices therefor [1,2006.01] Clutch systems with a plurality of electromagnetically-actuated of Systems of clutches, or clutches and couplings, comprising grouped under at least two of the following sets of groups: F16D 11/00-F16D 23/00; F16D 25/00-F16D 29/00; F16D 31/F16D 41/00-F16D 45/00 (freewheels combined with a clutch to driven members of the freewheel F16D 41/04, F16D 41/26) [1,2006.01] with movements in three dimensions [3D] [1,2006.01] 	tallations specially ed for elastic fluids (from a store or timing lutches [1,2006.01] devices of types 16D 1/00-F16D 9/00; 00-F16D 39/00; o lock the driving and
L M	F02M F02M 27/08 F04C F04C 23/00 F15B F15B 21/02 F16D F16D 27/12 F16D 47/00	 by sonic or ultrasonic waves [1,2006.01] Combinations of two or more pumps, each being of rotary-pipiston type, specially adapted for elastic fluids; Pumping ins adapted for elastic fluids; Multi-stage pumps specially adapted F04C 25/00 takes precedence) [1,2006.01] Servomotor systems with programme-program control derived for device; Control devices therefor [1,2006.01] Clutch systems with a plurality of electromagnetically-actuated of Systems of clutches, or clutches and couplings, comprising grouped under at least two of the following sets of groups: F16D 11/00-F16D 23/00; F16D 25/00-F16D 29/00; F16D 31/0F16D 41/00-F16D 45/00 (freewheels combined with a clutch to driven members of the freewheel F16D 41/04, F16D 41/26) [1,2006.01] with movements in three dimensions [3D] [1,2006.01] Note(s) [2012.01] 	tallations specially ed for elastic fluids (from a store or timing lutches [1,2006.01] devices of types 16D 1/00-F16D 9/00; 00-F16D 39/00; 10 lock the driving and 2006.01]
L M M	F02M F02M 27/08 F04C F04C 23/00 F15B F15B 21/02 F16D F16D 27/12 F16D 47/00	 by sonic or ultrasonic waves [1,2006.01] Combinations of two or more pumps, each being of rotary-pipiston type, specially adapted for elastic fluids; Pumping instadapted for elastic fluids; Multi-stage pumps specially adapted F04C 25/00 takes precedence) [1,2006.01] Servomotor systems with programme-program control derived find device; Control devices therefor [1,2006.01] Clutch systems with a plurality of electromagnetically-actuated of Systems of clutches, or clutches and couplings, comprising grouped under at least two of the following sets of groups: F16D 11/00-F16D 23/00; F16D 25/00-F16D 29/00; F16D 31/F16D 41/00-F16D 45/00 (freewheels combined with a clutch to driven members of the freewheel F16D 41/04, F16D 41/26) [1,2006.01] with movements in three dimensions [3D] [1,2006.01] Note(s) [2012.01] When classifying in this group, in the absence of an indication to the second content of the classifying in this group, in the absence of an indication to the content of the classifying in this group, in the absence of an indication to the content of the classifying in this group, in the absence of an indication to the classifying in this group, in the absence of an indication to the classifying in this group, in the absence of an indication to the classifying in this group. 	tallations specially ed for elastic fluids (from a store or timing lutches [1,2006.01] devices of types 16D 1/00-F16D 9/00; 00-F16D 39/00; 10 lock the driving and 2006.01]
L M M	F02M F02M 27/08 F04C F04C 23/00 F15B F15B 21/02 F16D F16D 27/12 F16D 47/00	 by sonic or ultrasonic waves [1,2006.01] Combinations of two or more pumps, each being of rotary-pipiston type, specially adapted for elastic fluids; Pumping ins adapted for elastic fluids; Multi-stage pumps specially adapted F04C 25/00 takes precedence) [1,2006.01] Servomotor systems with programme-program control derived for device; Control devices therefor [1,2006.01] Clutch systems with a plurality of electromagnetically-actuated of Systems of clutches, or clutches and couplings, comprising grouped under at least two of the following sets of groups: F16D 11/00-F16D 23/00; F16D 25/00-F16D 29/00; F16D 31/0F16D 41/00-F16D 45/00 (freewheels combined with a clutch to driven members of the freewheel F16D 41/04, F16D 41/26) [1,2006.01] with movements in three dimensions [3D] [1,2006.01] Note(s) [2012.01] 	tallations specially ed for elastic fluids (from a store or timing lutches [1,2006.01] devices of types 16D 1/00-F16D 9/00; 00-F16D 39/00; 10 lock the driving and 2006.01]
L M M	F02M F02M 27/08 F04C F04C 23/00 F15B F15B 21/02 F16D F16D 27/12 F16D 47/00	 by sonic or ultrasonic waves [1,2006.01] Combinations of two or more pumps, each being of rotary-pipiston type, specially adapted for elastic fluids; Pumping instadapted for elastic fluids; Multi-stage pumps specially adapted F04C 25/00 takes precedence) [1,2006.01] Servomotor systems with programme-program control derived find device; Control devices therefor [1,2006.01] Clutch systems with a plurality of electromagnetically-actuated of Systems of clutches, or clutches and couplings, comprising grouped under at least two of the following sets of groups: F16D 11/00-F16D 23/00; F16D 25/00-F16D 29/00; F16D 31/F16D 41/00-F16D 45/00 (freewheels combined with a clutch to driven members of the freewheel F16D 41/04, F16D 41/26) [1,2006.01] with movements in three dimensions [3D] [1,2006.01] Note(s) [2012.01] When classifying in this group, in the absence of an indication to the second content of the classifying in this group, in the absence of an indication to the content of the classifying in this group, in the absence of an indication to the content of the classifying in this group, in the absence of an indication to the classifying in this group, in the absence of an indication to the classifying in this group, in the absence of an indication to the classifying in this group. 	tallations specially ed for elastic fluids (from a store or timing flutches [1,2006.01] devices of types 16D 1/00-F16D 9/00; 00-F16D 39/00; 0 lock the driving and 2006.01]
L M L M L	F02M F02M 27/08 F04C F04C 23/00 F15B F15B 21/02 F16D F16D 27/12 F16D 47/00 F16H 516H 21/46 F16H 57/02	 by sonic or ultrasonic waves [1,2006.01] Combinations of two or more pumps, each being of rotary-pipiston type, specially adapted for elastic fluids; Pumping ins adapted for elastic fluids; Multi-stage pumps specially adapter F04C 25/00 takes precedence) [1,2006.01] Servomotor systems with programme program control derived for device; Control devices therefor [1,2006.01] Clutch systems with a plurality of electromagnetically-actuated of Systems of clutches, or clutches and couplings, comprising grouped under at least two of the following sets of groups: F16D 11/00-F16D 23/00 ;, F16D 25/00-F16D 29/00 ;, F16D 31/F16D 41/00-F16D 45/00 (freewheels combined with a clutch to driven members of the freewheel F16D 41/04, F16D 41/26) [1,3006.01] with movements in three dimensions [3D] [1,2006.01] Note(s) [2012.01] When classifying in this group, in the absence of an indication to the made in all appropriate subgroups. 	tallations specially ed for elastic fluids (from a store or timing flutches [1,2006.01] devices of types 16D 1/00-F16D 9/00 ;, 00-F16D 39/00 ;, 0 lock the driving and 2006.01] the contrary, classification frating elements [2016.01]
L M M	F02M F02M 27/08 F04C F04C 23/00 F15B F15B 21/02 F16D 27/12 F16D 47/00 F16H 57/02 F16H 57/02	 by sonic or ultrasonic waves [1,2006.01] Combinations of two or more pumps, each being of rotary-pipiston type, specially adapted for elastic fluids; Pumping ins adapted for elastic fluids; Multi-stage pumps specially adapter F04C 25/00 takes precedence) [1,2006.01] Servomotor systems with programme program control derived for device; Control devices therefor [1,2006.01] Clutch systems with a plurality of electromagnetically-actuated of Systems of clutches, or clutches and couplings, comprising grouped under at least two of the following sets of groups: F16D 11/00-F16D 23/00; F16D 25/00-F16D 29/00; F16D 31/F16D 41/00-F16D 45/00 (freewheels combined with a clutch to driven members of the freewheel F16D 41/04, F16D 41/26) [1,3006.01] with movements in three dimensions [3D] [1,2006.01] Note(s) [2012.01] When classifying in this group, in the absence of an indication to its made in all appropriate subgroups. comprising a two-dimensional [2D] array of point-like light-general 	tallations specially ed for elastic fluids (from a store or timing flutches [1,2006.01] devices of types 16D 1/00-F16D 9/00 ;, 00-F16D 39/00 ;, 0 lock the driving and 2006.01] the contrary, classification frating elements [2016.01]

M	F22B 23/00 Water-tube boilers built-up from sets of spaced double-walled water tubes of return type in unilaterial unilateral abutting connection with a boiler drum or with a header box, i.e. built-up from Field water tubes comprising an inner tube arranged within an outer unilaterally-closed tube [1,2006.01]		
	F22D		
М	F22D 1/02	 with water tubes arranged in the boiler furnace furnaces, fire tubes [1,2006.01] 	s or flue ways
	F23D		
L	F23D 11/34	• by ultrasonic means [1,2006.01]	
	F23N		
M	F23N 5/20	• with a time programme program acting through electrical means, e.g. using time-delay relays [1,2006.01]	
М	F23N 5/22	 with a time programme program acting through mechanical means [1,2006.01] 	s, e.g. using cams
	F23R		
L	F23R 3/48	• • • Flame tube interconnectors, e.g. cross-over tubes [3,2006.01]	
	F24S		
L	F24S 80/30	 Arrangements for connecting the fluid circuits of solar heat collects with other components, e.g. pipe connections; Fluid distributing me [2018.01] 	
	F26B		
M	F26B	Subclass index	
		PROCESSES FOR DRYING Preliminary treatment Processes: with heat; without heat; by combination of both types	F26B 1/00 F26B 3/00; F26B 5/00; F26B 7/00
		MACHINES OR APPARATUS FOR DRYING With articles to be dried at rest or locally agitated, domestic airing With non-progressive movement With progressive movement: for fabrics or yarns; for articles and compact batches; for material not in compact batches Other kinds Combinations using at least two of the above kinds ARRANGEMENTS OR DETAILS OF GENERAL APPLICATIONS Arrangements for air or gas-other gases for drying; heating Other details	F26B 9/00 F26B 11/00 F26B 13/00; F26B 15/00; F26B 17/00 F26B 19/00 F26B 20/00 F26B 21/00; F26B 23/00 F26B 25/00
L	F26B 5/02	by using ultrasonic vibrations [1,2006.01]	1 200 20/00
С	F26B 21/00	Arrangements for supplying or controlling air or other gases for materials or objects (air-conditioning or ventilation in general [1,2006.01,2026.01]	
D	F26B 21/02 F26B 21/04 F26B 21/06 F26B 21/08 F26B 21/10 F26B 21/12 F26B 21/14 F26B 21/20 F26B 21/25 F26B 21/30 F26B 21/33 F26B 21/35 F26B 21/37	(transferred to F26B 21/20) (transferred to F26B 21/25) (transferred to F26B 21/30) (transferred to F26B 21/33) (transferred to F26B 21/35) (transferred to F26B 21/37) (transferred to F26B 21/40-F26B 21/45) • Circulating air or gases in closed cycles, e.g. wholly within the dryi. • partly outside the drying enclosure [2026.01] • Controlling, e.g. regulating, parameters of gas supply [2026.01] • Humidity [2026.01] • Velocity of flow; Quantity of flow [2026.01]	ing enclosure [2026.01]

Ν	F26B 21/40	• using gases other than air [2026.01]
Ν	F26B 21/45	• • using steam [2026.01]
N	F26B 21/50	 Ducting arrangements from the source of air or other gases to the materials or objects being dried [2026.01]
Ν	F26B 21/55	• Outlets for directing or distributing the air or other gases [2026.01]
М	F26B 23/00	Heating arrangements (using heated air or other gases F26B 21/00) [1,2006.01]
	G01B	3 3 (3) 71,7 1
M	G01B 17/00	Measuring arrangements characterised by the use of infrasonic, sonic —or ultrasonic vibrations [1,4,2006.01]
	G01C	
M M	G01C 19/5677 G01C 19/5691	••• of essentially two-dimensional [2D] vibrators, e.g. ring-shaped vibrators [2012.01] ••• of essentially three-dimensional [3D] vibrators, e.g. wine glass-type vibrators [2012.01]
	G01G	er essentially times amonomial [e2] violations, eight time glass type violations [25 1215]
М	G01G 19/38	• • programme-program controlled, e.g. by perforated tape [1,2006.01]
L	G01H	MEASUREMENT OF MECHANICAL VIBRATIONS OR ULTRASONIC, SONIC OR INFRASONIC WAVES [4]
L	G01H 5/00	Measuring propagation velocity of ultrasonic, sonic or infrasonic waves [1,2006.01]
L	G01H 9/00	Measuring mechanical vibrations or ultrasonic, sonic or infrasonic waves by using radiation-sensitive means, e.g. optical means [1,2006.01]
L	G01H 11/00	Measuring mechanical vibrations or ultrasonic, sonic or infrasonic waves by detecting changes in electric or magnetic properties [1,2006.01]
L	G01H 17/00	Measuring mechanical vibrations or ultrasonic, sonic or infrasonic waves, not provided for in the other groups of this subclass [4,2006.01]
	G01J	
L	G01J 1/54	• • by observing photo-reactions between gases [1,2006.01]
	G01L	
L	G01L 11/06	• • Ultrasonic means [6,2006.01]
	G01M	
M	G01M 3/24	••• using infrasonic, sonic —or ultrasonic vibrations [1,2006.01]
	G01N	
L	G01N 17/02	 Electrochemical measuring systems for weathering, corrosion or corrosion-protection measurement (G01N 17/04 takes precedence) [5,2006.01]
L	G01N 29/00	Investigating or analysing materials by the use of ultrasonic, sonic or infrasonic waves; Visualisation of the interior of objects by transmitting ultrasonic or sonic waves through the object (G01N 3/00-G01N 27/00 take precedence) [1,4,2006.01]
L	G01N 29/34	Generating the ultrasonic, sonic or infrasonic waves [2006.01]
D	G01N 33/574	(transferred to G01N 33/575-G01N 33/57555)
N	G01N 33/575	•••• for cancer [2026.01]
N	G01N 33/57505	••••• of the blood, e.g. leukaemia [2026.01]
N	G01N 33/5751	••••• of the skin, e.g. melanoma [2026.01]
N	G01N 33/57515	••••• of the breast [2026.01]
N N	G01N 33/5752 G01N 33/57525	••••• of the lungs [2026.01]
N	G01N 33/5753	••••• of the liver or pancreas [2026.01] ••••• of the stomach or small intestine [2026.01]
N	G01N 33/57535	••••• of the large intestine, e.g. colon, rectum or anus [2026.01]
N	G01N 33/5754	••••• of the renal system, e.g. kidneys or ureters [2026.01]
N	G01N 33/57545	••••• of the ovaries [2026.01]
Ν	G01N 33/5755	••••• of the uterine cervix, uterine corpus or endometrium [2026.01]
Ν	G01N 33/57555	••••• of the prostate [2026.01]
	G01P	
М	G01P	Note(s) [4]
		 This subclass <u>covers</u> measuring direction or velocity of flowing fluids using propagation effects of radiowaves or other waves caused in the fluid itself, e.g. b
		lacer anomameter, or by ultracenic flaumeter with "aing around avetem"

laser anemometer —or by ultrasonic flowmeter with "sing-around-system".

2. Attention is drawn to the Notes following the title of class G01.

	G01R	
M	G01R 31/00	Arrangements for testing electric properties; Arrangements for locating electric faults; Arrangements for electrical testing characterised by what is being tested not provided for elsewhere (testing or measuring semiconductors or solid state devices during manufacture H01L 21/66 H10P 74/00; testing line transmission systems H04B 3/46) [1,2006.01]
M	G01R 31/10	• • by increasing destruction at fault, e.g. burning-in by using a pulse generator operating a special programme program [1,2006.01]
М	G01R 31/26	 Testing of individual semiconductor devices (testing or measuring during manufacture or treatment H01L 21/66 H10P 74/00; testing of photovoltaic devices H02S 50/10) [1,2,2006.01,2014.01,2020.01]
L	G01R 33/09	• • • Magneto-resistive devices [6,2006.01]
	G01S	
M	G01S 1/72	 using ultrasonic, sonic — or infrasonic waves [1,2006.01]
M	G01S 3/00	Direction-finders for determining the direction from which infrasonic, sonic, ultrasonic, or electromagnetic waves, or particle emission, not having a directional significance, are being received (position-fixing by co-ordinating a plurality of determinations of direction or position lines G01S 5/00) [1,2006.01]
M	G01S 3/80	• using ultrasonic, sonic — or infrasonic waves [1,2006.01]
M M	G01S 5/18 G01S 7/10	• using ultrasonic, sonic —or infrasonic waves [1,2006.01]
		•••• Providing two-dimensional [2D] co-ordinated display of distance and direction [1,2006.01]
M	G01S 7/20	•••• Stereoscopic displays; Three-dimensional [3D] displays; Pseudo-three dimensional 3D displays [1,2006.01]
L	G01S 11/14	• using ultrasonic, sonic or infrasonic waves [5,2006.01]
M	G01S 13/72	• • for two-dimensional [2D] tracking, e.g. combination of angle and range tracking, track-while-scan radar [3,2006.01]
M	G01S 17/894	• • • • Three-dimensional [3D] imaging with simultaneous measurement of time-of-flight at a two-dimensional [2D] array of receiver pixels, e.g. time-of-flight cameras or flash lidar [2020.01]
	G02B	
L M	G02B 7/40 G02B 30/34	 • using time delay of the reflected waves, e.g. of ultrasonic waves [5,2006.01,2021.01] • Stereoscopes providing a stereoscopic pair of separated images corresponding to parallactically displaced views of the same object, e.g. three-dimensional [3D] slide viewers [2020.01]
M	G02B 30/50	• the image being built up from image elements distributed over a <i>three-dimensional</i> [3D] volume, e.g. voxels [2020.01]
M	G02B 30/52	• • the <i>three-dimensional</i> [3D] volume being constructed from a stack or sequence of <i>two-dimensional</i> [2D] planes, e.g. depth sampling systems [2020.01]
M	G02B 30/54	• • the three-dimensional [3D] volume being generated by moving a two-dimensional [2D] surface, e.g. by vibrating or rotating the 2D surface [2020.01]
	G02C	
М	G02C 11/06	 Hearing aids (construction of electric hearing aids H04R 25/00) [1,2006.01]
	G03B	
L	G03B 27/36	• • • by mechanical connections, e.g. by cam, by linkage [1,2006.01]
L	G03B 42/06	• using ultrasonic, sonic or infrasonic waves [4,2006.01,2021.01]
	G03C	
M	G03C 1/025	• • Physical treatment of emulsions, e.g. by ultrasonies ultrasounds, refrigeration — or pressure (coating — or drying G03C 1/74) [5,2006.01]
L	G03C 1/705	 Compositions containing chalcogenides, metals or alloys thereof, as photosensitive substances, e.g. photodope systems [5,2006.01]
М	G03C 9/08	• producing three-dimensional [3D] images [1,2006.01]
	G03F	

M	G03F 7/00	Photomechanical, e.g. photolithographic, production of textured or patterned surfaces, e.g. printed surfaces; Materials therefor, e.g. comprising photoresists; Apparatus specially adapted therefor (using photoresist structures for special production processes, <u>see</u> the relevant places, e.g. B44C, H01L, e.g. H01L 21/00, H10P 76/00, H05K) [1,3,5,2006.01]
M	G03G	ELECTROGRAPHY; ELECTROPHOTOGRAPHY; MAGNETOGRAPHY (information storage based on relative movement between record carrier and transducer G11B; static stores with means for writing-in or reading-out information G11C; recording of television signals H04N 5/76)
M	G03G 5/00	Recording-members for original recording by exposure, e.g. to light, to heat —or to electrons; Manufacture thereof; Selection of materials therefor—or thereof electrons; Manufacture thereof; Selection of materials therefor—or thereof electrons; Manufacture thereof; Selection of materials therefor—or the electrons; Manufacture thereof electrons is the electrons of the electrons
M	G03G 5/14	• Inert intermediate or cover layers for charge-receiving layers (-G03G 5/04 takes precedence for photoconductive, charge-generation or charge-transporting layers G03G 5/04) [2,5,2006.01]
M	G03G 7/00	Selection of materials for use in image-receiving members, i.e. for reversal by physical contact; Manufacture thereof (photosensitive materials for photographic purposes G03C) [1,2006.01]
М	G03G 13/02	• Sensitising, i.e. laying-down a uniform charge (devices for corona discharge per se H01T 19/00) [1,2006.01]
М	G03G 13/045	• • Charging or discharging distinct portions of the charge pattern on the recording material, e.g. discharging non-image areas —or contrast enhancement (G03G 13/34, G03G 15/36 —G03G 21/06 take precedence) [6,2006.01]
M	G03G 13/05	 Imagewise charging, i.e. laying-down a charge in the configuration of an original image using a modulated stream of charged particles, e.g. of corona ions, modulated by a photoconductive control screen bearing a charge pattern or by optically activated charging means (using charging means controlled by electric image signals B41J) [6,2006.01]
М	G03G 15/05	• for imagewise charging, e.g. photoconductive control screen , or optically activated charging means (charging means controlled by electric image signals B41J) [6,2006.01]
	G03H	
М	G03H 3/00	Holographic processes or apparatus using ultrasonic, sonic —or infrasonic waves for obtaining holograms; Processes or apparatus for obtaining an optical image from them (G03H 1/22 takes precedence) [2,2006.01]
	G04B	
L	G04B 21/00	Indicating the time by acoustic means (at preselected times G04B 23/00; by electro- acoustic means G04C 21/04; sound-producing apparatus per se G10) [1,2006.01]
L	G04B 21/08	• • Sounding bodies; Whistles; Musical apparatus (with electro-acoustic transmitters G04C 21/00) [1,2006.01]
М	G04C	ELECTROMECHANICAL CLOCKS OR WATCHES (mechanical parts of clocks or watches in general G04B; electronic time-pieces with no moving parts, electronic circuitry for producing timing pulses G04G)
M	G04C 1/00	Winding mechanical clocks electrically (winding mechanically G04B 3/00) [1,2006.01]
М	G04C 1/10	• Protection against overwinding (in mechanical clocks or watches G04B 1/20, G04B 3/06 G04B 3/10) [1,2006.01]
М	G04C 3/033	• • using torsion pendulums; using conical pendulums (construction thereof G04B 17/00) [3,2006.01]
М	G04C 9/00	Electrically-actuated devices for setting the time-indicating means (of secondary clocks G04C 13/03 ; radio-controlled time-pieces G04R) [1,3,2006.01]
M	G04C 11/00	Synchronisation of independently-driven clocks (radio-controlled time-pieces G04R) [1,2006.01]
М	G04C 11/04	• over a line (transmitting time signals over telephone networks H04M 11/06) [1,2006.01]
M	G04C 17/00	Indicating the time optically by electric means (G04C 19/00 takes precedence; liquid erystal materials C09K 19/00; by mechanical means G04B 19/00, G04B 19/20) [1,3,2006.01]
M L	G04C 21/04 G04C 21/12	 Indicating the time of the day (acoustic indication of time G04B 21/00) [1,2006.01] by electro-acoustic means [1,2006.01]

Compilation of amendments between 2025.01 and 2026.01 IPC L G04C 21/14 • • • Electro-acoustic time announcement, i.e. spoken [1,2006.01] G04C 21/28 L • • by closing a contact to put into action electro-acoustic means, e.g. awakening by music [1,2006.01] G04C 23/00 M Clocks with attached or built-in means operating any device at preselected times or after preselected time-intervals (if restricted to producing acoustic time signals by electrical means G04C 21/00 ; mechanical alarm clocks G04B 23/02 ; apparatus which ean be set and started to measure-off predetermined intervals G04F 3/06; time or time-programme switches which automatically terminate their operation after the programme is completed H01H 43/00) [1,2006.01] G04F M G04F 7/06 running only during the time interval to be measured, e.g. stop watch stopwatches [1,2006.01] **G05B** М G05B 9/00 Safety arrangements (G05B 7/00 takes precedence; safety arrangements in programme program-control systems G05B 19/048, G05B 19/406) [1,2006.01] G05B 19/00 M Programme Program-control systems [1,2006.01] G05B 19/04 M Programme-Program control other than numerical control, i.e. in sequence controllers or logic controllers (G05B 19/418 takes precedence) [1,2006.01] M G05B 19/07 • • • where the programme program is defined in the fixed connection of electrical elements, e.g. potentiometers, counters -or transistors [6,2006.01] M G05B 19/18 • • Numerical control [NC], i.e. automatically operating machines, in particular machine tools, e.g. in a manufacturing environment, so as to execute positioning, movement or co-ordinated operations by means of programme-program data in numerical form (G05B 19/418 takes precedence) [1,6,2006.01] M G05B 19/4068 •••• Verifying part programme-program on screen, by drawing or other means [6,2006.01] M G05B 19/4093 • • • characterised by part programming, e.g. entry of geometrical information as taken from a technical drawing, combining this with machining and material information to obtain control information, named part programme program, for the NC machine [6,2006.01] M G05B 19/4099 • • • • Surface or curve machining, making three-dimensional [3D] objects, e.g. desktop manufacturing [6,2006.01] M G05B 19/4155 • • • characterised by programme program execution, i.e. part programme program or machine function execution, e.g. selection of a programme program [6,2006.01] M G05B 19/42 • • Recording and playback systems, i.e. in which the programme program is recorded from a cycle of operations, e.g. the cycle of operations being manually controlled, after which this record is played back on the same machine [1,2006.01] • • • Teaching successive positions by tracking the position of a joystick or handle to control L G05B 19/427 the positioning servo of the tool head, leader-follower control (G05B 19/423 takes precedence) [6,2006.01] М G05B 23/00 Testing or monitoring of control systems or parts thereof (monitoring of programme program-control systems G05B 19/048, G05B 19/406) [1,2006.01] **G05D** M G05D 1/43 • • Control of position or course in two dimensions [2D] [2024.01] G05D 1/46 M • • Control of position or course in three dimensions [3D] [2024.01] G05D 111/20 L Acoustic signals, e.g. ultrasonic signals [2024.01] G05G М G05G 21/00 Mechanical apparatus for control of a series of operations, i.e. programme-program

		control, e.g. involving a set of cams (G05G 5/02 takes precedence) [1,2006.01]	
M	G06	COMPUTING OR CALCULATING; CALCULATING OR COUNTING	
	G06D		
М	G06D 1/00	Details, e.g. functional units (individual logic elements F15C; valves F16K) [1,2006.01]	
	G06F		
С	G06F 1/18	• • Packaging or power distribution [5,2006.01,2026.01]	
Ν	G06F 1/183	• • • Internal mounting support structures, e.g. for supporting printed circuit boards [202	6.01 _.
Ν	G06F 1/184	•••• Mounting of motherboards [2026.01]	
Ν	G06F 1/185	•••• Mounting of expansion boards [2026.01]	
			35/6

	•	
Ν	G06F 1/186	••••• Securing of expansion boards in correspondence to slots provided at the computer enclosure [2026.01]
Ν	G06F 1/187	•••• Mounting of fixed or removable disk drives [2026.01]
Ν	G06F 1/188	•••• Mounting of power supply units [2026.01]
М	G06F 3/0346	•••• with detection of the device orientation or free movement in a <i>three-dimensional</i> [3D] space, e.g. 3D mice, 6-DOF [six degrees of freedom] pointers using gyroscopes, accelerometers or tilt-sensors [2013.01]
М	G06F 3/0354	•••• with detection of <i>two-dimensional</i> [2D] relative movements between the device, or an operating part thereof, and a plane or surface, e.g. 2D mice, trackballs, pens or pucks [2013.01]
М	G06F 3/0362	•••• with detection of <i>one-dimensional</i> [1D] translations or rotations of an operating part of the device, e.g. scroll wheels, sliders, knobs, rollers or belts [2013.01]
M	G06F 3/04815	•••• Interaction with a metaphor-based environment or interaction object displayed as three-dimensional [3D], e.g. changing the user viewpoint with respect to the environment or object [2022.01]
L	G06F 7/08	• • Sorting, i.e. grouping record carriers in numerical or other ordered sequence according to the classification of at least some of the information they carry (by merging two or more sets of carriers in ordered sequence G06F 7/16) [1,2006.01]
С	G06F 11/14	• • Error detection or correction of the data by redundancy in operation, e.g. by using
		different operation sequences leading to the same result (G06F 11/16 takes precedence
		operations (error detection or correction of the data by redundancy in hardware
		G06F 11/16) [3,2006.01,2026.01]
Ν	G06F 11/1446	••• Point-in-time backing up or restoration of persistent data [2026.01]
Ν	G06F 11/1471	••• involving logging of persistent data for recovery [2026.01]
N	G06F 11/1474	• • • in transactions (updating of structured data in databases G06F 16/23) [2026.01]
N	G06F 11/1479	• • • Generic software techniques for error detection or fault masking [2026.01]
N	G06F 11/1482	•••• using middleware or operating system [OS] functionalities [2026.01]
N	G06F 11/1487	•••• using N-version programming [2026.01]
N	G06F 11/1489	•••• using recovery blocks [2026.01]
Ν	G06F 11/1492	•••• using run-time replication performed by the application software, e.g. N-modular type [2026.01]
N	G06F 11/1497	• • • Time redundant execution of software on a single processing unit [2026.01]
L L	G06F 16/45 G06F 16/55	• Clustering; Classification [2019.01]• Clustering; Classification [2019.01]
L	G06F 16/65	• • Clustering; Classification [2019.01]
M	G06F 16/74	Browsing; Visualisation therefor (end-user interfaces for requesting or interacting with
		video content, e.g. video on demand interfaces or electronic program programme guides, H04N 21/472) [2019.01]
L	G06F 16/75	• • Clustering; Classification [2019.01]
L	G06F 16/906	•• Clustering; Classification [2019.01]
L L	G06F 18/23213 G06F 18/24	•••• with fixed number of clusters, e.g. K-means clustering [2023.01]•• Classification techniques [2023.01]
L	G06F 18/2433	Single-class perspective, e.g. one-against-all classification; Novelty detection; Outlier detection [2023.01]
L	G06F 30/323	• • • Translation or migration, e.g. logic to logic, hardware description language [HDL] translation or netlist translation [2020.01]
L	G06F 30/327	Logic synthesis; Behaviour synthesis, e.g. mapping logic, HDL to netlist, high-level language to RTL or netlist [2020.01]
М	G06F 40/183	• • • Tabulation, i.e. one-dimensional [1D] positioning [2020.01]
М	G06F 113/10	• Additive manufacturing, e.g. <i>three-dimensional</i> [3D] printing [2020.01]
M	G06G	ANALOGUE COMPUTERS (analogue optical computing devices G06E 3/00 ; computer systems based on specific computational models G06N)
М	G06G 1/00	Hand-manipulated computing devices (planimeters G01B 5/26) [1,2006.01]
M	G06G 5/00	Devices in which the computing operation is performed by means of fluid-pressure elements (such elements in general F15C) [1,2006.01]
М	G06G 7/00	Devices in which the computing operation is performed by varying electric or magnetic quantities (neural networks for image data processing G06T; speech analysis or synthesis G10L) [1,2006.01]

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М	G06G 7/04	 Input or output devices (graph readers G06K 11/00; using function plotters, co-ordinate plotters G06K 15/22) [1,2006.01]
M	G06G 7/12	 Arrangements for performing computing operations, e.g. amplifiers specially adapted therefor (amplifiers in general H03F) [1,2006.01]
M	G06G 7/164	••• using means for evaluating powers, e.g. quarter square multiplier (for evaluating powers G06G 7/20) [3,2006.01]
M	G06G 7/19	 for forming integrals of products, e.g. Fourier integrals, Laplace integrals —or correlation integrals; for analysis or synthesis of functions using orthogonal functions —(Fourier or spectrum analysis G01R 23/16) [1,3,2006.01]
L M	G06G 7/195 G06G 7/20	 • • • using electro-acoustic elements [3,2006.01] • • for evaluating powers, roots, polynomes, mean square values — or standard deviation (G06G 7/122, G06G 7/28 take precedence; gamma correction in television systems H04N 5/202, H04N 9/69) [1,3,2006.01]
M	G06G 7/26	 Arbitrary function generators (using orthogonal functions, e.g. Fourier series, G06G 7/19 ; using curve follower G06K 11/02) [1,2006.01]
M	G06G 7/40	•••• of partial differential equations (simulating specific devices analogue computers for specific processes, systems or devices, e.g. simulators, G06G 7/48) [1,2006.01]
M	G06G 7/625	• • • for impedance networks, e.g. determining response, determining poles or zeros —or determining the Nyquist diagram —(measuring impedance G01R 27/00) [2,2006.01]
М	G06G 7/72	••• Flight simulators (Link trainers G09B 9/08) [1,2006.01]
M	G06J	HYBRID COMPUTING ARRANGEMENTS (optical hybrid computing devices G06E 3/0 ; computer systems based on specific computational models—G06N; neural networl for image data processing G06T; analogue/digital conversion, in general H03M 1/00
M	G06J 1/00	Hybrid computing arrangements (digitally-programmed analogue computers G06G 7/06) [1,2006.01]
M	G06M	COUNTING MECHANISMS; COUNTING OF OBJECTS NOT OTHERWISE PROVIDED FOR (counting by measuring volume or weight of articles to be counted—G01F; G01G; adaptation of counters to electricity meters in electromechanical arrangements for measuring time integral of electric power or current G01R 11/16; computers G06C-G06J; counting electric pulses H03K; counting characters, words or messages in switching networks for transmission of digital information H04L 12/(counting arrangements in telephonic systems—H04M 15/00)
M	G06M 1/02	Housing (for measuring instruments in general G01D) [1,2006.01]
M	G06M 3/00	Counters with additional facilities (generating electric pulses at random intervals
		H03K 3/84) [1,2006.01]
	G06M 3/06 G06M 3/10	 for printing or separately displaying result of count (display systems G09) [1,2006.01] for counting denominations with unequal numbers in each stage, e.g. degrees and
M		 for printing or separately displaying result of count (display systems G09) [1,2006.01] for counting denominations with unequal numbers in each stage, e.g. degrees and minutes of angle (transfer mechanism therefor G06M 1/20) [1,2006.01]
M	G06M 3/10	 for printing or separately displaying result of count (display systems G09) [1,2006.01] for counting denominations with unequal numbers in each stage, e.g. degrees and minutes of angle (transfer mechanism therefor G06M 1/20) [1,2006.01] with provision for distinguishing between different sizes of objects (investigating partie)
M	G06M 3/10 G06M 11/04	 for printing or separately displaying result of count (display systems G09) [1,2006.01] for counting denominations with unequal numbers in each stage, e.g. degrees and minutes of angle (transfer mechanism therefor G06M 1/20) [1,2006.01] with provision for distinguishing between different sizes of objects (investigating partic)
M M L	G06M 3/10 G06M 11/04 G06N	 for printing or separately displaying result of count (display systems G09) [1,2006.01] for counting denominations with unequal numbers in each stage, e.g. degrees and minutes of angle (transfer mechanism therefor G06M 1/20) [1,2006.01] with provision for distinguishing between different sizes of objects (investigating partic size in general G01N 15/00) [1,2006.01] Physical realisations or architectures of quantum processors or components for
M M L	G06M 3/10 G06M 11/04 G06N G06N 10/40	 for printing or separately displaying result of count (display systems G09) [1,2006.01] for counting denominations with unequal numbers in each stage, e.g. degrees and minutes of angle (transfer mechanism therefor G06M 1/20) [1,2006.01] with provision for distinguishing between different sizes of objects (investigating partic size in general G01N 15/00) [1,2006.01] Physical realisations or architectures of quantum processors or components for manipulating qubits, e.g. qubit coupling or qubit control [2022.01] Quantum programming, e.g. interfaces, languages or software-development kits for creating or handling programs capable of running on quantum computers; Platforms for simulating or accessing quantum computers, e.g. cloud-based quantum computing
M M L	G06M 3/10 G06M 11/04 G06N G06N 10/40 G06N 10/80	 for printing or separately displaying result of count (display systems G09) [1,2006.01] for counting denominations with unequal numbers in each stage, e.g. degrees and minutes of angle (transfer mechanism therefor G06M 1/20) [1,2006.01] with provision for distinguishing between different sizes of objects (investigating partic size in general G01N 15/00) [1,2006.01] Physical realisations or architectures of quantum processors or components for manipulating qubits, e.g. qubit coupling or qubit control [2022.01] Quantum programming, e.g. interfaces, languages or software-development kits for creating or handling programs capable of running on quantum computers; Platforms for simulating or accessing quantum computers, e.g. cloud-based quantum computing [2022.01]
M M L	G06M 3/10 G06M 11/04 G06N G06N 10/40 G06N 10/80	 for printing or separately displaying result of count (display systems G09) [1,2006.01] for counting denominations with unequal numbers in each stage, e.g. degrees and minutes of angle (transfer mechanism therefor G06M 1/20) [1,2006.01] with provision for distinguishing between different sizes of objects (investigating partic size in general G01N 15/00) [1,2006.01] Physical realisations or architectures of quantum processors or components for manipulating qubits, e.g. qubit coupling or qubit control [2022.01] Quantum programming, e.g. interfaces, languages or software-development kits for creating or handling programs capable of running on quantum computers; Platforms for simulating or accessing quantum computers, e.g. cloud-based quantum computing [2022.01] Administration; Management [2006.01,2012.01,2023.01,2026.01]
M M L L	G06M 3/10 G06M 11/04 G06N G06N 10/40 G06N 10/80 G06Q G06Q 10/00	 for printing or separately displaying result of count — (display systems G09) [1,2006.01] for counting denominations with unequal numbers in each stage, e.g. degrees and minutes of angle — (transfer mechanism therefor G06M 1/20) [1,2006.01] with provision for distinguishing between different sizes of objects — (investigating particles ize in general G01N 15/00) [1,2006.01] Physical realisations or architectures of quantum processors or components for manipulating qubits, e.g. qubit coupling or qubit control [2022.01] Quantum programming, e.g. interfaces, languages or software-development kits for creating or handling programs capable of running on quantum computers; Platforms for simulating or accessing quantum computers, e.g. cloud-based quantum computing [2022.01]

		H03K 3/84) [1,2006.01]
M M	G06M 3/06 G06M 3/10	 for printing or separately displaying result of count -(display systems G09) [1,2006.01] for counting denominations with unequal numbers in each stage, e.g. degrees and minutes of angle (transfer mechanism therefor G06M 1/20) [1,2006.01]
М	G06M 11/04	• • with provision for distinguishing between different sizes of objects -(investigating particle size in general G01N 15/00) [1,2006.01]
	G06N	
L	G06N 10/40	 Physical realisations or architectures of quantum processors or components for manipulating qubits, e.g. qubit coupling or qubit control [2022.01]
L	G06N 10/80	 Quantum programming, e.g. interfaces, languages or software-development kits for creating or handling programs capable of running on quantum computers; Platforms for simulating or accessing quantum computers, e.g. cloud-based quantum computing [2022.01]
	G06Q	
С	G06Q 10/00	Administration; Management [2006.01,2012.01,2023.01,2026.01]
L	G06Q 10/0875	• • • Itemisation or classification of parts, supplies or services, e.g. bill of materials [2023.01]
Ν	G06Q 10/40	Business processes related to social networking or social networking services [2026.01]
Ν	G06Q 10/42	• • Determination of affinities or common interests between users [2026.01]
Ν	G06Q 10/44	• • Identification of trends within social networks, e.g. identification of trending topics [2026.01]
Ν	G06Q 10/46	• • Determination of level of influence of users within social networking services [2026.01]
Ν	G06Q 10/48	• • using social graphs [2026.01]
	G06T	
		9710
		37/6

L	G06T	Subclass index	
M	G06T 3/067	GENERAL PURPOSE IMAGE DATA PROCESSING GEOMETRIC IMAGE TRANSFORMATIONS IN THE PLANE OF THE IMAGE IMAGE ENHANCEMENT OR RESTORATION IMAGE ANALYSIS IMAGE CODING 2D [TWO DIMENSIONAL] IMAGE GENERATION ANIMATION 3D [THREE DIMENSIONAL] IMAGE RENDERING 3D MODELLING FOR COMPUTER GRAPHICS MANIPULATING 3D MODELS OR IMAGES FOR COMPUTER GRAPHICS • Reshaping or unfolding three-dimensional [3D] tree structures onto two-dimplanes [2024.01]	G06T 5/00 G06T 7/00 G06T 9/00 G06T 11/00 G06T 13/00 G06T 15/00 G06T 17/00 G06T 19/00
C	G06T 11/00	2D [Two Dimensional Two-dimensional [2D] image generation [6,2006.01,	2026.01]
N	G06T 11/10	 Texturing; Colouring; Generation of textures or colours (retouching, inpainting removal G06T 5/77) [2026.01] 	g or scratch
С	G06T 11/20	 Drawing from basic elements, e.g. lines or circles [6,2006.01,2026.01] 	
Ν	G06T 11/23	• • using straight lines or curves [2026.01]	
Ν	G06T 11/26	• • Drawing of charts or graphs [2026.01]	
M	G06T 11/40	 Filling a planar surface surfaces by adding surface attributes, e.g. colour additional textures [6,2006.01] 	ding colours o
С	G06T 11/60	 Editing figures and text Creating or editing images; Combining figures or ima [6,2006.01,2026.01] 	ges with text
Ν	G06T 11/65	•• on geographic maps [2026.01]	
D	G06T 11/80	(transferred to G06T 11/60-G06T 11/65)	
N	G06T 12/00	Tomographic reconstruction from projections [2026.01]	
N	G06T 12/10	 Image preprocessing, e.g. calibration, positioning of sources or scatter correct [2026.01] 	etion
Ν	G06T 12/20	• Inverse problem, i.e. transformations from projection space into object space	[2026.01]
Ν	G06T 12/30	 Image post-processing, e.g. metal artefact correction [2026.01] 	
M	G06T 13/20	• 3D [Three Dimensional Three-dimensional [3D] animation [2011.01]	
M	G06T 13/80	 Two-dimensional [2D] animation, e.g. using sprites [2011.01] 	
М	G06T 15/00	3D [Three Dimensional Three-dimensional [3D] image rendering [6,2006.0	1,2011.01]
М	G06T 17/00	Three-dimensional [3D] modelling for computer graphics [6,2006.01]	
М	G06T 19/00	Manipulating <i>three-dimensional [3D]</i> models or images for computer grap [2011.01]	ohics
М	G06T 19/20	 Editing of three-dimensional [3D] images, e.g. changing shapes or colours, a or positioning parts [2011.01] 	ligning objects
	G06V		

L	G06V	 Note(s) [2022.01] 1. This subclass covers: methods or arrangements for pattern recognition or machine learning specially adapted for images or video. 2. In this subclass, the following terms or expressions are used with the meaning indicated: "pattern recognition" means detection, categorisation, authentication and identification of patterns for explanatory purposes or to derive a certain meaning in images or video, by acquiring, preprocessing or extracting distinctive features and matching, clustering or classifying these features or representations thereof; "feature extraction" means deriving descriptive or quantitative measures from images or video; "clustering" means grouping or separating patterns according to their closeness or dissimilarity; "classification" means the identification of an object/feature as belonging to a class of objects/features by assigning of a label. 3. In this subclass, subject matter classified in groups G06V 20/00-G06V 40/00 is also classified in groups G06V 10/10 or G06V 10/20 respectively, if recognition relies on specific processing at the stages of acquisition or preprocessing.
L	G06V 10/26	Segmentation of patterns in the image field; Cutting or merging of image elements to establish the pattern region, e.g. clustering-based techniques; Detection of occlusion [2022.01]
L	G06V 10/762	• • using clustering, e.g. of similar faces in social networks [2022.01]
L	G06V 10/764	• • using classification, e.g. of video objects [2022.01]
L	G06V 10/80	• • • Fusion, i.e. combining data from various sources at the sensor level, preprocessing level, feature extraction level or classification level (multimodal speaker identification or verification G10L 17/10) [2022.01]
М	G06V 20/64	• • Three-dimensional [3D] objects [2022.01]
M	G06V 30/00	Note(s) [2022.01] This group <u>covers</u> recognition of characters or digital ink, where the characters or the digital ink can include representations in three dimensions [3D], e.g. as written by performing gestures in the air.
M L	G06V 30/228 G06V 30/413	• • • of three-dimensional [3D] handwriting, e.g. writing in the air [2022.01] • • • Classification of content, e.g. text, photographs or tables [2022.01]
M	G07G	REGISTERING THE RECEIPT OF CASH, VALUABLES, OR TOKENS (digital
	G07 G	computing in general G06C , G06F) [4]
М	G07G 1/00	Cash registers (alarm indicators G07G 3/00) [1,2006.01]
М	G07G 1/01	• Details for indicating (displaying information in general G09F, G09G) [4,2006.01]
M M	G07G 1/12 G07G 1/14	 electronically operated (digital data processing aspects G06Q 20/00) [4,2006.01] Systems including one or more distant stations co-operating with a central processing unit (data transmission in general H04L; telemetry systems for selectively calling a substation from a main station H04Q 9/00) [4,2006.01]
М	G07G 5/00	Receipt-giving machines (cash registers giving receipts G07G 1/00) [1,2006.01]
M	G08B	SIGNALLING OR SYSTEMS, e.g. PERSONAL CALLING SYSTEMS; ORDER TELEGRAPHS; ALARM SYSTEMS
M	G08B 3/00	Audible signalling systems ; Audible , e.g. audible personal calling systems [1,2006.01]
M	G08B 5/00	Visible signalling systems, e.g. <i>visible</i> personal calling systems — or remote indication of seats occupied [1,2006.01]
М	G08B 6/00	Tactile signalling systems, e.g. <i>tactile</i> personal calling systems [6,2006.01]
M	G08B 7/00	Signalling systems according to <i>two or</i> more than one of groups G08B 3/00-G08B 6/00 ; Personal calling systems according to more than one of groups G08B 3/00-G08B 6/00 [1,2006.01]
	G08G	
L	G08G 1/04	• • using optical or ultrasonic detectors [1,2006.01]
	G09B	

	G16Y	
М	G16B 15/00	ICT specially adapted for analysing two-dimensional [2D] or three-dimensional [3D] molecular structures, e.g. structural or functional relations or structure alignment [2019.01]
	G16B	
М	G11C 19/38	• two-dimensional [2D], e.g. horizontal and vertical shift registers [7,2006.01]
М	G11C 11/065	two coincident partial currents both for reading and for writing [2,2006.01] ••••• word-organized organised, such as two-dimensional [2D]-organization organisation, or linear selection, i.e. for selection of all the elements of a word by means of a single full current for reading [2,2006.01]
M	G11C G11C 11/063	•••• bit-organized organised, such as -2L/2D -, 3D organization organisation or three-dimensional [3D]-organisation, i.e. for selection of an element by means of at least
IVI		dimensions [3D], e.g. volume storage (G11B 7/24038 takes precedence) [2013.01]
M	G11B G11B 7/24044	• • • • for storing optical interference patterns, e.g. holograms; for storing data in three
		[5,2006.01]
L	G10K 11/30	networks comprising electro-acoustic elements H03H 9/00) [3,2006.01] • using time-delay networks comprising electromechanical or electro-acoustic devices
L	G10K 11/36	[6,2006.01] • Devices for manipulating acoustic surface waves (electro-acoustic amplifiers H03F 13/00;
L	G10K 11/178	 arrangements for generating mechanical vibrations in fluids; the production of sounds which may not be audible to human beings but which are audible to animals. In this subclass, the following terms are used with the meanings indicated: "acoustics" and "sound" cover the technical field dealing with mechanical vibrations at all infrasonic-, sonic- and ultrasonic frequencies. However, generation or transmission of mechanical waves, in general, is covered by subclass B06B, subject to the exception specified in Note (1) above. **• by electro-acoustically regenerating the original acoustic waves in anti-phase
L	G10K	Note(s) [6] 1. This subclass <u>covers</u> :
	G10K	
М	G09F 1/06	•• to be erected in three dimensions [3D] (G09F 1/08 takes precedence) [1,2006.01]
	G09F	
М	G09B 7/12	 answer, e.g. repeating the question —or supplying further information [1,2006.01] characterised by modifying the teaching program in response to a wrong answer, e.g. repeating the question —or supplying further information [1,2006.01]
М	G09B 7/08	answer, e.g. repeating the question — or supplying a further explanation [1,2006.01] • • characterised by modifying the teaching program in response to a wrong
М	G09B 7/04	• • characterised by modifying the teaching programme program in response to a wrong

M G16Y

Note(s) [2020.01,2026.01]

- This subclass is for obligatory secondary classification in the sense of paragraph.107bis of the Guide to the IPC. Therefore, the classification symbols of this subclass are not listed first when assigned to patent documents. Secondary classification symbols may be assigned for either invention information or additional information, as appropriate.
- 2. This subclass covers inter-networking of physical objects ("things") that embed technology enabling the things to sense and collect information from their internal state or their external environment, wherein the information is processed by the things or by other devices, e.g. servers, to be output to the things, to other things or to other devices, and enabling these things to be connected to the Internet either directly or indirectly.
 - "Directly connected to Internet" means that a thing possesses a network address of the Internet address space, which is used to communicate over the Internet.
 - "Indirectly connected to Internet" means that a thing is connected to a
 proxy device, which possesses a network address of the Internet address
 space and which communicates over the Internet on behalf of the thing.
 - A network address of the Internet address space is an address uniquely identifying a device in the Internet.
- 3. This subclass does not cover:
 - Mere-mere monitoring, e.g. security cameras, or mere controlling, e.g. remote control arrangements.;
 - Generic generic computing and communicating devices, e.g. computers or telephones
- 4. This subclass is intended to enable a complementary search of subject matter related to IoT by combination of classification symbols of this subclass with classification symbols from other subclasses. Therefore, this subclass covers aspects of IoT (e.g. detection or navigation) that might also be entirely or partially covered elsewhere in the IPC.
- 5. This subclass is for obligatory supplementary classification of subject matter already classified as such in other classification places, when the subject matter contains an aspect of IoT.
- 6. The classification symbols of this subclass are not listed first when assigned to patent documents.
- 7. No systematic reclassification was done when this subclass was introduced. When searching using the symbols of this subclass it should be noted that many documents published before 2020 are not classified in subclass G16Y.

	G21C	
L	G21C 7/06	 by application of neutron-absorbing material, i.e. material with absorption cross-section very much in excess of reflection cross-section [1,2006.01]
	G21F	
L	G21F 5/018	• • Syringe shields or holders (syringe shielding for applying radioactive material to the body A61M 36/08) [5,2006.01]
M	G21K	TECHNIQUES FOR HANDLING OF PARTICLES OR IONISING RADIATION NOT OTHERWISE PROVIDED FOR; IRRADIATION DEVICES; GAMMA RAY OR X-RAY MICROSCOPES [2]
С	G21K 1/00	Arrangements for handling particles or ionising radiation, e.g. focusing or moderating (ionising radiation filters G21K 3/00; production or acceleration of neutrons, electrically-charged particles, neutral molecular beams or neutral atomic beams H05H 3/00-H05H 15/00) [1,2,2006.01,2026.01]
N	G21K 1/20	• for confining charged particles or handling confined charged particles, e.g. ion traps [2026.01]
N	G21K 1/30	 for confining neutral particles or handling confined neutral particles, e.g. atom traps [2026.01]
	H01C	

or more basic types of discharge tubes or lamps [1,2006.01] M H01J 3/40 • Traps Arrangements for removing or diverting unwanted particles, e.g. for negative ions or fringing electrons; Arrangements for velocity or mass selection [1,2006.01] M H01J 29/84 • Traps Arrangements for removing or diverting unwanted particles, e.g. for negative ions of fringing electrons; Arrangements for velocity or mass selection [1,2006.01] M H01J 31/495 • Pick-up tubes adapted for an input of sonic, ultrasonic or mechanical vibrations and having an electric output [1,2006.01]		•	
powdered or granular semi-conducting material [2,2006.01] *** by mechanical means, e.g. sand-blasting, cutting — or ultrasonic treatment [6,2006.01] *** by mechanical means, e.g. sand-blasting, cutting — or ultrasonic treatment [6,2006.01] *** BLECTRIC DISCHARGE TUBES OR DISCHARGE LAMPS (spark-gaps H01T; electric arc lamps with consumable electrodes, of magnetic control means, of screens, or of the mounting or spacing thereof, common to two or more basic types of discharge tubes or lamps (details of electron-optical arrangements or of ion traps—optical arrangements H011 3/00] [1,2006.01] M H01J 3/00 Details of electron-optical or ion-optical arrangements or of ion traps—optical arrangements H011 3/00 [1,2006.01] M H01J 3/40 **Teps—Arrangements for removing or diverting unwanted particles, e.g. for negative ions or fringing electrons; Arrangements for velocity or mass selection [1,2006.01] **Teps—Arrangements for removing or diverting unwanted particles, e.g. for negative ions of fringing electrons; Arrangements for velocity or mass selection [1,2006.01] **Teps—Arrangements for removing or diverting unwanted particles, e.g. for negative ions of fringing electrons; Arrangements for velocity or mass selection [1,2006.01] **Teps—Arrangements for removing or diverting unwanted particles, e.g. for negative ions of fringing electrons; Arrangements for velocity or mass selection [1,2006.01] **Teps—Arrangements for removing or diverting unwanted particles, e.g. for negative ions of fringing electrons; Arrangements for velocity or mass selection [1,2006.01] **Teps—Arrangements for removing or diverting unwanted particles, e.g. for negative ions of fringing electrons; Arrangements for velocity or mass selection [1,2006.01] **Teps—Arrangements for removing or diverting unwanted particles, e.g. for negative ions of fringing electrons; Arrangements for velocity or mass selection [1,2006.01] **Teps—Arrangements for removing or diverting unwanted particles, e.g. for negative ions of fringing electrons; Arrangemen	L	H01C 7/00	resistors made from powdered conducting material or powdered semi-conducting material with or without insulating material (consisting of loose powdered or granular material H01C 8/00; resistors having potential barriers, e.g. field-effect resistors, H10D 1/40-H10D 1/43, H10K 10/10; semiconductor devices sensitive to electromagnetic or corpuscular radiation, e.g. photoresistors, H10F 30/00; magnetic field controlled resistors H10N 50/10; bulk negative resistance effect devices
M H01J ELECTRIC DISCHARGE TUBES OR DISCHARGE LAMPS (spark-gaps H01T; electric arc lamps with consumable electrodes-H05B 1/05B 31/00; particle accelerators H05H) M H01J 1/00 Details of electron-optical arrangements or of the mounting or spacing thereof, common to two or more basic types of discharge tubes or lamps (details of electron-optical arrangements- or of-ion-trapsoptical arrangements H01J 3/00], 12,006.01] M H01J 3/00 Details of electron-optical or ion-optical arrangements or of-ion-trapsoptical arrangements h01J 3/00]. Traps-Arrangements for removing or diverting unwanted particles, e.g., for negative ions or fringing electrons; Arrangements for velocity or mass selection [1,2006.01] M H01J 3/495 - Traps-Arrangements for removing or diverting unwanted particles, e.g., for negative ions or fringing electrons; Arrangements for velocity or mass selection [1,2006.01] - Pick-up tubes adapted for an input of sonic, ultrasonic por mechanical vibrations and having an electric output [1,2006.01] - Pick-up tubes adapted for an input of sonic, ultrasonic por mechanical vibrations and having an electric output [1,2006.01] - Controlling tubes by external information, e.g., programme-program control (H01J 3/7/30 takes precedence) [3,2006.01] D H01L (deleted) D H01L 1/100 (transferred to H10P 95/00) D H01L 21/02 (transferred to H10P 10/00, H10P 96/00, H10P 70/00, H10P 90/00-H10P 95/00) D H01L 21/02 (transferred to H10P 76/00) D H01L 21/03 (transferred to H10P 76/00-H10P 76/20) D H01L 21/04 (transferred to H10P 76/00-H10P 76/20) D H01L 21/05 (transferred to H10P 10/00-H10P 14/00, H10P 95/00) D H01L 21/08 (transferred to H10P 10/00-H10P 14/00, H10P 95/00) D H01L 21/20 (transferred to H10P 14/20) D H01L 21/20 (transferred to H10P 14/20) D H01L 21/20 (transferred to H10P 14/20) D H01L 21/22 (transferred to H10P 14/20) D H01L 21/22 (transferred to H10P 14/20) D H01L 21/22 (transferred to H10P 30/00-H10P 32/10, H10P 32/20-H10P 32/30) D H01L 21/22 (transferred to H10P 30/00) D H01L 21/22 (transferred to H10P 30/00-H	L		
arc lamps with consumable electrodes. H05B H05B 31/00; particle accelerators H05H) M H01J 1/00 Details of electrodes, of magnetic control means, of screens, or of the mounting or spacing thereof, common to two or more basic types of discharge tubes or lamps (details of electron-optical arrangements or of-ion-traps-optical arrangements H01J 3/00) [1,2006.01] M H01J 3/40 Details of electron-optical or ion-optical arrangements or of-ion-traps-common to two or more basic types of discharge tubes or lamps [1,2006.01] M H01J 29/84 Traps-Arrangements for removing or diverting unwanted particles, e.g., for negative ions or fringing electrons; Arrangements for velocity or mass selection [1,2006.01] M H01J 31/495 Treps-Arrangements for removing or diverting unwanted particles, e.g., for negative ions or fringing electrons; Arrangements for velocity or mass selection [1,2006.01] M H01J 37/302 Treps-Arrangements for removing or diverting unwanted particles, e.g., for negative ions or fringing electrons; Arrangements for velocity or mass selection [1,2006.01] M H01J 37/302 Treps-Arrangements for removing or diverting unwanted particles, e.g., for negative ions or fringing electrons; Arrangements for velocity or mass selection [1,2006.01] M H01J 37/302 Treps-Arrangements for removing or diverting unwanted particles, e.g., for negative ions or fringing electrons; Arrangements for velocity or mass selection [1,2006.01] M H01J 37/302 Treps-Arrangements for removing or diverting unwanted particles, e.g., for negative ions or fringing electrons; Arrangements for velocity or mass selection [1,2006.01] M H01J 37/302 Treps-Arrangements for removing or diverting unwanted particles, e.g., for negative ions or fringing electrons; Arrangements for velocity or mass selection [1,2006.01] M H01J 21/200 (transferred to H10P 95/00) M H01L 21/201 (transferred to H10P 10/00, H10P 95/00) M H01L 21/203 (transferred to H10P 10/00, H10P 95/00) M H01L 21/203 (transferred to H10P 10/00, H10P 95/00) M H01L 21/204 (transferred to H10P 10	М	H01C 17/245	••• by mechanical means, e.g. sand-blasting, cutting —or ultrasonic treatment [6,2006.01]
M	M	H01J	
or more basic types of discharge tubes or lamps [1,2006.01] M H01J 3/40 * Trape-Arrangements for removing or diverting unwanted particles, e.g. for negative ions or fringing electrons; Arrangements for velocity or mass selection [1,2006.01] M H01J 39/495 * Trape-Arrangements for removing or diverting unwanted particles, e.g. for negative ions or fringing electrons; Arrangements for velocity or mass selection [1,2006.01] M H01J 37/302 * Pick-up tubes adapted for an input of sonic, ultrasonic ¬or mechanical vibrations and having an electric output [1,2006.01] D H01L (deleted) D H01L Note(s) [2,6,2006.01,2010.01] (deleted) (deleted) D H01L Subclass index (deleted) D H01L 21/00 (transferred to H10P 95/00) D H01L 21/02 (transferred to H10P 95/00) D H01L 21/02 (transferred to H10P 10/00, H10P 56/00, H10P 70/00, H10P 90/00-H10P 95/00) D H01L 21/02 (transferred to H10P 10/00, H10P 56/00, H10P 70/00, H10P 90/00-H10P 95/00) D H01L 21/02 (transferred to H10P 76/00-H10P 76/20) D H01L 21/03 (transferred to H10P 76/00-H10P 76/20) D H01L 21/03 (transferred t	M	H01J 1/00	spacing thereof, common to two or more basic types of discharge tubes or lamps (details of electron-optical arrangements or of ion traps -optical arrangements
or fringing electrons; Arrangements for velocity or mass selection [1,2006.01] N H01J 29/84	M	H01J 3/00	Details of electron-optical or ion-optical arrangements or of ion traps common to two or more basic types of discharge tubes or lamps [1,2006.01]
fringing electrons; Arrangements for velocity or mass selection [1,2006.01] 1	M	H01J 3/40	• Traps-Arrangements for removing or diverting unwanted particles, e.g. for negative ions , or fringing electrons; Arrangements for velocity or mass selection [1,2006.01]
having an electric output [1,2006.01] 1 Controlling tubes by external information, e.g. programme program control (H01J 37/30 takes precedence) [3,2006.01] D H01L (deleted) D H01L Note(s) [2,6,2006.01,2010.01] (deleted) D H01L Subclass index (deleted) D H01L 1/102 (transferred to H10P 95/00) D H01L 21/02 (transferred to H10P 10/00, H10P 56/00, H10P 70/00, H10P 90/00-H10P 95/00) D H01L 21/02 (transferred to H10P 10/00, H10P 56/00, H10P 70/00, H10P 90/00-H10P 95/00) D H01L 21/02 (transferred to H10P 76/00-H10P 76/20) D H01L 21/03 (transferred to H10P 76/00-H10P 76/20) D H01L 21/04 (transferred to H10P 95/00) D H01L 21/18 (transferred to H10P 95/00) D H01L 21/18 (transferred to H10P 10/00-H10P 14/00, H10P 95/00) D H01L 21/20 (transferred to H10P 10/00-H10P 14/20) D H01L 21/20 (transferred to H10P 10/20) D H01L 21/20 (transferred to H10P 10/20) D H01L 21/22 (transferred to H10P 10/22) D H01L 21/22 (transferred to H10P 32/00-H10P 32/10, H10P 32/20-H10P 32/30) D H01L 21/22 (transferred to H10P 32/14) D H01L 21/22 (transferred to H10P 32/14) D H01L 21/22 (transferred to H10P 32/16) D H01L 21/22 (transferred to H10P 32/16) D H01L 21/26 (transferred to H10P 95/00) D H01L 21/26 (transferred to H10P 95/00) D H01L 21/26 (transferred to H10P 34/00) D H01L 21/26 (transferred to H10P 95/00)	М	H01J 29/84	• Traps Arrangements for removing or diverting unwanted particles, e.g. for negative ions or fringing electrons; Arrangements for velocity or mass selection [1,2006.01]
takes precedence) [3,2006.01] D H01L (deleted) D H01L Note(s) [2,6,2006.01,2010.01]	М	H01J 31/495	
(deleted) D H01L Note(s) [2,6,2006.01,2010.01] (deleted) D H01L Subclass index (deleted) D H01L 21/00 (transferred to H10P 95/00) D H01L 21/02 (transferred to H10P 10/00, H10P 56/00, H10P 70/00, H10P 90/00-H10P 95/00) D H01L 21/02 (transferred to H10P 10/00, H10P 56/00, H10P 70/00, H10P 90/00-H10P 95/00) D H01L 21/027 (transferred to H10P 76/00) D H01L 21/033 (transferred to H10P 76/00) D H01L 21/04 (transferred to H10P 95/00) D H01L 21/18 (transferred to H10P 95/00) D H01L 21/18 (transferred to H10P 10/00-H10P 14/00, H10P 95/00) D H01L 21/18 (transferred to H10P 10/00-H10P 14/00, H10P 95/00) D H01L 21/20 (transferred to H10P 10/00-H10P 14/20) D H01L 21/203 (transferred to H10P 10/00, H10P 14/20) D H01L 21/205 (transferred to H10P 14/22) D H01L 21/205 (transferred to H10P 14/26) D H01L 21/228 (transferred to H10P 32/00-H10P 32/10, H10P 32/20-H10P 32/30) D H01L 21/228 (transferred to H10P 32/14) D H01L 21/228 (transferred to H10P 32/16) D H01L 21/261 (transferred to H10P 34/20) D H01L 21/261 (transferred to H10P 34/20) D H01L 21/261 (transferred to H10P 34/20) D H01L 21/263 (transferred to H10P 34/20)	M	H01J 37/302	• • Controlling tubes by external information, e.g. programme program control (H01J 37/304 takes precedence) [3,2006.01]
(deleted) D H01L 21/00 (transferred to H10P 95/00) D H01L 21/02 (transferred to H10P 10/00, H10P 56/00, H10P 70/00, H10P 90/00-H10P 95/00) D H01L 21/02 (transferred to H10P 10/00, H10P 56/00, H10P 70/00, H10P 90/00-H10P 95/00) D H01L 21/02 (transferred to H10P 76/00-H10P 76/20) D H01L 21/027 (transferred to H10P 76/00-H10P 76/20) D H01L 21/033 (transferred to H10P 76/00-H10P 76/20) D H01L 21/04 (transferred to H10P 95/00) D H01L 21/18 (transferred to H10P 10/00-H10P 14/00, H10P 95/00) D H01L 21/18 (transferred to H10P 10/00-H10P 14/00, H10P 95/00) D H01L 21/20 (transferred to H10P 10/00, H10P 95/00) D H01L 21/203 (transferred to H10P 10/00, H10P 14/20) D H01L 21/205 (transferred to H10P 14/24) D H01L 21/208 (transferred to H10P 14/26) D H01L 21/223 (transferred to H10P 32/10, H10P 32/20-H10P 32/30) D H01L 21/225 (transferred to H10P 32/12) D H01L 21/225 (transferred to H10P 32/12) D H01L 21/226 (transferred to H10P 32/16) D H01L 21/24 (transferred to H10P 32/16) D H01L 21/261 (transferred to H10P 34/20) D H01L 21/261 (transferred to H10P 34/20) D H01L 21/263 (transferred to H10P 34/20) D H01L 21/261 (transferred to H10P 34/20)	D	H01L	(deleted)
D H01L 21/00 (transferred to H10P 95/00) D H01L 21/02 (transferred to H10P 10/00, H10P 56/00, H10P 70/00, H10P 90/00-H10P 95/00) D H01L 21/02 (transferred to H10P 10/00, H10P 56/00, H10P 70/00, H10P 90/00-H10P 95/00) D H01L 21/02 (transferred to H10P 76/00-H10P 76/20) D H01L 21/033 (transferred to H10P 76/40) D H01L 21/04 (transferred to H10P 95/00) D H01L 21/18 (transferred to H10P 10/00-H10P 14/00, H10P 95/00) D H01L 21/18 (transferred to H10P 10/00-H10P 14/00, H10P 95/00) D H01L 21/20 (transferred to H10P 10/00-H10P 14/20, H10P 95/00) D H01L 21/203 (transferred to H10P 10/00, H10P 14/20) D H01L 21/203 (transferred to H10P 14/22) D H01L 21/203 (transferred to H10P 14/24) D H01L 21/208 (transferred to H10P 14/26) D H01L 21/22 (transferred to H10P 32/00-H10P 32/10, H10P 32/20-H10P 32/30) D H01L 21/223 (transferred to H10P 32/12) D H01L 21/225 (transferred to H10P 32/16) D H01L 21/226 (transferred to H10P 95/00) D H01L 21/24 (transferred to H10P 95/00) D H01L 21/26 (transferred to H10P 34/00) D H01L 21/261 (transferred to H10P 34/20) D H01L 21/263 (transferred to H10P 34/20)	D	H01L	Note(s) [2,6,2006.01,2010.01]
(deleted)			(deleted)
D H01L 21/02 (transferred to H10P 10/00, H10P 56/00, H10P 70/00, H10P 90/00-H10P 95/00) D H01L 21/02 (transferred to H10P 10/00, H10P 56/00, H10P 70/00, H10P 90/00-H10P 95/00) D H01L 21/027 (transferred to H10P 76/00-H10P 76/20) D H01L 21/033 (transferred to H10P 76/40) D H01L 21/04 (transferred to H10P 95/00) D H01L 21/18 (transferred to H10P 10/00-H10P 14/00, H10P 95/00) D H01L 21/18 (transferred to H10P 10/00-H10P 14/00, H10P 95/00) D H01L 21/20 (transferred to H10P 10/00, H10P 14/20) D H01L 21/203 (transferred to H10P 10/00, H10P 14/20) D H01L 21/203 (transferred to H10P 14/24) D H01L 21/205 (transferred to H10P 14/26) D H01L 21/208 (transferred to H10P 14/26) D H01L 21/22 (transferred to H10P 32/10, H10P 32/20-H10P 32/30) D H01L 21/223 (transferred to H10P 32/12) D H01L 21/225 (transferred to H10P 32/14) D H01L 21/228 (transferred to H10P 32/16) D H01L 21/26 (transferred to H10P 34/00) D H01L 21/26 (transferred to H10P 34/00) D H01L 21/261 (transferred to H10P 34/00) D H01L 21/263 (transferred to H10P 34/00)	D	H01L	
D H01L 21/02 (transferred to H10P 10/00, H10P 56/00, H10P 70/00, H10P 90/00-H10P 95/00) D H01L 21/027 (transferred to H10P 76/00-H10P 76/20) D H01L 21/033 (transferred to H10P 76/40) D H01L 21/04 (transferred to H10P 95/00) D H01L 21/18 (transferred to H10P 10/00-H10P 14/00, H10P 95/00) D H01L 21/18 (transferred to H10P 10/00-H10P 14/00, H10P 95/00) D H01L 21/20 (transferred to H10P 10/00, H10P 14/20) D H01L 21/203 (transferred to H10P 10/00, H10P 14/20) D H01L 21/205 (transferred to H10P 14/24) D H01L 21/208 (transferred to H10P 14/26) D H01L 21/22 (transferred to H10P 32/00-H10P 32/10, H10P 32/20-H10P 32/30) D H01L 21/223 (transferred to H10P 32/12) D H01L 21/225 (transferred to H10P 32/14) D H01L 21/228 (transferred to H10P 32/16) D H01L 21/24 (transferred to H10P 95/00) D H01L 21/26 (transferred to H10P 34/00) D H01L 21/261 (transferred to H10P 34/20) D H01L 21/263 (transferred to H10P 34/40)	D	H01L 21/00	(transferred to H10P 95/00)
D H01L 21/027 (transferred to H10P 76/00-H10P 76/20) D H01L 21/033 (transferred to H10P 76/40) D H01L 21/04 (transferred to H10P 95/00) D H01L 21/18 (transferred to H10P 10/00-H10P 14/00, H10P 95/00) D H01L 21/18 (transferred to H10P 10/00-H10P 14/00, H10P 95/00) D H01L 21/20 (transferred to H10P 10/00, H10P 95/00) D H01L 21/203 (transferred to H10P 14/20) D H01L 21/205 (transferred to H10P 14/24) D H01L 21/208 (transferred to H10P 14/26) D H01L 21/22 (transferred to H10P 32/00-H10P 32/10, H10P 32/20-H10P 32/30) D H01L 21/223 (transferred to H10P 32/12) D H01L 21/225 (transferred to H10P 32/14) D H01L 21/228 (transferred to H10P 32/16) D H01L 21/24 (transferred to H10P 95/00) D H01L 21/26 (transferred to H10P 34/00) D H01L 21/261 (transferred to H10P 34/20) D H01L 21/263 (transferred to H10P 34/40)	D		
D H01L 21/033 (transferred to H10P 76/40) D H01L 21/18 (transferred to H10P 10/00-H10P 14/00, H10P 95/00) D H01L 21/18 (transferred to H10P 10/00-H10P 14/00, H10P 95/00) D H01L 21/20 (transferred to H10P 10/00, H10P 14/20) D H01L 21/203 (transferred to H10P 14/22) D H01L 21/205 (transferred to H10P 14/24) D H01L 21/208 (transferred to H10P 14/26) D H01L 21/22 (transferred to H10P 32/00-H10P 32/10, H10P 32/20-H10P 32/30) D H01L 21/223 (transferred to H10P 32/12) D H01L 21/225 (transferred to H10P 32/14) D H01L 21/225 (transferred to H10P 32/14) D H01L 21/24 (transferred to H10P 32/16) D H01L 21/26 (transferred to H10P 34/00) D H01L 21/261 (transferred to H10P 34/20) D H01L 21/263 (transferred to H10P 34/40)	D		,
D H01L 21/04 (transferred to H10P 95/00) D H01L 21/18 (transferred to H10P 10/00-H10P 14/00, H10P 95/00) D H01L 21/18 (transferred to H10P 10/00-H10P 14/00, H10P 95/00) D H01L 21/20 (transferred to H10P 10/00, H10P 14/20) D H01L 21/203 (transferred to H10P 14/22) D H01L 21/205 (transferred to H10P 14/24) D H01L 21/208 (transferred to H10P 14/26) D H01L 21/22 (transferred to H10P 32/00-H10P 32/10, H10P 32/20-H10P 32/30) D H01L 21/223 (transferred to H10P 32/12) D H01L 21/223 (transferred to H10P 32/14) D H01L 21/225 (transferred to H10P 32/16) D H01L 21/226 (transferred to H10P 32/16) D H01L 21/26 (transferred to H10P 34/00) D H01L 21/261 (transferred to H10P 34/20) D H01L 21/263 (transferred to H10P 34/40)			,
D H01L 21/18 (transferred to H10P 10/00-H10P 14/00, H10P 95/00) D H01L 21/18 (transferred to H10P 10/00-H10P 14/00, H10P 95/00) D H01L 21/20 (transferred to H10P 10/00, H10P 14/20) D H01L 21/203 (transferred to H10P 14/22) D H01L 21/205 (transferred to H10P 14/24) D H01L 21/208 (transferred to H10P 14/26) D H01L 21/22 (transferred to H10P 32/00-H10P 32/10, H10P 32/20-H10P 32/30) D H01L 21/223 (transferred to H10P 32/12) D H01L 21/225 (transferred to H10P 32/14) D H01L 21/228 (transferred to H10P 32/16) D H01L 21/24 (transferred to H10P 95/00) D H01L 21/26 (transferred to H10P 34/00) D H01L 21/261 (transferred to H10P 34/20) D H01L 21/263 (transferred to H10P 34/40)			
D H01L 21/18 (transferred to H10P 10/00-H10P 14/00, H10P 95/00) D H01L 21/20 (transferred to H10P 10/00, H10P 14/20) D H01L 21/203 (transferred to H10P 14/22) D H01L 21/205 (transferred to H10P 14/24) D H01L 21/208 (transferred to H10P 14/26) D H01L 21/22 (transferred to H10P 32/00-H10P 32/10, H10P 32/20-H10P 32/30) D H01L 21/223 (transferred to H10P 32/12) D H01L 21/225 (transferred to H10P 32/14) D H01L 21/228 (transferred to H10P 32/16) D H01L 21/24 (transferred to H10P 95/00) D H01L 21/26 (transferred to H10P 34/00) D H01L 21/261 (transferred to H10P 34/20) D H01L 21/263 (transferred to H10P 34/40)			· · · · · · · · · · · · · · · · · · ·
D H01L 21/20 (transferred to H10P 10/00, H10P 14/20) D H01L 21/203 (transferred to H10P 14/24) D H01L 21/205 (transferred to H10P 14/24) D H01L 21/208 (transferred to H10P 14/26) D H01L 21/22 (transferred to H10P 32/00-H10P 32/10, H10P 32/20-H10P 32/30) D H01L 21/223 (transferred to H10P 32/12) D H01L 21/225 (transferred to H10P 32/14) D H01L 21/228 (transferred to H10P 32/16) D H01L 21/24 (transferred to H10P 95/00) D H01L 21/26 (transferred to H10P 34/00) D H01L 21/261 (transferred to H10P 34/20) D H01L 21/263 (transferred to H10P 34/40)			·
D H01L 21/203 (transferred to H10P 14/22) D H01L 21/205 (transferred to H10P 14/24) D H01L 21/208 (transferred to H10P 14/26) D H01L 21/22 (transferred to H10P 32/00-H10P 32/10, H10P 32/20-H10P 32/30) D H01L 21/223 (transferred to H10P 32/12) D H01L 21/225 (transferred to H10P 32/14) D H01L 21/228 (transferred to H10P 32/16) D H01L 21/24 (transferred to H10P 95/00) D H01L 21/26 (transferred to H10P 34/00) D H01L 21/261 (transferred to H10P 34/20) D H01L 21/263 (transferred to H10P 34/40)	_		·
D H01L 21/205 (transferred to H10P 14/24) D H01L 21/208 (transferred to H10P 14/26) D H01L 21/22 (transferred to H10P 32/00-H10P 32/10, H10P 32/20-H10P 32/30) D H01L 21/223 (transferred to H10P 32/12) D H01L 21/225 (transferred to H10P 32/14) D H01L 21/228 (transferred to H10P 32/16) D H01L 21/24 (transferred to H10P 95/00) D H01L 21/26 (transferred to H10P 34/20) D H01L 21/263 (transferred to H10P 34/40)			· · · · · · · · · · · · · · · · · · ·
D H01L 21/22 (transferred to H10P 32/00-H10P 32/10, H10P 32/20-H10P 32/30) D H01L 21/223 (transferred to H10P 32/12) D H01L 21/225 (transferred to H10P 32/14) D H01L 21/228 (transferred to H10P 32/16) D H01L 21/24 (transferred to H10P 95/00) D H01L 21/26 (transferred to H10P 34/00) D H01L 21/261 (transferred to H10P 34/20) D H01L 21/263 (transferred to H10P 34/40)			
D H01L 21/223 (transferred to H10P 32/12) D H01L 21/225 (transferred to H10P 32/14) D H01L 21/228 (transferred to H10P 32/16) D H01L 21/24 (transferred to H10P 95/00) D H01L 21/26 (transferred to H10P 34/00) D H01L 21/261 (transferred to H10P 34/20) D H01L 21/263 (transferred to H10P 34/40)	D	H01L 21/208	
D H01L 21/225 (transferred to H10P 32/14) D H01L 21/228 (transferred to H10P 32/16) D H01L 21/24 (transferred to H10P 95/00) D H01L 21/26 (transferred to H10P 34/00) D H01L 21/261 (transferred to H10P 34/20) D H01L 21/263 (transferred to H10P 34/40)	D	H01L 21/22	(transferred to H10P 32/00-H10P 32/10, H10P 32/20-H10P 32/30)
D H01L 21/228 (transferred to H10P 32/16) D H01L 21/24 (transferred to H10P 95/00) D H01L 21/26 (transferred to H10P 34/00) D H01L 21/261 (transferred to H10P 34/20) D H01L 21/263 (transferred to H10P 34/40)	D		
D H01L 21/24 (transferred to H10P 95/00) D H01L 21/26 (transferred to H10P 34/00) D H01L 21/261 (transferred to H10P 34/20) D H01L 21/263 (transferred to H10P 34/40)			· · · · · · · · · · · · · · · · · · ·
D H01L 21/26 (transferred to H10P 34/00) D H01L 21/261 (transferred to H10P 34/20) D H01L 21/263 (transferred to H10P 34/40)	_		· · · · · · · · · · · · · · · · · · ·
D H01L 21/261 (transferred to H10P 34/20) D H01L 21/263 (transferred to H10P 34/40)			· · · · · · · · · · · · · · · · · · ·
D H01L 21/263 (transferred to H10P 34/40)			· · · · · · · · · · · · · · · · · · ·
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	D	1701L 21/203	(และเอเตน เบ ทาบท อ4/40)

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D
     H01L 21/266
                          (transferred to H10P 30/22)
D
     H01L 21/268
                          (transferred to H10P 34/42)
D
     H01L 21/28
                          (transferred to H10P 14/40-H10P 14/47)
     H01L 21/283
D
                          (transferred to H10P 14/40)
                          (transferred to H10P 14/42-H10P 14/45)
D
     H01L 21/285
D
     H01L 21/288
                          (transferred to H10P 14/46-H10P 14/47)
D
                          (transferred to H10P 95/00)
     H01L 21/30
D
     H01L 21/301
                          (transferred to H10P 54/00-H10P 54/94, H10P 58/00)
D
     H01L 21/302
                          (transferred to H10P 50/00, H10P 52/00)
                          (transferred to H10P 52/00-H10P 54/94, H10P 70/00, H10P 95/60)
D
     H01L 21/304
D
     H01L 21/306
                          (transferred to H10P 50/00-H10P 50/26, H10P 50/60-H10P 50/66,
                          H10P 95/70-H10P 95/80)
D
     H01L 21/3063
                          (transferred to H10P 50/61-H10P 50/66)
D
                          (transferred to H10P 50/20-H10P 50/26)
     H01L 21/3065
D
     H01L 21/308
                          (transferred to H10P 50/00-H10P 50/68)
D
     H01L 21/31
                          (transferred to H10P 14/60)
D
                          (transferred to H10P 14/60, H10P 95/00-H10P 95/90)
     H01L 21/3105
D
     H01L 21/311
                          (transferred to H10P 50/28, H10P 50/68)
D
     H01L 21/3115
                          (transferred to H10P 30/40, H10P 32/20)
D
     H01L 21/312
                          (transferred to H10P 14/68)
D
                          (transferred to H10P 14/69)
     H01L 21/314
D
     H01L 21/316
                          (transferred to H10P 14/692)
D
     H01L 21/318
                          (transferred to H10P 14/694)
D
     H01L 21/32
                          (transferred to H10P 14/61)
D
     H01L 21/3205
                          (transferred to H10P 14/40)
D
                          (transferred to H10P 14/40, H10P 95/00-H10P 95/90)
     H01L 21/321
D
     H01L 21/3213
                          (transferred to H10P 50/26, H10P 50/66)
D
     H01L 21/3215
                          (transferred to H10P 32/30)
D
                          (transferred to H10P 36/00-H10P 36/20, H10P 95/40)
     H01L 21/322
     H01L 21/324
                          (transferred to H10P 95/90)
D
D
     H01L 21/326
                          (transferred to H10P 95/80)
D
     H01L 21/34
                          (transferred to H10P 10/00-H10P 14/00, H10P 95/00)
D
                          (transferred to H10P 10/00, H10P 14/20)
     H01L 21/36
D
     H01L 21/363
                          (transferred to H10P 14/22)
D
     H01L 21/365
                          (transferred to H10P 14/24)
D
     H01L 21/368
                          (transferred to H10P 14/26)
D
     H01L 21/38
                          (transferred to H10P 32/00-H10P 32/10)
D
     H01L 21/383
                          (transferred to H10P 32/12)
D
     H01L 21/385
                          (transferred to H10P 32/14)
D
     H01L 21/388
                          (transferred to H10P 32/16)
D
     H01L 21/40
                          (transferred to H10P 95/00)
D
                          (transferred to H10P 34/00-H10P 34/20)
     H01L 21/42
D
     H01L 21/423
                          (transferred to H10P 34/40)
D
                          (transferred to H10P 30/00-H10P 30/20, H10P 30/28)
     H01L 21/425
D
     H01L 21/426
                          (transferred to H10P 30/22)
D
     H01L 21/428
                          (transferred to H10P 34/42)
D
     H01L 21/44
                          (transferred to H10P 14/40)
D
                          (transferred to H10P 14/40)
     H01L 21/441
D
     H01L 21/443
                          (transferred to H10P 14/42-H10P 14/45)
D
     H01L 21/445
                          (transferred to H10P 14/46-H10P 14/47)
D
     H01L 21/447
                          (transferred to H10P 14/40)
D
     H01L 21/449
                          (transferred to H10P 14/40, H10P 95/60)
D
     H01L 21/46
                          (transferred to H10P 95/00)
D
     H01L 21/461
                          (transferred to H10P 50/00, H10P 50/64-H10P 50/66, H10P 95/00)
D
     H01L 21/463
                          (transferred to H10P 52/00-H10P 54/94, H10P 70/00, H10P 95/60)
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D	H01L 21/465	(transferred to H10P 50/20-H10P 50/26, H10P 50/60-H10P 50/66, H10P 52/00-H10P 52/20, H10P 95/70-H10P 95/80)
D	H01L 21/467	(transferred to H10P 50/00-H10P 50/68)
D	H01L 21/469	(transferred to H10P 14/60)
D	H01L 21/47	(transferred to H10P 14/68)
D	H01L 21/471	(transferred to H10P 14/69, H10P 14/694)
D	H01L 21/473	(transferred to H10P 14/692)
D	H01L 21/475	(transferred to H10P 14/61)
D	H01L 21/4757	(transferred to H10P 14/60, H10P 30/40, H10P 32/20, H10P 50/28, H10P 50/68,
D	11012 21/4/5/	(transferred to 11101 14/00, 11101 30/40, 11101 32/20, 11101 30/20, 11101 30/00, H10P 95/00-H10P 95/90)
О	H01L 21/4763	,
D	MUIL 21/4/03	(transferred to H10P 14/40, H10P 32/30, H10P 50/26, H10P 50/66,
_	11041 04/477	H10P 95/00-H10P 95/90)
D	H01L 21/477	(transferred to H10P 95/90)
D	H01L 21/479	(transferred to H10P 95/80)
D	H01L 21/48	(transferred to H10W 40/00, H10W 70/01-H10W 70/09, H10W 74/01, H10W 76/01, H10W 95/00)
D	H01L 21/50	(transferred to H10W 70/01-H10W 70/09, H10W 76/01, H10W 95/00)
D	H01L 21/52	(transferred to H10W 72/00-H10W 72/20, H10W 72/30-H10W 72/49, H10W 95/00)
D	H01L 21/54	(transferred to H10W 76/05)
D	H01L 21/56	(transferred to H10W 74/01)
D	H01L 21/58	(transferred to H10W 72/00-H10W 72/49, H10W 80/00, H10W 95/00)
D	H01L 21/60	(transferred to H10W 72/00-H10W 72/29, H10W 72/40-H10W 72/90, H10W 80/00, H10W 95/00)
D	H01L 21/603	(transferred to H10W 72/00-H10W 72/29, H10W 72/40-H10W 72/90, H10W 95/00)
D	H01L 21/607	(transferred to H10W 72/00-H10W 72/29, H10W 72/40-H10W 72/90, H10W 80/00, H10W 95/00)
D	H01L 21/62	(transferred to H10P 95/00)
D	H01L 21/64	(transferred to H10P 95/00)
D	H01L 21/66	(transferred to H10P 74/00-H10P 74/20)
D	H01L 21/67	(transferred to H10P 72/00)
D	H01L 21/673	(transferred to H10P 72/10)
D	H01L 21/677	(transferred to H10P 72/30)
D	H01L 21/68	(transferred to H10P 72/50)
D	H01L 21/683	(transferred to H10P 72/70-H10P 72/72, H10P 72/78)
D	H01L 21/687	(transferred to H10P 72/76)
D	H01L 21/70	(transferred to H10D 84/01, H10D 86/01, H10D 87/00-H10D 89/00)
D	H01L 21/71	(transferred to H10D 62/00, H10W 29/00)
D	H01L 21/74	(transferred to H10W 15/00)
D	H01L 21/76	(transferred to H10W 10/00)
D	H01L 21/761	(transferred to H10W 10/30)
D	H01L 21/762	(transferred to H10W 10/10-H10W 10/17)
	H01L 21/763	·
D		(transferred to H10W 10/40)
D	H01L 21/764	(transferred to H10W 10/20)
D	H01L 21/765	(transferred to H10W 10/50)
D	H01L 21/768	(transferred to H10W 20/00-H10W 20/49)
D	H01L 21/77	(transferred to H10D 84/01, H10D 86/01, H10D 87/00-H10D 89/00)
D	H01L 21/78	(transferred to H10P 54/00-H10P 54/94, H10P 58/00)
D D	H01L 21/98 H01L 23/00	(transferred to H10W 70/01-H10W 70/09, H10W 76/01, H10W 80/00, H10W 95/00) (transferred to H10W 29/00, H10W 42/40, H10W 95/00-H10W 99/00)
D	H01L 23/00	(transferred to H10W 29/00, H10W 42/40, H10W 95/00-H10W 99/00)
D	H01L 23/02	(transferred to H10W 76/00, H10W 76/10, H10W 76/60)
D	H01L 23/04	(transferred to H10W 76/12)
D	H01L 23/043	(transferred to H10W 76/13)
D	H01L 23/045	(transferred to H10W 76/132)
D	H01L 23/047	(transferred to H10W 76/134)

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D
     H01L 23/049
                          (transferred to H10W 76/136)
D
     H01L 23/051
                          (transferred to H10W 76/138)
D
     H01L 23/053
                          (transferred to H10W 76/15)
     H01L 23/055
D
                          (transferred to H10W 76/153)
D
     H01L 23/057
                          (transferred to H10W 76/157)
D
     H01L 23/06
                          (transferred to H10W 76/17)
D
     H01L 23/08
                          (transferred to H10W 76/18)
D
     H01L 23/10
                          (transferred to H10W 76/60-H10W 76/67)
D
     H01L 23/12
                          (transferred to H10W 70/60)
D
     H01L 23/13
                          (transferred to H10W 70/68)
D
     H01L 23/14
                          (transferred to H10W 70/69, H10W 70/695-H10W 70/698)
D
     H01L 23/15
                          (transferred to H10W 70/692)
D
     H01L 23/16
                          (transferred to H10W 76/40)
D
     H01L 23/18
                          (transferred to H10W 76/42)
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     H01L 23/20
                          (transferred to H10W 76/43)
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                          (transferred to H10W 76/47)
D
     H01L 23/26
                          (transferred to H10W 76/48)
D
     H01L 23/28
                          (transferred to H10W 74/00)
D
     H01L 23/29
                          (transferred to H10W 74/40-H10W 74/47)
D
     H01L 23/31
                          (transferred to H10W 74/10-H10W 74/15)
D
     H01L 23/32
                          (transferred to H10W 78/00)
D
     H01L 23/34
                          (transferred to H10W 40/00-H10W 40/20, H10W 40/50)
     H01L 23/36
                          (transferred to H10W 40/10)
D
D
     H01L 23/367
                          (transferred to H10W 40/22)
D
     H01L 23/373
                          (transferred to H10W 40/25)
D
     H01L 23/38
                          (transferred to H10W 40/28)
D
     H01L 23/40
                          (transferred to H10W 40/60)
D
     H01L 23/42
                          (transferred to H10W 40/70)
D
     H01L 23/427
                          (transferred to H10W 40/73)
D
     H01L 23/433
                          (transferred to H10W 40/77)
D
     H01L 23/44
                          (transferred to H10W 40/30)
D
     H01L 23/46
                          (transferred to H10W 40/40)
D
     H01L 23/467
                          (transferred to H10W 40/43)
D
     H01L 23/473
                          (transferred to H10W 40/47)
D
     H01L 23/48
                          (transferred to H10W 70/40, H10W 72/00, H10W 72/60-H10W 72/90)
D
     H01L 23/482
                          (transferred to H10W 20/40-H10W 20/49, H10W 70/60-H10W 72/00)
D
     H01L 23/485
                          (transferred to H10W 20/40-H10W 20/49, H10W 70/60-H10W 72/00)
D
                          (transferred to H10W 72/20-H10W 72/29, H10W 72/60)
     H01L 23/488
D
     H01L 23/49
                          (transferred to H10W 72/50-H10W 72/59)
D
     H01L 23/492
                          (transferred to H10W 70/20)
D
     H01L 23/495
                          (transferred to H10W 70/40)
D
     H01L 23/498
                          (transferred to H10W 70/62-H10W 70/66)
D
     H01L 23/50
                          (transferred to H10W 70/62-H10W 70/66, H10W 72/00-H10W 72/29,
                          H10W 72/40-H10W 72/90)
D
     H01L 23/52
                          (transferred to H10W 20/40-H10W 20/42, H10W 20/45-H10W 20/47)
D
     H01L 23/522
                          (transferred to H10W 20/40-H10W 20/42, H10W 20/45-H10W 20/47)
D
     H01L 23/525
                          (transferred to H10W 20/49)
D
     H01L 23/528
                          (transferred to H10W 20/43)
D
     H01L 23/532
                          (transferred to H10W 20/44, H10W 20/48)
D
     H01L 23/535
                          (transferred to H10W 20/20)
                          (transferred to H10W 70/00, H10W 70/60-H10W 70/685)
D
     H01L 23/538
D
     H01L 23/544
                          (transferred to H10W 46/00)
D
     H01L 23/552
                          (transferred to H10W 42/20)
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D	H01L 23/556	(transferred to H10W 42/25)
D D	H01L 23/58 H01L 23/60	(transferred to H10W 40/80-H10W 42/00) (transferred to H10W 42/60)
D	H01L 23/62	(transferred to H10W 42/80)
D	H01L 23/64	(transferred to H10W 44/00)
D	H01L 23/66	(transferred to H10W 44/20)
D	H01L 25/00	(transferred to H10W 90/00)
D	H01L 25/03	(transferred to H10B 80/00, H10D 80/00-H10D 80/30, H10F 39/90-H10F 39/95, H10H 29/20-H10H 29/24, H10K 19/00-H10K 19/80, H10K 39/00-H10K 39/38, H10K 59/90-H10K 59/95, H10N 19/00, H10N 39/00, H10N 59/00, H10N 69/00, H10N 79/00, H10N 89/00, H10W 90/00)
D	H01L 25/04	(transferred to H10B 80/00, H10D 80/00-H10D 80/30, H10F 39/90-H10F 39/95, H10H 29/20-H10H 29/24, H10K 19/00-H10K 19/80, H10K 39/00-H10K 39/38, H10K 59/90-H10K 59/95, H10N 19/00, H10N 39/00, H10N 59/00, H10N 69/00, H10N 79/00, H10N 89/00, H10W 90/00)
D	H01L 25/065	(transferred to H10B 80/00, H10D 80/00, H10D 80/30, H10F 39/90-H10F 39/95, H10H 29/20-H10H 29/24, H10K 19/00-H10K 19/80, H10K 39/00-H10K 39/38, H10K 59/90-H10K 59/95, H10N 19/00, H10N 39/00, H10N 59/00, H10N 69/00, H10N 79/00, H10N 89/00, H10W 90/00)
D	H01L 25/07	(transferred to H10B 80/00, H10D 80/00-H10D 80/20, H10W 90/00)
D	H01L 25/075	(transferred to H10H 29/20-H10H 29/24, H10W 90/00)
D	H01L 25/10	(transferred to H10B 80/00, H10D 80/00-H10D 80/30, H10F 39/90-H10F 39/95, H10H 29/20-H10H 29/24, H10K 19/00-H10K 19/80, H10K 39/00-H10K 39/38,
		H10K 59/90-H10K 59/95, H10N 19/00, H10N 39/00, H10N 59/00, H10N 69/00,
_	11011 05/11	H10N 79/00, H10N 89/00, H10W 90/00)
D D	H01L 25/11 H01L 25/13	(transferred to H10D 80/00-H10D 80/20) (transferred to H10H 29/20-H10H 29/24, H10W 90/00)
D	H01L 25/16	(transferred to H10B 80/00, H10D 80/00-H10D 80/30, H10F 39/90-H10F 39/95,
_		H10H 29/20-H10H 29/24, H10K 19/00-H10K 19/80, H10K 39/00-H10K 39/38,
		H10K 59/90-H10K 59/95, H10N 19/00, H10N 39/00, H10N 59/00, H10N 69/00, H10N 79/00, H10N 89/00, H10W 90/00)
D	H01L 25/18	(transferred to H10B 80/00, H10D 80/00-H10D 80/30, H10F 39/90-H10F 39/95,
		H10H 29/20-H10H 29/24, H10K 19/00-H10K 19/80, H10K 39/00-H10K 39/38,
		H10K 59/90-H10K 59/95, H10N 19/00, H10N 39/00, H10N 59/00, H10N 69/00, H10N 79/00, H10N 89/00, H10W 90/00)
	H01Q	
M	H01Q 15/10	• • comprising three-dimensional [3D] array of impedance discontinuities, e.g. holes in conductive surfaces or conductive discs forming artificial dielectric [1,2006.01]
M	H01Q 15/16	• • curved in two dimensions [2D], e.g. paraboloidal [1,2006.01]
N 4	H01R	
M	H01R 13/504	• • • different pieces being moulded, cemented, welded, e.g. ultrasonic welding, or swaged together [3,2006.01]
	H02G	
L	H02G 7/20	 Spatial arrangements or dispositions of lines or cables on poles, posts or towers [1,2006.01]
M	H02J	ELECTRIC POWER NETWORKS; CIRCUIT ARRANGEMENTS OR SYSTEMS FOR SUPPLYING OR DISTRIBUTING ELECTRIC POWER; SYSTEMS FOR STORING ELECTRIC ENERGY

M H02J Note(s)

- 1. This subclass covers:
 - ac-AC, DC or de-unspecified mains or power distribution networks;
 - remote operation of AC, DC or unspecified power networks;
 - circuit arrangements for battery supplies, including charging or control
 thereof, or co-ordinated supply from two or more sources of any kind
 charging or discharging batteries when the load has no particular limiting
 effect on the circuit arrangement;
 - long-term energy storage systems not otherwise provided for, having an interaction with AC or DC power networks;
 - circuit arrangements or systems for wireless supply or distribution of electric power;
 - operational aspects of smart grids, namely the integration of power, communications and information technologies for an improved electric power infrastructure serving loads while providing for evolution of end-use applications.
- 2. This subclass does not cover:
 - the control of a single motor, generator or dynamo-electric converter , of the types covered by subclass-subclasses H01F or H02K, which is covered by subclass H02P;
 - the control of a single motor or generator —of the types covered by subclass H02N, which is covered by that subclass H02N.
- 3. In this subclass, it is desirable to add the indexing codes of groups H02J 101/00-H02J 107/00.

M H02J Subclass index

CIRCUIT ARRANGEMENTS

[1,2006.01,2026.01]

For for distribution networks:

direct-Direct current; alternative current	H02J 1/00;
	H02J 3/00
combined; not specified	H02J 5/00;
	H02J 4/00
For for batteries	H02J 7/00
For for emergency or stand-by power supply	H02J 9/00
For for power supply to auxiliaries of stations	H02J 11/00
For for providing remote indication of network conditions	H02J 13/00
SYSTEMS FOR STORING ELECTRICAL ELECTRIC ENERGY	H02J 15/00
CIRCUIT ARRANGEMENTS OR SYSTEMS FOR WIRELESS SUPPLY OR DISTRIBUTION OF ELECTRIC POWER	H02J 50/00

С	H02J 1/00	Circuit arrangements for de-DC mains or de-DC distribution networks [1,2006.01,2026.01]
Ν	H02J 1/002	using intermediate DC-AC-DC conversion [2026.01]
Τ	H02J 1/02	 Arrangements for reducing harmonics or ripples [1,2006.01,2026.01]
Τ	H02J 1/04	• Constant-Current-controlled supply systems, e.g. constant-current supply systems
		[1,2006.01,2026.01]
Τ	H02J 1/06	Two-wire DC power distribution systems [1,2006.01,2026.01]
C	H02J 1/08	Three-wire DC power distribution systems; Systems having more than three wires
		[1,2006.01,2026.01]
Ν	H02J 1/082	•• DC supplies with two or more different DC voltage levels [2026.01]
C	H02J 1/10	 Parallel operation of de-DC sources [1,2006.01,2026.01]
Ν	H02J 1/102	• • being switching converters (H02J 1/108, H02J 1/12 take precedence) [2026.01]
Ν	H02J 1/108	• • having arrangements for blocking reverse current flow, e.g. using diodes (H02J 1/12
		takes precedence) [2026.01]
Τ	H02J 1/12	• • Parallel operation of degenerators with converters, e.g. with mercury are rectifier DC
		sources having power converters with further DC sources without power converters

110014/00

	•	ndments between 2025.01 and 2026.01 IPC
С	H02J 1/14	 Balancing the load in a network and power generation in DC networks [1,2006.01,2026.01]
Ν	H02J 1/15	• • characterised by load management [2026.01]
Т	H02J 1/16	• • using energy storage units, e.g. batteries or dynamo-electric machines coupled to
		flywheels [1,2006.01,2026.01]
C	H02J 3/00	Circuit arrangements for ac AC mains or ac AC distribution networks
		[1,2006.01,2026.01]
V	H02J 3/001	 Arrangements for handling faults or abnormalities, e.g. emergencies or contingencies [2026.01]
V	H02J 3/0012	 characterised by the contingency detection means in AC networks, e.g. using phasor measurement units [PMU], synchrophasors or contingency analysis [2026.01]
V	H02J 3/0014	•• for preventing or reducing power oscillations in networks [2026.01]
V	H02J 3/0074	 Arrangements for selectively connecting one or more loads to one or more power source
		or power lines [2026.01]
V	H02J 3/0073	•• by providing alternative feeding paths when the main path fails [2026.01]
V	H02J 3/008	 Circuit arrangements for power supply or distribution technologies responsive to energ trading [2026.01]
Τ	H02J 3/01	 Arrangements for reducing harmonics or ripples [3,2006.01,2026.01]
)	H02J 3/02	 using a single network for simultaneous distribution of AC power at different frequencial using a single network for simultaneous distribution of ac power and of dc power.
		[1,2006.01,2026.01]
-	H02J 3/04	 Arrangements for connecting networks of the same frequency but supplied from differences [1,2006.01,2026.01]
Г	H02J 3/06	Controlling the transfer of power between connected networks; Controlling load shall be connected networks.
		of load-between connected networks [1,2006.01,2026.01]
Г	H02J 3/08	• • Synchronising Synchronisation of networks [1,2006.01,2026.01]
Γ	H02J 3/10	• Constant-Current-controlled supply systems, e.g. constant-current supply systems
		[1,2006.01,2026.01]
V	H02J 3/11	 Arrangements for adjusting frequency in AC networks, e.g. by control of active power [2026.01]
Τ	H02J 3/12	 Arrangements for adjusting voltage in ac-AC networks by changing a characteristic of network load [1,2006.01,2026.01]
Γ	H02J 3/14	•• by switching loads on to, or off from, network the networks, e.g. progressively balance
		loading [1,2006.01,2026.01]
Г	H02J 3/16	•• by adjustment of reactive power [1,2006.01,2026.01]
V	H02J 3/17	 Demand-responsive operation of AC power transmission or distribution networks [2026.01]
V	H02J 3/175	•• responsive to end-user or load operations (H02J 3/14 takes precedence) [2026.01]
9	H02J 3/18	 Arrangements for adjusting, eliminating or compensating reactive power in networks -(adjustment of voltage H02J 3/16) [1,2006.01,2026.01]
V	H02J 3/1807	•• using series compensators, e.g. thyristor-controlled series capacitors [TCSC] [2026.
V	H02J 3/1814	• • • having reactive elements actively controlled by bridge converters, e.g. unified power
		flow controllers [UPFC] or controlled series voltage compensators [2026.01]
V	H02J 3/1821	• • using shunt compensators [2026.01]
V	H02J 3/1828	••• with stepwise control, e.g. switched capacitor banks [2026.01]
V	H02J 3/1835	••• with stepless control [2026.01]
V	H02J 3/1842	 having reactive elements actively controlled by bridge converters, e.g. active filters static compensators [STATCOM] [2026.01]
N	H02J 3/185	•••• the reactive elements being purely inductive, e.g. superconductive magnetic ene storage [SMES] systems [2026.01]
		torage [owen pytome [reserve]

•••• the bridge converters being multilevel bridge converters or modular multilevel

•••• using reactive elements connected in series with semiconductor switches, e.g. static VAR compensators [SVC], thyristor-controlled reactors [TCR] or thyristor-switched

converters [2026.01]

capacitors [TSC] [2026.01]

H02J 3/1857

H02J 3/1864

Ν

Ν	H02J 3/1878	• • using tap changing or phase shifting transformers [2026.01]
Ν	H02J 3/1885	• • using rotating AC generators, e.g. synchronous generators [2026.01]
Ν	H02J 3/1892	•• the arrangements being an integral part of the loads or of their control circuits [2026.01]
D	H02J 3/20	(transferred to H02J 3/18)
D	H02J 3/22	(transferred to H02J 3/18)
D	H02J 3/24	(transferred to H02J 3/0014)
T	H02J 3/26	 Arrangements for eliminating or reducing asymmetry in polyphase networks [1,2006.01,2026.01]
T	H02J 3/28	 Arrangements for balancing of the load in a network networks by storage of energy [1,2006.01,2026.01]
Т	H02J 3/30	• using dynamo-electric machines coupled to flywheels [1,2006.01,2026.01]
T	H02J 3/32	• • using batteries or super capacitors with converting means [1,2006.01,2026.01]
Τ	H02J 3/34	 Arrangements for transfer of electric power between networks of substantially different frequency [1,2006.01,2026.01]
Τ	H02J 3/36	• Arrangements for transfer of electric power between ac AC networks via high-tension de link high-voltage DC [HVDC] links a; Arrangements for transfer of electric power between generators and networks via HVDC links [1,2006.01,2026.01]
С	H02J 3/38	 Arrangements for parallelly feeding a single network by from two or more generators - converters or transformers or sources in parallel; Arrangements for feeding already
N	H02J 3/388	 energised networks from additional generators or sources in parallel [1,2006.01,2026.01] Arrangements for the handling of islanding, e.g. for disconnection or for avoiding the
Т	H02J 3/40	disconnection of power [2026.01] • • Synchronising a generator—Synchronisation of generators for connection to a network or
ı	11020 3/40	to another generator [1,2006.01,2026.01]
Τ	H02J 3/42	••• with automatic parallel connection when synchronism synchronisation is achieved [1,2006.01,2026.01]
T	H02J 3/44	••• with means for ensuring correct phase sequence [1,2006.01,2026.01]
С	H02J 3/46	 Controlling the sharing of output-generated power between the generators, converters, sources or transformers networks [1,2006.01,2026.01]
Ν	H02J 3/466	• • • Scheduling or selectively controlling the operation of the generators or sources, e.g. connecting or disconnecting generators to meet a demand [2026.01]
Τ	H02J 3/48	••• Controlling the sharing of the in-phase component active power [1,2006.01,2026.01]
Τ	H02J 3/50	• • • Controlling the sharing of the out of phase component reactive power [1,2006.01,2026.01]
С	H02J 4/00	Circuit arrangements for mains or distribution networks not specified as ac or de AC or DC; Circuit arrangements for mains or distribution networks combining AC and DC sections or sub-networks (arrangements using intermediate DC-AC-DC conversion H02J 1/002; arrangements using high-voltage DC [HVDC] links H02J 3/36) [2,2006.01,2026.01]
N	H02J 4/10	 using a single network for simultaneous distribution of AC and DC power [2026.01]
Ν	H02J 4/20	 Networks integrating separated AC and DC power sections [2026.01]
N	H02J 4/25	 • for transfer of electric power between AC and DC networks, e.g. for supplying the DC section within a load from an AC mains system [2026.01]
D	H02J 5/00	(transferred to H02J 4/25)
C	H02J 7/00	Circuit arrangements for charging or depolarising discharging batteries or for supplying loads from batteries [1,2006.01,2026.01]
N	H02J 7/40	• characterised by the exchange of charge or discharge related data [2026.01]
N	H02J 7/42	• • with electronic devices having internal batteries, e.g. mobile phones [2026.01]
Ν	H02J 7/44	• • between battery management systems and power sources [2026.01]
Ν	H02J 7/45	• • between battery management systems and external servers (batteries used in smart grids for balancing of the load H02J 3/32) [2026.01]
Ν	H02J 7/46	• • Leader-follower arrangements [2026.01]
Ν	H02J 7/47	• • Arrangements for checking compatibility or authentication between one component, e.g. a battery or a battery charger, and another component, e.g. a power source [2026.01]
Ν	H02J 7/50	acting upon multiple batteries simultaneously or sequentially [2026.01]

Compilation of amendments between 2025.01 and 2026.01 IPC Ν H02J 7/52 • • for charge balancing, e.g. equalisation of charge between batteries [2026.01] Ν H02J 7/54 • • • Passive balancing, e.g. using resistors or parallel MOSFETs [2026.01] Ν H02J 7/56 • • • Active balancing, e.g. using capacitor-based, inductor-based or DC-DC converters [2026.01] H02J 7/60 • including safety or protection arrangements [2026.01] Ν Ν H02J 7/61 • • against overcharge [2026.01] Ν H02J 7/62 • • against overcurrent [2026.01] Ν H02J 7/63 • • against overdischarge [2026.01] Ν H02J 7/64 • • against overvoltage [2026.01] Ν H02J 7/65 • • against overtemperature [2026.01] H02J 7/68 • • using circuits for correcting or protecting against reverse-polarity [2026.01] Ν Ν H02J 7/70 characterised by the mechanical construction [2026.01] Ν H02J 7/80 • including monitoring or indicating arrangements [2026.01] Ν H02J 7/82 • • Control of state of charge [SOC] [2026.01] Ν H02J 7/84 • • Control of state of health [SOH] [2026.01] • Regulation of charging or discharging current or voltage [2026.01] Ν H02J 7/90 Ν H02J 7/92 • • with prioritisation of loads or sources [2026.01] Ν H02J 7/94 • • in response to battery current [2026.01] Ν H02J 7/96 • • in response to battery voltage [2026.01] C H02J 13/00 Circuit arrangements for providing remote indication of network conditions, e.g. an instantaneous record of the open or closed condition of each circuitbreaker in the network ; Circuit arrangements for providing-monitoring or remote control of switching means equipment in a power distribution network, e.g. switching in and out of current consumers by using a pulse code signal carried by the network [1,2006.01,2026.01] H02J 13/10 characterised by displaying of information or by user interaction, e.g. supervisory control Ν and data acquisition [SCADA] systems [2026.01] Ν H02J 13/12 • Monitoring network conditions, e.g. electrical magnitudes or operational status [2026.01] Ν H02J 13/13 • characterised by the transmission of data to equipment in the power network [2026.01] Ν H02J 13/14 • the power network being locally controlled, e.g. home energy management systems [HEMS] [2026.01] Ν H02J 13/16 • the power network being controlled at grid-level, e.g. using aggregators [2026.01] Ν H02J 13/18 • characterised by the remotely-controlled equipment, e.g. converters or transformers [2026.01] Ν H02J 13/181 •• the equipment comprising generators [2026.01] H02J 13/182 Ν •• the equipment comprising loads connected to the power network [2026.01] Ν H02J 13/183 •• the equipment comprising energy storage systems [2026.01] Ν H02J 13/333 •• the equipment forming part of substations [2026.01] H02J 13/34 • • the equipment being switches, relays or circuit breakers [2026.01] Ν Ν H02J 13/36 • • • specially adapted for protection systems [2026.01] Ν H02J 13/38 •• the equipment being power outlets [2026.01] C H02J 15/00 Systems for storing electric energy (mechanical systems therefor F01-F04 ; in chemical form H01M) specially adapted for power networks [2,2006.01,2026.01] H02J 15/10 • using storage of hydraulic energy [2026.01] Ν Ν H02J 15/20 using storage of pneumatic energy, e.g. compressed air energy storage [CAES] [2026.01] Ν H02J 15/30 • using storage of inertial or mechanical energy, e.g. using flywheels [2026.01] Ν H02J 15/40 using coils, e.g. superconductive magnetic energy storage [SMES] systems [2026.01] Ν H02J 15/50 • using stored hydrogen [2026.01] L H02J 50/15 • using ultrasonic waves [2016.01] N H02J 101/00 Indexing scheme relating to dispersed electric power generation [2026.01] Ν H02J 101/00 Supply or distribution of decentralised, dispersed or local electric power generation [2026.01]

Dispersed power generation using fossil fuels, e.g. diesel generators [2026.01]

Dispersed power generation using renewable energy sources [2026.01]

Ν

Ν

H02J 101/10

H02J 101/20

Com	pilation of amen	dments between 2025.01 and 2026.01 IPC
Ν	H02J 101/22	• • Solar energy [2026.01]
N	H02J 101/24	••• Photovoltaics [2026.01]
N	H02J 101/28	•• Wind energy [2026.01]
N	H02J 101/30	•• Fuel cells [2026.01]
N	H02J 101/35	• • Renewable hydrocarbon sources [2026.01]
N	H02J 101/40	 Hybrid power plants, i.e. a plurality of different generation technologies being operated at one power plant [2026.01]
<u>N</u>	<u>H02J 103/00</u>	Indexing scheme relating to circuit arrangements for AC distribution networks [2026.01]
N	H02J 103/00	Details of circuit arrangements for mains or AC distribution networks [2026.01]
Ν	H02J 103/30	 Simulating, planning, modelling, reliability check or computer assisted design [CAD] of
		electric power networks [2026.01]
N	H02J 103/35	 Grid-level management of power transmission or distribution systems, e.g. load flow analysis or active network management [2026.01]
Ν	H02J 103/40	 Circuit arrangements adaptive to forecasted demand [2026.01]
Ν	H02J 103/50	Circuit arrangements adaptive to forecasted power generation [2026.01]
N	H02J 105/00	Indexing scheme relating to spatial reach or load [2026.01]
N	H02J 105/00	Networks for supplying or distributing electric power characterised by their spatial reach or by the load [2026.01]
Ν	H02J 105/10	• Local stationary networks having a local or delimited stationary reach [2026.01]
Ν	H02J 105/12	• • supplying households or buildings [2026.01]
Ν	H02J 105/16	• • being internal to power sources or power generation plants [2026.01]
Ν	H02J 105/30	• the load networks being external to vehicles, i.e. exchanging power with vehicles
		[2026.01]
Ν	H02J 105/33	• • exchanging power with road vehicles [2026.01]
Ν	H02J 105/37	••• exchanging power with electric vehicles [EV] or with hybrid electric vehicles [HEV] [2026.01]
Ν	H02J 105/40	 characterised by the loads connecting to the networks or being supplied by the networks [2026.01]
Ν	H02J 105/42	• • Home appliances [2026.01]
N	H02J 105/44	• • Portable electronic devices [2026.01]
Ν	H02J 105/46	• • Medical devices, medical implants or life supporting devices [2026.01]
Ν	H02J 105/50	• for selectively controlling the operation of the loads [2026.01]
N	H02J 105/52	• • for limitation of the power consumption in the networks or in one section of the networks,
A /	110011105/50	e.g. load shedding or peak shaving [2026.01]
N	H02J 105/53	• • • for partial power limitation, e.g. entering degraded or current limitation modes [2026.01]
N	H02J 105/54	• • according to a non-electrical condition, e.g. temperature [2026.01]
N	H02J 105/55	••• according to an economic condition, e.g. tariff-based load management [2026.01]
<u>N</u>	H02J 107/00	Indexing scheme relating to circuit arrangements for communication [2026.01]
N	H02J 107/00	Circuit arrangements for communication specially adapted for monitoring, managing or controlling operation of power networks remotely [2026.01]
Ν	H02J 107/10	• using wired networks, e.g. data transmission buses or optical fibres [2026.01]
Ν	H02J 107/105	• • Power line communication [PLC] [2026.01]
Ν	H02J 107/20	• using wireless networks, e.g. mobile telephones [2026.01]
N	H02J 107/30	• involving the use of Internet protocols [2026.01]
	H02K	
L	H02K 11/215	• • • Magnetic effect devices, e.g. Hall-effect or magneto-resistive elements [2016.01]
Ĺ	H02K 15/30	• Manufacture of winding connections [2025.01]
L	H02K 15/32	Manufacture of terminal arrangements; Connecting the terminals to external circuits [2025.01]
L	H02K 15/33	• • Connecting winding sections; Forming leads; Connecting leads to terminals [2025.01]
L	H02K 15/34	••• Connecting the neutral point [2025.01]
L	H02K 29/08	• • using magnetic effect devices, e.g. Hall-plates or magneto-resistors (H02K 29/12 takes precedence) [4,2006.01]

H02M H02M M Note(s) [4] 1. This subclass covers only circuits or apparatus for the conversion of electric power, or arrangements for control or regulation of such circuits or apparatus. 2. This subclass does not cover the individual electro-technical devices employed when converting electric power. Such devices are covered by the relevant subclasses, e.g. inductors, transformers H01F, capacitors, electrolytic rectifiers H01G, mercury-vapour rectifying or other discharge tubes H01J, semiconductor devices H01L, H10, impedance networks or resonant circuits not primarily concerned with the transfer of electric power H03H, semiconductor devices H10. 3. In this subclass, the following term is used with the meaning indicated: • "conversion", in respect of an electric variable, e.g. voltage or current, means the change of one or more of the parameters of the variable, e.g. amplitude, frequency, phase, polarity. H₀2N M H₀2N Note(s) [7] 1. This subclass covers: electrostatic generators, motors, clutches, or holding devices; • other non-dynamo-electric generators or motors; • holding or levitation devices using magnetic attraction or repulsion; • arrangements for starting, regulating, braking, or otherwise controlling such machines unless in conjoint operation with a second machine. 2. Attention is drawn to the Notes following the titles of class B81 and subclass B81B relating to "microstructural devices" and "microstructural systems". 3. Specific provision for generators, motors, or other means for converting between electric and other forms of energy also exists in other subclasses, e.g. in class H10 and subclasses H01L, H01M, H02K, H04R. **H02S** • Testing of PV devices, e.g. of PV modules or single PV cells (testing of semiconductor H02S 50/10 M devices during manufacturing H01L 21/66 H10P 74/00) [2014.01] H₀3D H03D 1/00 Demodulation of amplitude-modulated oscillations (H03D 5/00, H03D 9/00, H03D 11/00 take precedence; amplitude demodulators adapted for digitally modulated carrier systems, e.g. using on-off keying, single sideband or vestigial sideband modulation H04L 27/06) [1,2006.01] **H03H** H03H Note(s) [3,7] 1. This subclass covers: networks comprising lumped impedance elements; · networks comprising distributed impedance elements together with lumped impedance elements; networks comprising electromechanical or electro-acoustic elements; networks simulating reactances and comprising discharge tubes or

- semiconductor devices:
- · constructions of electromechanical resonators.
- 2. In this subclass, the following expression is used with the meaning indicated:
 - "passive elements" means resistors, capacitors, inductors, mutual inductors, or diodes.
- 3. Attention is drawn to the Notes following the titles of class B81 and subclass B81B relating to "microstructural devices" and "microstructural systems".
- 4. In this subclass, main groups with a higher number take precedence.

L	H03H	Subclass index	
		NETWORKS Adaptive Using digital techniques Transversal filters Using passive elements only: one port; multi-port Using electromechanical or electro-acoustical elements Using active elements Using time varying elements Using other elements or techniques DETAILS MANUFACTURE	H03H 21/00 H03H 17/00 H03H 15/00 H03H 5/00; H03H 7/00 H03H 9/00 H03H 11/00 H03H 19/00 H03H 2/00 H03H 1/00 H03H 3/00
L	H03H 9/00	Networks comprising electromechanical or electro-a Electromechanical resonators (piezoelectric, electro- devices with mechanical input or output, e.g. actuat H10N 35/00; electro-acoustic transducers such as lo gramophone pick-ups H04R) [1,2006.01]	acoustic elements; ostrictive or magnetostrictive ors or sensors, H10N 30/00,
	H03J		
L	H03J 9/04	• using ultrasonic, sonic or infrasonic waves [3,2006.01]	
	H03K		
L	H03K	Subclass index	
		GENERATING PULSES Circuits; with finite slope or stepped portions PRODUCING PULSES FROM SINEWAVES MANIPULATING PULSES OTHER THAN WHEN COUNTING Modulating; demodulating; transfer Other PULSE COUNTERS, FREQUENCY DIVIDERS With counting chains; with integration; with a closed loop; with multistable elements	H03K 3/00; H03K 4/00 H03K 12/00 H03K 7/00; H03K 9/00; H03K 11/00 H03K 5/00, H03K 6/00 H03K 23/00; H03K 25/00; H03K 27/00; H03K 29/00
		Details SPECIAL APPLICATIONS Electronic switching; logic circuits	H03K 27/00; H03K 29/00 H03K 17/00; H03K 19/00
	H04B		
L	H04B 11/00	Transmission systems employing ultrasonic, sonic	or infrasonic waves [1 2006 01]
	H04L	Transmission systems employing anasomo, some	01 mmu30m0 wave3 [1,2000.01]
M L	H04L 12/14 H04L 27/02	 Charging, metering or billing arrangements specially e.g. authentication, authorisation and accounting [AA] Amplitude-modulated carrier systems, e.g. using on/of 	A] framework [5,2006.01,2024.01]
_	11042 27/02	sideband modulation (H04L 27/32 takes precedence)	
L	H04L 27/10	 Frequency-modulated carrier systems, i.e. using frequency takes precedence) [1,5,2006.01] 	ency-shift keying (H04L 27/32
L	H04L 27/18	 Phase-modulated carrier systems, i.e. using phase-shi precedence) [1,5,2006.01] 	ft keying (H04L 27/32 takes
	H04N		
M	H04N 1/191	••• the array comprising a one-dimensional [1D] array	
M	H04N 1/195	••• the array comprising a two-dimensional [2D] array	
M	H04N 1/415 H04N 13/00	•••• in which the picture-elements are subdivided or gr [1D] or two-dimensional [2D] blocks [4,2006.01] Note(s) [2018.01]	ouped into fixed one-dimensional
L	110 4 14 13/00	This group <u>covers</u> systems providing a three-dimension one or more viewers by means of electronic signals representation to the different viewpoints, or by means of signals is	resenting images, which could be

Com	npilation of amen	dments between 2025.01 and 2026.01 IPC		
М	H04N 13/122	•••• Improving the <i>three-dimensional</i> [3D] impression of image signal contents, e.g. by filtering or adding metakes precedence) [2018.01]		
M	H04N 13/207	••• using a single two-dimensional [2D] image sensor [2018.01]		
M	H04N 13/239	• • • using two two-dimensional [2D] image sensors have related to the interocular distance (H04N 13/243 to	ring a relative position equal to or	
M	H04N 13/243	••• using three or more two-dimensional [2D] image s	ensors [2018.01]	
M	H04N 13/275	from three-dimensional [3D] object models, e.g. con signals [2018.01]		
M	H04N 13/30	 Image reproducers (optical systems for producing ster [3D] effects G02B 30/00) [2018.01] 		
M	H04N 13/395	 ••• with depth sampling, i.e. the volume being constructive-dimensional [2D] image planes [2018.01] 	ted from a stack or sequence of	
M	H04N 19/533	 Motion estimation using multistep search, e.g. two one-at-a-time search [OTS] [2014.01] 	o-dimensional [2D]-log search or	
M	H04N 19/62	•• by frequency transforming in three dimensions [3D] [2014.01]	(H04N 19/63 takes precedence)	
M	H04N 21/242	• • • Synchronization—Synchronisation processes, e.g. p Programme Clock References] [2011.01]	rocessing of PCR [Program	
M	H04N 21/2747	• • • • Remote storage of video programs programmes e.g. from the server [2011.01]	received via the downstream path,	
M	H04N 21/462	Content or additional data management e.g. creating programme guide from data received from the Interest the complexity of a video stream by scaling the rescapabilities [2011.01]	rnet and a Head-end or controlling	
M	H04N 21/482	• • • End-user interface for program-programme selection	on [2011.01]	
M	H04N 25/443	••• by reading pixels from selected two-dimensional [2 windowing or digital zooming [2023.01]	Dj regions of the array, e.g. for	
	H04Q			
M	H04Q 3/545	••• using a stored programme program [4,2006.01]		
M	H04R	LOUDSPEAKERS, MICROPHONES, GRAMOPHONE ELECTROMECHANICAL TRANSDUCERS; DEAF-AIL AIDS; PUBLIC ADDRESS SYSTEMS (producing sou	SETS ELECTRIC HEARING	
		determined by supply frequency G10K) [6]	nds with frequency not	
М	H04R		inds with frequency not	
M	H04R	determined by supply frequency G10K) [6]	nds with frequency not	
M	H04R	determined by supply frequency G10K) [6] Subclass index TYPES OF TRANSDUCER With magnetic circuit: moving coil; moving armature; magnetisable diaphragm; magnetostriction	H04R 9/00; H04R 11/00; H04R 13/00; H04R 15/00	
M	H04R	determined by supply frequency G10K) [6] Subclass index TYPES OF TRANSDUCER With magnetic circuit: moving coil; moving armature; magnetisable	H04R 9/00; H04R 11/00; H04R 13/00; H04R 15/00 H04R 17/00; H04R 19/00;	
M	H04R	determined by supply frequency G10K) [6] Subclass index TYPES OF TRANSDUCER With magnetic circuit: moving coil; moving armature; magnetisable diaphragm; magnetostriction Without magnetic circuit:	H04R 9/00; H04R 11/00; H04R 13/00; H04R 15/00	
M	H04R	determined by supply frequency G10K) [6] Subclass index TYPES OF TRANSDUCER With magnetic circuit: moving coil; moving armature; magnetisable diaphragm; magnetostriction Without magnetic circuit: piezoelectric; electrostatic; with variable resistance Other types	H04R 9/00; H04R 11/00; H04R 13/00; H04R 15/00 H04R 17/00; H04R 19/00; H04R 21/00	
M	H04R	determined by supply frequency G10K) [6] Subclass index TYPES OF TRANSDUCER With magnetic circuit: moving coil; moving armature; magnetisable diaphragm; magnetostriction Without magnetic circuit: piezoelectric; electrostatic; with variable resistance Other types Details general; circuits; diaphragms and cones APPLICATIONS	H04R 9/00; H04R 11/00; H04R 13/00; H04R 15/00 H04R 17/00; H04R 19/00; H04R 21/00 H04R 23/00 H04R 1/00; H04R 3/00; H04R 7/00	
M	H04R	Subclass index TYPES OF TRANSDUCER With magnetic circuit: moving coil; moving armature; magnetisable diaphragm; magnetostriction Without magnetic circuit: piezoelectric; electrostatic; with variable resistance Other types Details general; circuits; diaphragms and cones APPLICATIONS Stereophonic arrangements; deaf-aid electric hearing	H04R 9/00; H04R 11/00; H04R 13/00; H04R 15/00 H04R 17/00; H04R 19/00; H04R 21/00 H04R 23/00 H04R 1/00; H04R 3/00; H04R 7/00 H04R 5/00; H04R 25/00;	
		determined by supply frequency G10K) [6] Subclass index TYPES OF TRANSDUCER With magnetic circuit: moving coil; moving armature; magnetisable diaphragm; magnetostriction Without magnetic circuit: piezoelectric; electrostatic; with variable resistance Other types Details general; circuits; diaphragms and cones APPLICATIONS Stereophonic arrangements; deaf-aid electric hearing aids; public address systems MONITORING, TESTING; MANUFACTURE	H04R 9/00; H04R 11/00; H04R 13/00; H04R 15/00 H04R 17/00; H04R 19/00; H04R 21/00 H04R 23/00 H04R 1/00; H04R 3/00; H04R 7/00 H04R 5/00; H04R 25/00; H04R 27/00 H04R 29/00; H04R 31/00	
M	H04R	determined by supply frequency G10K) [6] Subclass index TYPES OF TRANSDUCER With magnetic circuit: moving coil; moving armature; magnetisable diaphragm; magnetostriction Without magnetic circuit: piezoelectric; electrostatic; with variable resistance Other types Details general; circuits; diaphragms and cones APPLICATIONS Stereophonic arrangements; deaf aid electric hearing aids; public address systems MONITORING, TESTING; MANUFACTURE •• Structural association of microphone with electric circ	H04R 9/00; H04R 11/00; H04R 13/00; H04R 15/00 H04R 17/00; H04R 19/00; H04R 21/00 H04R 23/00 H04R 1/00; H04R 3/00; H04R 7/00 H04R 5/00; H04R 25/00; H04R 27/00 H04R 29/00; H04R 31/00	
		determined by supply frequency G10K) [6] Subclass index TYPES OF TRANSDUCER With magnetic circuit: moving coil; moving armature; magnetisable diaphragm; magnetostriction Without magnetic circuit: piezoelectric; electrostatic; with variable resistance Other types Details general; circuits; diaphragms and cones APPLICATIONS Stereophonic arrangements; deaf aid electric hearing aids; public address systems MONITORING, TESTING; MANUFACTURE • Structural association of microphone with electric circular electric hearing aids H04R 25/00) [1,2006.01]	H04R 9/00; H04R 11/00; H04R 13/00; H04R 15/00 H04R 17/00; H04R 19/00; H04R 21/00 H04R 23/00 H04R 1/00; H04R 3/00; H04R 7/00 H04R 5/00; H04R 25/00; H04R 27/00 H04R 29/00; H04R 31/00 cuitry therefor (in deaf aid sets	
M	H04R 1/04	determined by supply frequency G10K) [6] Subclass index TYPES OF TRANSDUCER With magnetic circuit: moving coil; moving armature; magnetisable diaphragm; magnetostriction Without magnetic circuit: piezoelectric; electrostatic; with variable resistance Other types Details general; circuits; diaphragms and cones APPLICATIONS Stereophonic arrangements; deaf aid electric hearing aids; public address systems MONITORING, TESTING; MANUFACTURE •• Structural association of microphone with electric circ	H04R 9/00; H04R 11/00; H04R 13/00; H04R 15/00 H04R 17/00; H04R 19/00; H04R 21/00 H04R 23/00 H04R 1/00; H04R 3/00; H04R 7/00 H04R 5/00; H04R 25/00; H04R 27/00 H04R 29/00; H04R 31/00 cuitry therefor (in deaf aid sets	
М <i>С</i>	H04R 1/04 H04R 1/10	determined by supply frequency G10K) [6] Subclass index TYPES OF TRANSDUCER With magnetic circuit: moving coil; moving armature; magnetisable diaphragm; magnetostriction Without magnetic circuit: piezoelectric; electrostatic; with variable resistance Other types Details general; circuits; diaphragms and cones APPLICATIONS Stereophonic arrangements; deaf aid electric hearing aids; public address systems MONITORING, TESTING; MANUFACTURE • Structural association of microphone with electric circular electric hearing aids H04R 25/00) [1,2006.01] • Earpieces; Attachments therefor [1,2006.01,2026.01] • Accumulators specially adapted for earpieces; Arrancharging thereof [2026.01]	H04R 9/00; H04R 11/00; H04R 13/00; H04R 15/00 H04R 17/00; H04R 19/00; H04R 21/00 H04R 23/00 H04R 1/00; H04R 3/00; H04R 7/00 H04R 5/00; H04R 25/00; H04R 27/00 H04R 29/00; H04R 31/00 cuitry therefor (in deaf aid sets	
M C N	H04R 1/04 H04R 1/10 H04R 1/1025	Subclass index TYPES OF TRANSDUCER With magnetic circuit: moving coil; moving armature; magnetisable diaphragm; magnetostriction Without magnetic circuit: piezoelectric; electrostatic; with variable resistance Other types Details general; circuits; diaphragms and cones APPLICATIONS Stereophonic arrangements; deaf aid electric hearing aids; public address systems MONITORING, TESTING; MANUFACTURE •• Structural association of microphone with electric circule electric hearing aids H04R 25/00) [1,2006.01] • Earpieces; Attachments therefor [1,2006.01,2026.01] • Accumulators specially adapted for earpieces; Arrangements	H04R 9/00; H04R 11/00; H04R 13/00; H04R 15/00 H04R 17/00; H04R 19/00; H04R 21/00 H04R 23/00 H04R 1/00; H04R 3/00; H04R 7/00 H04R 5/00; H04R 25/00; H04R 27/00 H04R 29/00; H04R 31/00 cuitry therefor (in deaf aid sets	

L	H04W 84/20	• • Leader-follower arrangements [2009.01]
	H05B	
М	H05B 3/20	 Heating elements having extended surface area substantially in a two-dimensional [2D] plane, e.g. plate-heater (H05B 3/62, H05B 3/68, H05B 3/78, H05B 3/84 take precedence) [1,5,2006.01]
М	H05B 33/12	• Light sources with substantially two-dimensional [2D] radiating surfaces [1,2006.01]
	H05K	
М	H05K	Note(s)
		 This subclass <u>covers</u>: combinations of a radio or television receiver with apparatus having a different main function; printed circuits structurally associated with non-printed electric components. In this subclass, the following expression is used with the meaning indicated: "printed circuits" covers all kinds of mechanical constructions of circuits that consist of an insulating base or support carrying the conductor and are combined structurally with the conductor throughout their length, especially in a two-dimensional [2D] plane, the conductors of which are secured to the base in a non-dismountable manner, and also covers the processes or apparatus for manufacturing such constructions, e.g. forming
		the circuit by mechanical or chemical treatment of a conductive foil, paste -
		or film on an insulating support.
М	H05K 1/16	 incorporating printed electric components, e.g. printed resistor, capacitor, inductor resistors, capacitors or inductors [1,2006.01]
С	H05K 1/18	• Printed circuits structurally associated with non-printed electric components (H05K 1/16
U	11051(1/10	takes precedence) [1,2006.01,2026.01]
Ν	H05K 1/181	• • associated with surface mounted components [2026.01]
N	H05K 1/182	• • associated with components mounted in printed circuit boards [PCB], e.g. insert-mounted
	7.00.1.7.102	components [IMC] [2026.01]
Ν	H05K 1/183	• • • associated with components mounted in and supported by recessed areas of the PCBs [2026.01]
N	H05K 1/184	• • • associated with components inserted in holes through the PCBs and wherein terminals of the components are connected to printed contacts on the walls of the holes or at the edges thereof or protruding over or into the holes [2026.01]
N	H05K 1/185	 ••• associated with components encapsulated in the insulating substrate of the PCBs; associated with components incorporated in internal layers of multilayer circuit boards [2026.01]
Ν	H05K 1/189	•• characterised by the use of flexible or folded printed circuits [2026.01]
С	H05K 3/30	Assembling printed circuits with electric components, e.g. with resistors
		[1,2006.01,2026.01]
Ν	H05K 3/303	• • with surface mounted components (H05K 3/32 takes precedence) [2026.01]
Ν	H05K 3/306	•• with lead-in-hole components (H05K 3/32 takes precedence) [2026.01]
C	H05K 3/32	 electrically connecting electric components or wires to printed circuits
		[1,2006.01,2026.01]
N	H05K 3/321	••• by conductive adhesives [2026.01]
N	H05K 3/325	• • • by abutting or pinching; Mechanical auxiliary parts therefor [2026.01]
N	H05K 3/328	••• by welding [2026.01]
C	H05K 3/34	• • • by soldering [1,2006.01,2026.01]
N	H05K 3/341	•••• Surface mounted components [2026.01]
N N	H05K 3/3447 H05K 3/3452	•••• Lead-in-hole components [2026.01] •••• Solder masks [2026.01]
N	H05K 3/346	•••• Solder materials or compositions specially adapted therefor [2026.01]
N	H05K 3/3465	•••• Application of solder [2026.01]
N	H05K 3/3468	••••• Application of molten solder, e.g. dip soldering [2026.01]
N	H05K 3/3473	••••• Plating of solder [2026.01]
	110011 0/07/0	Traditio di Soluei 12020.011

	•	ndments between 2025.01 and 2026.01 IPC
N	H05K 3/3485	••••• Application of solder paste, slurry or powder (using printing techniques to form the desired conductive pattern of the printed circuit by applying conductive material H05K 3/12) [2026.01]
Ν	H05K 3/3489	•••• Composition of fluxes; Application thereof; Other processes of activating the contact surfaces [2026.01]
Ν	H05K 3/3494	•••• Heating processes for reflow soldering [2026.01]
	H10B	
M	H10B 41/20	 characterised by three-dimensional [3D] arrangements, e.g. with cells on different height levels [2023.01]
M	H10B 43/20	 characterised by three-dimensional [3D] arrangements, e.g. with cells on different height levels [2023.01]
M	H10B 51/20	 characterised by the three-dimensional [3D] arrangements, e.g. with cells on different height levels [2023.01]
M	H10B 53/20	 characterised by the three-dimensional [3D] arrangements, e.g. with cells on different height levels [2023.01]
L	H10B 61/00	Magnetic memory devices, e.g. magnetoresistive RAM [MRAM] devices [2023.01]
T	H10B 80/00	Assemblies of multiple devices comprising at least one memory device covered by this subclass [2023.01,2026.01]
	H10D	
M	H10D	 Note(s) [2025.01] This subclass <u>covers</u> electric semiconductor devices having inorganic semiconductor bodies. This includes the following kind of devices:
М	H10D 30/43	• • having one-dimensional [1D] charge carrier gas channels, e.g. quantum wire FETs or transistors having 1D quantum-confined channels [2025.01]
M	H10D 30/47	• • having two-dimensional [2D] charge carrier gas channels, e.g. nanoribbon FETs or high electron mobility transistors [HEMT] [2025.01]
		• • FETs having Schottky gate electrodes, e.g. metal-semiconductor FETs [MESFET]

Assemblies of multiple devices comprising at least one device covered by this

[2025.01,2026.01]

subclass [2025.01,2026.01]

H10D 80/00

Com	nnilation of amen	dments between 2025.01 and 2026.01 IPC	
T	H10D 80/20	 the at least one device being covered by groups H10D 1/00-H10D 48/00, e. comprising capacitors, power FETs or Schottky diodes [2025.01,2026.01] 	g. assemblies
Τ	H10D 80/30	• the at least one device being covered by groups H10D 84/00-H10D 86/00, e comprising integrated circuit processor chips [2025.01,2026.01]	e.g. assemblies
T T	H10D 84/01 H10D 86/01	 Manufacture or treatment [2025.01,2026.01] Manufacture or treatment [2025.01,2026.01] 	
T	H10D 87/00	Integrated devices comprising both bulk components and either SOI or components on the same substrate [2025.01,2026.01]	sos
		Three-dimensional [3D] integrated devices [2025.01,2026.01]	
T	H10D 89/00	Aspects of integrated devices not covered by groups H10D 84/00-H10D [2025.01,2026.01]	88/00
	H10F		
L	H10F	Subclass index	
		PHOTOVOLTAICS	
		Individual photovoltaic cells	H10F 10/00
		Photovoltaic modules or integrated devices RADIATION-CONTROLLED DEVICES	H10F 19/00
		Individual photoresistors, photodiodes, phototransistors or like devices Integrated devices or assemblies of multiple devices OTHER DEVICES	H10F 30/00 H10F 39/00
		Radiation-sensitive devices coupled to electric light sources MANUFACTURE OR TREATMENT; CONSTRUCTIONAL DETAILS	H10F 55/00
		Manufacture or treatment	H10F 71/00
		Constructional details SUBJECT MATTER NOT PROVIDED FOR IN OTHER GROUPS OF THIS SUBCLASS	H10F 77/00 H10F 99/00
L	H10F 10/162	• • • comprising only Group II-VI materials, e.g. CdS/CdTe photovoltaic cells	
L	H10F 10/163	• • • comprising only Group III-V materials, e.g. GaAs/AlGaAs or InP/GaInAs cells [2025.01]	•
L	H10F 30/10	 the devices being sensitive to infrared radiation, visible or ultraviolet radiation no potential barriers, e.g. photoresistors [2025.01] 	n, and naving
T	H10F 39/90	Assemblies of multiple devices [2025.01,2026.01]	
Τ	H10F 39/95	 comprising at least one integrated device covered by group H10F 39/10, e integrated image sensors [2025.01,2026.01] 	e.g. comprising
	H10H	Nata (a) 10005 041	
L	H10H	 Note(s) [2025.01] 1. This subclass <u>covers</u> inorganic light-emitting semiconductor device visible, infrared [IR] or ultraviolet [UV] light. This includes light-emit [LED] and superluminescent diodes [SLD]. 2. This subclass <u>does not cover</u> semiconductor lasers, which are cov H01S 5/00. 	ting diodes
		In this subclass, the periodic system used is the I to VIII group syst in the Periodic Table under Note (3) of section C.	tem indicated
Τ	H10H 29/20	 Assemblies of multiple devices comprising at least one light-emitting semicocovered by group H10H 20/00 (active-matrix LED displays H10H 29/30) [20 	
T	H10H 29/24	• • comprising multiple light-emitting semiconductor devices [2025.01,2026.0	
	H10K		
T	H10K 19/00	Integrated devices, or assemblies of multiple devices, comprising at lea	st one
		organic element specially adapted for rectifying, amplifying, oscillating covered by group H10K 10/00 [2023.01,2026.01]	or switching,
Т	H10K 19/10	• comprising field-effect transistors [2023.01,2026.01]	
T	H10K 19/20	• comprising components having an active region that includes an inorganic s	semiconductor

[2023.01,2026.01]

H10K 19/80

• Interconnections, e.g. terminals [2023.01,2026.01]

T	H10K 39/00	Integrated devices, or assemblies of multiple devices, comprising at least one organic radiation-sensitive element covered by group H10K 30/00 [2023.01,2026.01]
T T	H10K 39/10 H10K 39/12	 Organic photovoltaic [PV] modules; Arrays of single organic PV cells [2023.01,2026.01] Electrical configurations of PV cells, e.g. series connections or parallel connections [2023.01,2026.01]
Τ	H10K 39/15	• • comprising both organic PV cells and inorganic PV cells [2023.01,2026.01]
Τ	H10K 39/18	• • Interconnections, e.g. terminals [2023.01,2026.01]
Τ	H10K 39/30	 Devices controlled by radiation [2023.01,2026.01]
Τ	H10K 39/32	• • Organic image sensors [2023.01,2026.01]
Τ	H10K 39/34	••• integrated with organic light-emitting diodes [OLED] [2023.01,2026.01]
Τ	H10K 39/36	•• Devices specially adapted for detecting X-ray radiation [2023.01,2026.01]
Τ	H10K 39/38	•• Interconnections, e.g. terminals [2023.01,2026.01]
Τ	H10K 59/90	 Assemblies of multiple devices comprising at least one organic light-emitting element [2023.01,2026.01]
Τ	H10K 59/95	 • wherein all light-emitting elements are organic, e.g. assembled OLED displays [2023.01,2026.01]
	H10N	
T	H10N 19/00	Integrated devices, or assemblies of multiple devices, comprising at least one thermoelectric or thermomagnetic element covered by groups H10N 10/00-H10N 15/00 [2023.01,2026.01]
L	H10N 30/06	• • Forming electrodes or interconnections, e.g. leads or terminals [2023.01]
T	H10N 39/00	Integrated devices, or assemblies of multiple devices, comprising at least one piezoelectric, electrostrictive or magnetostrictive element covered by groups H10N 30/00-H10N 35/00 [2023.01,2026.01]
L L	H10N 50/10 H10N 50/20	 Magnetoresistive devices [2023.01] Spin-polarised current-controlled devices (magnetoresistive devices H10N 50/10) [2023.01]
T	H10N 59/00	Integrated devices, or assemblies of multiple devices, comprising at least one galvanomagnetic or Hall-effect element covered by groups H10N 50/00-H10N 52/00 (MRAM devices H10B 61/00) [2023.01,2026.01]
T	H10N 69/00	Integrated devices, or assemblies of multiple devices, comprising at least one superconducting element covered by group H10N 60/00 [2023.01,2026.01]
T	H10N 79/00	Integrated devices, or assemblies of multiple devices, comprising at least one solid- state element covered by group H10N 70/00 (ReRAM devices H10B 63/00; PCRAM devices H10B 63/10) [2023.01,2026.01]
T	H10N 89/00	Integrated devices, or assemblies of multiple devices, comprising at least one bulk negative resistance effect element covered by group H10N 80/00 [2023.01,2026.01]
N	H10P	GENERIC PROCESSES OR APPARATUS FOR THE MANUFACTURE OR TREATMENT OF DEVICES COVERED BY CLASS H10 [2026.01]
N	H10P	Note(s) [2026.01] 1. This subclass co vers processes or apparatus specially adapted for the

- 1. This subclass <u>co vers</u> processes or apparatus specially adapted for the manufacture or treatment of devices, or parts thereof, covered by class H10, which are generically applicable to these devices.
- 2. Attention is drawn to the following:
 - a. processes or apparatus specially adapted for the manufacture or treatment of devices, or parts thereof, which are covered by a single subclass of H10B-H10N, are classified in the subclass in question. For example, the manufacture of a transistor is classified in subclass H10D;
 - b. processes or apparatus specially adapted for the manufacture or treatment of generic packages, interconnections, connectors or other constructional details of devices, which are covered by subclass H10W, are classified in the subclass in question. For example, the formation of a copper pillar bump connector is classified in subclass H10W.

Ν	H10P	Subclass index

	BUILDING UP OF LAYERS, STRUCTURES OR MATERIALS	
	Bonding	H10P 10/00
	Formation of materials	H10P 14/00
	MODIFICATION OF LAYERS, STRUCTURES OR MATERIALS	
	Ion implantation	H10P 30/00
	Diffusion of dopants	H10P 32/00
	Irradiation with electromagnetic or particle radiation	H10P 34/00
	Gettering	H10P 36/00
	REMOVAL OF LAYERS, STRUCTURES OR MATERIALS	
	Etching	H10P 50/00
	Grinding, lapping or polishing	H10P 52/00
	Cutting or separating	H10P 54/00
	Debonding	H10P 56/00
	Singulating wafers or substrates into multiple chips, i.e. dicing	H10P 58/00
	OTHER MANUFACTURE OR TREATMENT	
	Cleaning	H10P 70/00
	Handling or holding of wafers, substrates or devices during manufacture or treatment thereof	H10P 72/00
	Testing or measuring during manufacture or treatment of wafers, substrates or devices	· H10P 74/00
	Manufacture or treatment of masks on semiconductor bodies	H10P 76/00
	Preparation of wafers	H10P 90/00
	Other generic processes or apparatus for manufacture or treatments	H10P 95/00
H10P 10/00	Note(s) [2026.01]	
	1. This group covers bonding of wafers or substrates either (i) before to	he step of

- 1. This group <u>covers</u> bonding of wafers or substrates either (i) before the step of making of any interconnections or (ii) before the step of packaging of devices, whichever step comes first.
- 2. Attention is drawn to the following:
 - aspects of bonding involving chips, package parts or interconnections, e.g. chip-on-chip bonding or chip-on-wafer bonding, are classified in subclass H10W, e.g. in group H10W 80/00.

N	H10P 10/00	Building up of layers, structures or materials [2026.01]
N	H10P 10/00	Bonding of wafers, substrates or parts of devices [2026.01]
N	H10P 14/00	Formation of materials, e.g. in the shape of layers or pillars [2026.01]
Ν	H10P 14/20	• of semiconductor materials [2026.01]
Ν	H10P 14/22	• • using physical deposition, e.g. vacuum deposition or sputtering [2026.01]
Ν	H10P 14/24	• • using chemical vapour deposition [CVD] [2026.01]
Ν	H10P 14/26	• • using liquid deposition [2026.01]
Ν	H10P 14/40	 of conductive or resistive materials [2026.01]
Ν	H10P 14/42	• • using a gas or vapour [2026.01]
Ν	H10P 14/43	••• Chemical deposition, e.g. chemical vapour deposition [CVD] [2026.01]
Ν	H10P 14/44	••• Physical vapour deposition [PVD] [2026.01]
Ν	H10P 14/45	•••• Sputtering [2026.01]
Ν	H10P 14/46	• • using a liquid [2026.01]
Ν	H10P 14/47	• • • Electrolytic deposition, i.e. electroplating; Electroless plating [2026.01]
Ν	H10P 14/60	• of insulating materials [2026.01]
Ν	H10P 14/61	• • using masks [2026.01]
Ν	H10P 14/68	• • Organic materials, e.g. photoresists [2026.01]
Ν	H10P 14/69	• • Inorganic materials [2026.01]
Ν	H10P 14/692	••• composed of oxides, glassy oxides or oxide-based glasses [2026.01]
Ν	H10P 14/694	••• composed of nitrides [2026.01]
<u>N</u>	H10P 30/00	Modification of layers, structures or materials [2026.01]

N	H10P 30/00	Ion implantation into wafers, substrates or parts of devices [2026.01]	
Ν	H10P 30/20	• into semiconductor materials, e.g. for doping [2026.01]	
Ν	H10P 30/22	• • using masks [2026.01]	
Ν	H10P 30/28	• • characterised by an annealing step, e.g. for activation of dopants [2026.01]	
Ν	H10P 30/40	• into insulating materials [2026.01]	
N	H10P 32/00	Diffusion of dopants within, into, or out of wafers, substrates or parts of devices (during formation of materials H10P 14/00) [2026.01]	
Ν	H10P 32/10	• Diffusion of dopants within, into or out of semiconductor bodies or layers [2026.01]	
Ν	H10P 32/12	• • between a solid phase and a gaseous phase [2026.01]	
Ν	H10P 32/14	• • within a single semiconductor body or layer in a solid phase; between different	
		semiconductor bodies or layers, both in a solid phase [2026.01]	
Ν	H10P 32/16	• • between a solid phase and a liquid phase [2026.01]	
Ν	H10P 32/20	Diffusion for doping of insulating layers [2026.01]	
Ν	H10P 32/30	Diffusion for doping of conductive or resistive layers [2026.01]	
N	H10P 34/00	Irradiation with electromagnetic or particle radiation of wafers, substrates or parts of	
		devices [2026.01]	
Ν	H10P 34/20	for inducing a nuclear reaction transmuting chemical elements [2026.01]	
Ν	H10P 34/40	• with high-energy radiation [2026.01]	
Ν	H10P 34/42	•• with electromagnetic radiation, e.g. laser annealing (laser cutting H10P 54/20) [2026.01]	
N	H10P 36/00	Gettering within semiconductor bodies [2026.01]	
Ν	H10P 36/20	Intrinsic gettering, i.e. thermally inducing defects by using oxygen present in the silicon	
		body [2026.01]	
N	H10P 50/00	Removal of layers, structures or materials [2026.01]	
N	H10P 50/00	Etching of wafers, substrates or parts of devices [2026.01]	
Ν	H10P 50/20	 Dry etching; Plasma etching; Reactive-ion etching [2026.01] 	
Ν	H10P 50/24	• • of semiconductor materials [2026.01]	
Ν	H10P 50/26	• • of conductive or resistive materials [2026.01]	
Ν	H10P 50/28	•• of insulating materials [2026.01]	
Ν	H10P 50/60	• Wet etching [2026.01]	
Ν	H10P 50/61	• • Electrolytic etching [2026.01]	
N	H10P 50/64	• • of semiconductor materials [2026.01]	
N	H10P 50/66	• • of conductive or resistive materials [2026.01]	
Ν	H10P 50/68	• • of insulating materials [2026.01]	
N	H10P 52/00	Grinding, lapping or polishing of wafers, substrates or parts of devices [2026.01]	
Ν	H10P 52/20	 Electromechanical polishing [EMP]; Electrochemical mechanical polishing [ECMP] [2026.01] 	
Ν	H10P 52/40	 Chemomechanical polishing [CMP] (electrochemical mechanical polishing H10P 52/20) [2026.01] 	
Ν	H10P 54/00	Note(s) [2026.01]	
		This group <u>covers</u> cutting or separating of wafers or substrates having semiconductor or	
		solid-state devices formed, or to be formed, therein or thereon. The cutting may be partial,	
		e.g. for making a groove.	
N	H10P 54/00	Cutting or separating of wafers, substrates or parts of devices [2026.01]	
N	H10P 54/20	• by laser cutting [2026.01]	
Ν	H10P 54/30	 by forming weakened zones for subsequent cutting or separating, e.g. by laser treatment or by ion implantation [2026.01] 	
Ν	H10P 54/40	• by sawing, e.g. using revolving or reciprocating blades [2026.01]	
Ν	H10P 54/50	• by scoring, breaking or cleaving [2026.01]	
Ν	H10P 54/90	Auxiliary processes or arrangements [2026.01]	
Ν	H10P 54/92	• • for protecting or reinforcing the surface of wafers or substrates during cutting or	
		separating, e.g. using adhesive tapes [2026.01]	
Ν	H10P 54/94	• • After-treatments, e.g. removal of adhesive tapes or supports [2026.01]	
N	H10P 56/00	Debonding of wafers, substrates or parts of devices [2026.01]	

N	H10P 58/00	Note(s) [2026.01] When classifying in this group, any process step involving cutting or separating, which is considered to represent information of interest for search, may also be classified in group H10P 54/00.
N	H10P 58/00	Singulating wafers or substrates into multiple chips, i.e. dicing [2026.01]
N	H10P 70/00	Note(s) [2026.01] This group <u>does not cover</u> the cleaning of package elements, package parts or other constructional details, e.g. cleaning of packages after moulding, which are covered by the related groups of subclass H10W.
N	H10P 70/00	Other manufacture or treatment [2026.01]
N	H10P 70/00	Cleaning of wafers, substrates or parts of devices [2026.01]
N	H10P 72/00	Handling or holding of wafers, substrates or devices during manufacture or treatment thereof [2026.01]
N N N N N	H10P 72/10 H10P 72/30 H10P 72/50 H10P 72/70 H10P 72/72 H10P 72/76	 using carriers specially adapted therefor, e.g. front opening unified pods [FOUP] [2026.01] for conveying, e.g. between different workstations [2026.01] for positioning, orientation or alignment [2026.01] for supporting or gripping [2026.01] using electrostatic chucks [2026.01] using mechanical means, e.g. clamps or pinches [2026.01]
N	H10P 72/78	• • using vacuum or suction, e.g. Bernoulli chucks [2026.01]
N	H10P 74/00	Testing or measuring during manufacture or treatment of wafers, substrates or devices [2026.01]
N	H10P 74/20	 characterised by the properties tested or measured, e.g. structural or electrical properties [2026.01]
N	H10P 76/00	Manufacture or treatment of masks on semiconductor bodies, e.g. by lithography or photolithography [2026.01]
N N N	H10P 76/20 H10P 76/40 H10P 90/00	 of masks comprising organic materials [2026.01] of masks comprising inorganic materials [2026.01] Note(s) [2026.01] 1. This group covers multistep processes for the preparation of wafers before the subsequent manufacture of semiconductor devices or solid-state devices therein or thereon. 2. This group does not cover the single-crystal growth of semiconductor ingots,
N	H10P 90/00	which is covered by subclass C30B. Preparation of wafers not covered by a single main group of this subclass, e.g. wafer reinforcement [2026.01]
N	H10P 95/00	Generic processes or apparatus for manufacture or treatments not covered by the other groups of this subclass [2026.01]
N	H10P 95/40	 Treatments of semiconductor bodies to modify their internal properties, e.g. to produce internal imperfections [2026.01]
Ν	H10P 95/60	Mechanical treatments, e.g. by ultrasounds [2026.01]
N	H10P 95/70	Chemical treatments [2026.01] Clearly of treatments of the destroy of the second
N N	H10P 95/80 H10P 95/90	 Electrical treatments, e.g. for electroforming [2026.01] Thermal treatments, e.g. annealing or sintering [2026.01]
N	H10W	GENERIC PACKAGES, INTERCONNECTIONS, CONNECTORS OR OTHER CONSTRUCTIONAL DETAILS OF DEVICES COVERED BY CLASS H10 [2026.01]

H₁₀W Ν Note(s) [2026.01]

This subclass covers:

- a. packages of devices and parts of such packages;
- b. interconnections of devices in chips, wafers, substrates or packages;
- c. connectors of devices in packages;
- d. other constructional details of devices in chips, wafers, substrates or packages, e.g. isolation regions between components of integrated devices;
- e. detachable holders for supporting packaged chips in operation;
- f. the manufacture or treatment of aspects (a)-(e);

when aspects (a)-(e) are

- (1) applicable to devices covered by subclass H10B;
- (2) applicable to devices covered by subclass H10D, except for semiconductor bodies or electrodes thereof, which are covered by subgroups H10D 62/00 or H10D 64/00; or
- (3) generically applicable to devices covered by subclasses H10B, H10D, H10F, H10H, H10K or H10N.
- H10W Ν Subclass index

CONSTRUCTIONAL DETAILS OF INTEGRATED DEVICES IN CHIPS,

WAFERS OR SUBSTRATES

Isolation regions in semiconductor bodies between components of integrated H10W 10/00

Highly-doped buried regions of integrated devices H10W 15/00 Interconnections in chips, wafers or substrates H10W 20/00 Generic parts of integrated devices, not otherwise provided for H10W 29/00

CONSTRUCTIONAL DETAILS RELATED TO CHIPS, WAFERS,

SUBSTRATES OR PACKAGES

H10W 40/00 Arrangements for thermal protection or control H10W 42/00 Arrangements for protection of devices Electrical arrangements for controlling or matching impedance H10W 44/00 Marks applied to devices H10W 46/00

ASPECTS OF PACKAGES

Package substrates; Interposers; Redistribution layers H10W 70/00 Interconnections or connectors in packages H10W 72/00 H10W 74/00 Encapsulations Containers; Fillings; Seals H10W 76/00

Detachable holders for supporting packaged chips in operation H10W 78/00 Direct bonding of chips, wafers or substrates H10W 80/00 Package configurations H10W 90/00 Packaging processes not covered by the other groups of this subclass H10W 95/00

Subject matter not provided for in other groups of this subclass H10W 99/00

N H10W 10/00 Constructional details of integrated devices in chips, wafers or substrates [2026.01]

N H10W 10/00 Isolation regions in semiconductor bodies between components of integrated devices [2026.01]

- H10W 10/10 • Isolation regions comprising dielectric materials [2026.01] Ν
 - • formed using local oxidation of silicon [LOCOS], e.g. sealed interface localised oxidation [SILO] or side-wall mask isolation [SWAMI] [2026.01]
 - · · formed using trench refilling with dielectric materials, e.g. shallow trench isolations [2026.01]
- Ν H10W 10/20 • Air gaps [2026.01]

Ν

Ν

H10W 10/13

H10W 10/17

- Ν H10W 10/30 • Isolation regions comprising PN junctions [2026.01]
- Ν H10W 10/40 • Isolation regions comprising polycrystalline semiconductor materials [2026.01]

Ν	H10W 10/50	• Isolation regions based on field-effect [2026.01]
N	H10W 15/00	Highly-doped buried regions of integrated devices [2026.01]
Ν	H10W 20/00	Note(s) [2026.01]
		1. This group <u>covers</u> :

- interconnections in chips;
- interconnections in or on wafers;
- interconnections in or on substrates.
- 2. This group <u>does not cover</u> interconnections in packages, such as in or on package substrates, which are covered by subgroups H10W 70/00 or H10W 72/00.

		H10W 72/00.
N	H10W 20/00	Interconnections in chips, wafers or substrates [2026.01]
Ν	H10W 20/20	 Interconnections within wafers or substrates, e.g. through-silicon vias [TSV] [2026.01]
Ν	H10W 20/40	 Interconnections external to wafers or substrates, e.g. back-end-of-line [BEOL]
		metallisations or vias connecting to gate electrodes [2026.01]
Ν	H10W 20/41	• • characterised by their conductive parts [2026.01]
Ν	H10W 20/42	••• Vias, e.g. via plugs [2026.01]
Ν	H10W 20/43	• • • Layouts of interconnections [2026.01]
Ν	H10W 20/44	• • • Conductive materials thereof [2026.01]
Ν	H10W 20/45	• • characterised by their insulating parts [2026.01]
Ν	H10W 20/46	••• comprising air gaps [2026.01]
Ν	H10W 20/47	• • • comprising two or more dielectric layers having different properties, e.g. different
		dielectric constants [2026.01]
Ν	H10W 20/48	••• Insulating materials thereof [2026.01]
Ν	H10W 20/49	• • Adaptable interconnections, e.g. fuses or antifuses [2026.01]
N	H10W 29/00	Generic parts of integrated devices, not otherwise provided for [2026.01]
N	H10W 40/00	Constructional details related to chips, wafers, substrates or packages [2026.01]
N	H10W 40/00	Arrangements for thermal protection or thermal control (integrated devices
		comprising arrangements for thermal protection H10D 89/60) [2026.01]
Ν	H10W 40/10	Arrangements for heating [2026.01]
Ν	H10W 40/20	Arrangements for cooling [2026.01]
Ν	H10W 40/22	• • characterised by their shape, e.g. having conical or cylindrical projections [2026.01]
Ν	H10W 40/25	• • characterised by their materials [2026.01]
Ν	H10W 40/28	• • comprising Peltier coolers [2026.01]
Ν	H10W 40/30	 wherein the packaged device is completely immersed in a fluid other than air, e.g.
		immersed in a cryogenic fluid [2026.01]
Ν	H10W 40/40	 involving heat exchange by flowing fluids [2026.01]
Ν	H10W 40/43	•• by flowing gases, e.g. forced air cooling [2026.01]
Ν	H10W 40/47	•• by flowing liquids, e.g. forced water cooling [2026.01]
Ν	H10W 40/50	Arrangements for sensing temperature [2026.01]
Ν	H10W 40/60	• Securing means for detachable heating or cooling arrangements, e.g. clamps [2026.01]
Ν	H10W 40/70	 Fillings or auxiliary members in containers or in encapsulations for thermal protection or control [2026.01]
Ν	H10W 40/73	•• for cooling by change of state [2026.01]
Ν	H10W 40/77	• • Auxiliary members characterised by their shape [2026.01]
Ν	H10W 40/80	 Circuit arrangements for thermal protection or control of packages [2026.01]
N	H10W 42/00	Arrangements for protection of devices (arrangements for thermal protection H10W 40/00) [2026.01]
N	H10W 42/20	 protecting against electromagnetic or particle radiation, e.g. light, X-rays, gamma-rays or electrons [2026.01]
Ν	H10W 42/25	• • against alpha rays, e.g. for outer space applications [2026.01]
Ν	H10W 42/40	 protecting against tampering, e.g. unauthorised inspection or reverse engineering [2026.01]
Ν	H10W 42/60	 protecting against electrostatic charges or discharges, e.g. Faraday shields (integrated devices comprising arrangements for electrical protection H10D 89/60) [2026.01]

Compilation of amendments between 2025.01 and 2026.01 IPC H10W 42/80 Ν protecting against overcurrent or overload, e.g. fuses or shunts (integrated devices comprising arrangements for electrical protection H10D 89/60) [2026.01] Ν H10W 44/00 Electrical arrangements for controlling or matching impedance [2026.01] Ν H10W 44/20 • at high-frequency [HF] or radio frequency [RF] [2026.01] Ν H10W 46/00 Note(s) [2026.01] This group covers marks in or on chips, wafers, substrates or packages. Ν H10W 46/00 Marks applied to devices, e.g. for alignment or identification [2026.01] Ν H10W 70/00 Aspects of packages [2026.01] Ν H10W 70/00 Package substrates; Interposers; Redistribution layers [RDL] [2026.01] Ν H10W 70/01

• Manufacture or treatment [2026.01] Ν H10W 70/02 • • of conductive package substrates serving as an interconnection, e.g. of metal plates (manufacture or treatment of leadframes H10W 70/04) [2026.01] Ν H10W 70/04 • • of leadframes [2026.01] • • of insulating or insulated package substrates, or of interposers, or of redistribution layers Ν H10W 70/05 (manufacture or treatment of leadframes H10W 70/04) [2026.01] Ν H10W 70/06 • • • using temporary auxiliary supports [2026.01] Ν H10W 70/08 • • • by depositing layers on the chip or wafer, e.g. "chip-first" RDLs [2026.01] H10W 70/09 •••• extending onto an encapsulation that laterally surrounds the chip or wafer, e.g. fan-out Ν wafer level package [FOWLP] RDLs [2026.01] Ν H10W 70/20 • Conductive package substrates serving as an interconnection, e.g. metal plates (leadframes H10W 70/40) [2026.01] Ν H10W 70/40 • Leadframes [2026.01] H10W 70/60 · Insulating or insulated package substrates; Interposers; Redistribution layers (leadframes Ν H10W 70/40) [2026.01] Ν H10W 70/62 • • characterised by their interconnections [2026.01] Ν H10W 70/63 • • • Vias, e.g. via plugs [2026.01] Ν H10W 70/65 • • • Shapes or dispositions of interconnections [2026.01] · · · · Cross-sectional shapes [2026.01] Ν H10W 70/652 Ν H10W 70/654 •••• Top-view layouts [2026.01] Ν H10W 70/655 •••• Fan-out layouts [2026.01] •••• Fan-in layouts [2026.01] Ν H10W 70/656 • • • Conductive materials thereof [2026.01] Ν H10W 70/66 Ν H10W 70/67 • • characterised by their insulating layers or insulating parts [2026.01] H10W 70/68 • • • Shapes or dispositions thereof [2026.01] Ν Ν H10W 70/685 • • • • comprising multiple insulating layers [2026.01] • • • Insulating materials thereof [2026.01] Ν H10W 70/69 Ν H10W 70/692 · · · · Ceramics or glasses [2026.01] Ν H10W 70/695 · · · · Organic materials [2026.01] H10W 70/698 • • • • Semiconductor materials that are electrically insulating, e.g. undoped silicon [2026.01] Ν Ν H10W 72/00 Note(s) [2026.01]

In this group, bond pads in general, i.e. where the nature of a related connector is unspecified or generic to multiple types of connectors, are classified in group H10W 72/90. Bond pads specially adapted for a specific type of connector are classified in the group covering the connector type. For example, bond pads specially adapted for wire connectors are classified in group H10W 72/59

		are classified in group HTOW 72/59.
N	H10W 72/00	Interconnections or connectors in packages [2026.01]
N	H10W 72/20	 Bump connectors, e.g. solder bumps or copper pillars; Dummy bumps; Thermal bumps [2026.01]
Ν	H10W 72/29	• • Bond pads specially adapted therefor [2026.01]
Ν	H10W 72/30	Die-attach connectors [2026.01]
Ν	H10W 72/40	Anisotropic conductive adhesives [2026.01]
Ν	H10W 72/49	• • Bond pads specially adapted therefor [2026.01]
Ν	H10W 72/50	• Bond wires [2026.01]
Ν	H10W 72/59	• • Bond pads specially adapted therefor [2026.01]

Compilation of amendments between 2025.01 and 2026.01 IPC Ν H10W 72/60 Strap connectors, e.g. thick copper clips for grounding of power devices [2026.01] H10W 72/90 Ν • Bond pads, in general [2026.01] Ν H10W 74/00 Encapsulations, e.g. protective coatings [2026.01] H10W 74/01 • Manufacture or treatment [2026.01] Ν • characterised by their shape or disposition [2026.01] Ν H10W 74/10 H10W 74/15 Ν • • on active surfaces of flip-chip devices, e.g. underfills [2026.01] Ν H10W 74/40 characterised by their materials [2026.01] H10W 74/43 • • comprising oxides, nitrides or carbides, e.g. ceramics or glasses [2026.01] Ν • • comprising organic materials, e.g. plastics or resins [2026.01] Ν H10W 74/47 N H10W 76/00 Containers; Fillings or auxiliary members therefor; Seals [2026.01] Ν H10W 76/01 Manufacture or treatment [2026.01] Ν H10W 76/05 • • Providing fillings in containers, e.g. gas filling [2026.01] H10W 76/10 • Containers or parts thereof [2026.01] Ν Ν H10W 76/12 • • characterised by their shape [2026.01] Ν H10W 76/13 • • • Containers comprising a conductive base serving as an interconnection [2026.01] • • • • having other interconnections through an insulated passage in the conductive base Ν H10W 76/132 [2026.01] Ν H10W 76/134 • • • • having other interconnections parallel to the conductive base [2026.01] Ν H10W 76/136 • • • • having other interconnections perpendicular to the conductive base [2026.01] Ν H10W 76/138 • • • • having another interconnection being formed by a cover plate parallel to the conductive base, e.g. sandwich type [2026.01] Ν H10W 76/15 • • • Containers comprising an insulating or insulated base [2026.01] Ν H10W 76/153 • • • • having interconnections in passages through the insulating or insulated base [2026.01] Ν H10W 76/157 • • • • having interconnections parallel to the insulating or insulated base [2026.01] Ν H10W 76/17 • • characterised by their materials [2026.01] Ν H10W 76/18 • • • Insulating materials, e.g. resins, glasses or ceramics [2026.01] Ν H10W 76/40 • Fillings or auxiliary members in containers, e.g. centering rings (fillings or auxiliary members for thermal protection or control in containers or encapsulations H10W 40/70) [2026.01] H10W 76/42 Note(s) [2026.01] In this group, the phase of the fillings is determined at the operating temperature of the device. H10W 76/42 •• Fillings [2026.01] Ν Ν H10W 76/43 · · · Gaseous fillings [2026.01] Ν H10W 76/45 • • • Liquid fillings [2026.01] · · · Solid or gel fillings [2026.01] Ν H10W 76/47 • • • Fillings including materials for absorbing or reacting with moisture or other undesired Ν H10W 76/48 substances [2026.01] Ν H10W 76/60 · Seals [2026.01] H10W 76/63 • characterised by their shape or disposition, e.g. between cap and walls of a container Ν [2026.01] Ν H10W 76/67 • • characterised by their materials [2026.01] N H10W 78/00 Detachable holders for supporting packaged chips in operation [2026.01] H10W 80/00 Ν Note(s) [2026.01] This group covers direct bonding of: • chips, e.g. chip-to-chip;

- wafers having devices and interconnections therein or thereon, e.g. wafer-towafer;
- substrates having devices and interconnections therein or thereon;
- combinations thereof, e.g. chip-to-wafer.

N H10W 80/00 Direct bonding of chips, wafers or substrates [2026.01]

N H10W 90/00 Note(s) [2026.01]

This group covers:

- the relative positions of multiple chips within a single package, e.g. adjacent chips in a single encapsulation;
- the relative positions of multiple chips within multiple packages, e.g. one encapsulated chip on another encapsulated chip in a "package-on-package" configuration.

N	H10W 90/00	Package configurations [2026.01]
N	H10W 90/10	Configurations of laterally-adjacent chips [2026.01]
Ν	H10W 90/15	•• the laterally-adjacent chips having different thicknesses than each other [2026.01]
Ν	H10W 90/20	Configurations of stacked chips [2026.01]
Ν	H10W 90/22	 the stacked chips being on both top and bottom sides of a package substrate, interposer or RDL [2026.01]
Ν	H10W 90/24	 at least one of the stacked chips being laterally offset from a neighbouring stacked chip, e.g. chip stacks having a staircase shape [2026.01]
Ν	H10W 90/26	• • the stacked chips being of the same size without any chips being laterally offset, e.g. chip stacks having a rectangular shape [2026.01]
Ν	H10W 90/28	 the stacked chips having different sizes, e.g. chip stacks having a pyramidal shape [2026.01]
N	H10W 95/00	Packaging processes not covered by the other groups of this subclass [2026.01]
N	H10W 99/00	Subject matter not provided for in other groups of this subclass [2026.01]