

Compilation of Changes to the CPC Scheme Between 2014.06 and 2014.07

Presentation Details

- Entries for new symbols and headings: *Black text in italics*
- Entries for existing symbols and headings
- text insertions: *Green text in italics with yellow background*
 - text deletions: ~~Red strikethrough text with grey background~~
- Entries for deleted symbols and headings: ~~Black strikethrough text~~
- Entries arranged by project.
 - In cases when the originating project cannot be found, "N/A" is given for the Project information (e.g. the change could be due to an Editorial Correction).
 - Projects ending in "-F" indicate finalisation after reclassification was completed.

Project: RP0042 (H02G)

- U H02G 1/00 Methods or apparatus specially adapted for installing, maintaining, repairing or dismantling electric cables or lines**
- U H02G 1/12 . for removing insulation or armouring from cables, e.g. from the end thereof(pliers in general [B25B](#) ; cutters in general [B26B](#))
- U H02G 1/1202 . . {by cutting and withdrawing insulation}
- U H02G 1/1204 . . . {Hand-held tools}
- U H02G 1/1207 {the cutting element not rotating about the wire or cable(making longitudinal and transverse or helical cut [H02G 1/1229](#))}
- U H02G 1/1217 {making a longitudinal cut}
- D H02G 2001/1219 ~~making a transverse and longitudinal cut~~
- N H02G 1/1219 {~~making a transverse and longitudinal cut~~}
- U H02G 1/1248 . . . {Machines}
- U H02G 1/1251 {the cutting element not rotating about the wire or cable(making longitudinal and transverse or helical cut [H02G 1/1268](#))}
- U H02G 1/126 {making a longitudinal cut}
- D H02G 2001/1263 ~~making a transverse and longitudinal cut~~
- N H02G 1/1263 {~~making a transverse and longitudinal cut~~}

Project: RP0061 (G10H)

- U G10H 2250/00 Aspects of algorithms or signal processing methods without intrinsic musical character, yet specifically adapted for or used in electrophonic musical processing (methods with intrinsic musical character [G10H 2210/00](#))**
- G10H 2250/041 . Delay lines applied to musical processing (reverberation effects [G10H 2210/281](#); time-delay networks [H03H 9/30](#); chain of active-delay devices ~~H03K 5/132~~[H03K 5/133](#))

Project: RP0061 (H03K)

- H03K 5/14 . . by the use of delay lines {(~~using active delay devices H03K 5/132~~[H03K 5/133](#) *takes precedence*)}

Project: RP0068 (E05B)**E05B****LOCKS; ACCESSORIES THEREFOR; HANDCUFFS****NOTES**

1. Operating or controlling of locks for vehicle wings are classified in groups [E05B 77/00-E05B 81/00](#).

2. Knobs, handles or press buttons for locks of vehicle wings are classified in [E05B 79/00-E05B 85/00](#).

WARNING

Groups [E05B 77/00](#) to [E05B 85/28](#) do not correspond to former or current IPC groups. Concordance CPC : IPC for these groups is as follows: - [E05B 77/00](#) to [E05B 85/28](#) : [E05B 65/12](#)

Project: N/A (A01C)**A01C 15/00**

Fertiliser distributors (~~7/06~~ [A01C 7/06](#) takes precedence; {combined with seeders [A01C 7/06](#)}; arrangements for driving working parts [A01C 19/00](#); {harrows with special additional arrangements [A01B 19/00](#)}; sand, gravel or salt spreaders for roads [E01C 19/20](#))

Project: N/A (A01N)**U A01N 47/00**

Biocides, pest repellants or attractants, or plant growth regulators containing organic compounds containing a carbon atom not being member of a ring and having no bond to a carbon or hydrogen atom, e.g. derivatives of carbonic acid (carbon tetrahalides [A01N 29/02](#))

U A01N 47/08

A01N 47/28

- the carbon atom having one or more single bonds to nitrogen atoms
- • Ureas or thioureas containing the groups N-CO-N or N-CS-N (~~isoureas;~~ ~~isothioureas~~ ~~47/42~~ [isoureas](#), [isothioureas](#) [A01N 47/42](#))

Project: N/A (A23C)**A23C 9/00**

Milk preparations; Milk powder or milk powder preparations(~~21/06~~ [A23C 21/06](#) takes precedence; preservation [A23C 3/00](#) ; chocolate milk [A23G 1/00](#) ; ice-cream, mixtures for preparation of ice-cream [A23G 9/00](#) ; puddings, dry powder puddings [A23L 1/187](#))

U A23C 19/00

Cheese; Cheese preparations; Making thereof(cheese substitutes [A23C 20/00](#) ; casein [A23J 1/20](#))

U A23C 19/02

A23C 19/05

- Making cheese curd
- • Treating milk before coagulation; Separating whey from curd(~~19/097~~ [A23C 19/097](#), { [A23C 19/045](#) }take precedence)

Project: N/A (A23F)**U A23F 5/00****Coffee; Coffee substitutes; Preparations thereof**

U A23F 5/10

- Treating roasted coffee; Preparations produced thereby (removing unwanted substances [A23F 5/16](#); reducing or removing alkaloid content [A23F 5/20](#); coffee extraction, making instant coffee [A23F 5/24](#))

A23F 5/12

- • Agglomerating, flaking or tableting (~~of coffee extract or instant coffee~~ ~~5/38~~ [of coffee extract or instant coffee](#) [A23F 5/38](#))

Project: N/A (A47B)**U A47B 37/00**

Tables adapted for other particular purposes {(glass cutting tables [C03B 33/03](#))}

A47B 37/02 • Tables specially adapted to be used with domestic photographic projectors, e.g. tables with levelling arrangements (~~tables with adjustable height 9/00~~; ~~tables with adjustable height A47B 9/00~~; tables with adjustable inclination of the top [A47B 13/00](#), [A47B 19/06](#), [A47B 23/00](#), [A47B 27/00](#))

A47B 88/00 Drawers for tables, cabinets or like furniture; Guides for drawers (~~63/02 A47B 63/02~~ takes precedence; drawers coupled to doors [A47B 96/16](#); {locks for drawers, e.g. anti-tilt interlock [E05B 65/46](#)})

U A47B 95/00

Fittings for furniture

A47B 95/04

• Keyplates; Ornaments or the like (~~rims specially adapted for table tops 13/08~~; ~~rims specially adapted for table tops A47B 13/08~~; keyplates in general [E05B 17/14](#))

Project: N/A (A47C)

A47C 17/00

Sofas; Couches; Beds (~~bedsteads 19/00~~; ~~bedsteads A47C 19/00~~; spring mattresses [A47C 23/00](#); divan bases [A47C 23/00](#); stuffed mattresses [A47C 27/00](#); beds with special provisions for nursing [A61G 7/00](#))

Project: N/A (A47J)

U A47J 36/00

Parts, details or accessories of cooking-vessels ([A47J 27/00](#) to [A47J 33/00](#) take precedence insofar as these parts, details or accessories are restricted to a particular kind of cooking-vessel provided for in a single one of these groups; heating devices for cooking-vessels in general [F24](#))

U A47J 36/16

• Inserts {(for preventing boiling over of milk [A47J 27/60](#); for frying pans [A47J 37/108](#))}

A47J 36/18

• • Boilers or utensils with sieves inserted therein, e.g. potato-cookers {(~~perforated supports 36/20~~; ~~perforated supports A47J 36/20~~; basting devices in frying-pans [A47J 37/106](#))}

Project: N/A (A47K)

U A47K 17/00

Other equipment, {e.g. separate apparatus for deodorising, disinfecting or cleaning devices without flushing for toilet bowls, seats or covers; Holders for toilet brushes (portable urinating aids [A61F 5/4556](#));}{devices for receiving spittle [A61J 19/00](#); {disinfecting apparatus for medical, surgical or hygienic purposes [A61L](#); cleaning devices with flushing for toilet bowls, seats or covers [E03D 9/00](#); for emptying or cleaning chamber-pots, bed pans, bed urinals or the like [E03D 11/025](#))}

U A47K 17/02

• Body supports, other than seats, for closets, e.g. handles, back-rests, foot-rests; Accessories for closets, e.g. reading tables; {(devices for lifting patients or disabled persons [A61G 7/10](#))}

A47K 17/026

• • { Armrests mounted on or around the toilet (~~17/02B takes precedence~~[A47K 17/022 takes precedence](#))}

Project: N/A (A61B)

U A61B 5/00

Detecting, measuring or recording for diagnostic purposes(radiation diagnosis [A61B 6/00](#) ; diagnosis by ultrasonic, sonic or infrasonic waves [A61B 8/00](#)); Identification of persons{(measuring or recording in general subclasses of [G01](#); medical informatics [G06F 19/30](#))}

WARNING

Groups [A61B 5/40](#) - [A61B 5/748](#) do not correspond to former or present IPC groups. Concordance CPC : IPC for these groups is as follows: [A61B 5/40](#) : [A61B 5/00](#) [A61B 5/41](#) : [A61B 5/00](#) [A61B 5/42](#) : [A61B 5/00](#) [A61B 5/43](#) : [A61B 5/00](#) [A61B 5/44](#) : [A61B 5/00](#) [A61B 5/45](#) : [A61B 5/00](#) [A61B 5/48](#) : [A61B 5/00](#) [A61B 5/68](#)

: [A61B 5/00](#) [A61B 5/70](#) : [A61B 5/00](#) [A61B 5/72](#) : [A61B 5/00](#) [A61B 5/74](#) :
[A61B 5/00](#)

- U A61B 5/15
- Devices for taking samples of blood(hypodermic syringes [A61M 5/178](#))
- NOTE
- In these subgroups, the following terms are used with the meaning indicated:
- "piercing element" means skin penetrating component e.g. blade, needle, lancet, laser beam;
 - "piercing or lancing device" means device ready to be used for lancing;
 - "driving device" means device for driving a piercing element e.g. spring
- WARNING
- This group and its subgroups are not complete pending a reorganisation. See also [A61B 5/14](#) , [A61B 5/1405](#) and subgroups
- A61B 5/150992
- • {Blood sampling from a fluid line external to a patient, such as a catheter line, combined with an infusion line; blood sampling from indwelling needle sets, e.g. sealable ports, luer couplings, valves(~~tubing connectors and couplings~~ [A61M39tubing connectors and couplings A61M 39/00](#))}

Project: N/A (A61F)

- U A61F 9/00
- Method or devices for treatment of the eyes; Devices for putting-in contact lenses; Devices to correct squinting; Apparatus to guide the blind; Protective devices for the eyes, carried on the body or in the hand (caps with means for protecting the eyes [A42B 1/06](#); visors for helmets [A42B 3/22](#); {retractors [A61B 17/02](#); manipulators specially adapted for use in surgery [A61B 19/22](#)}; appliances to aid invalids to move about [A61H 3/00](#); {exercisers for the eyes [A61H 5/00](#)}; eye baths [A61H 35/02](#); sunglasses or goggles having the same features as spectacles [G02C](#))**
- U A61F 9/02
- Goggles {(breathing masks [A62B 18/00](#); swimming goggles [A63B 33/002](#); diving masks [B63C 11/12](#))}
- U A61F 9/022
- • {Use of special optical filters, e.g. multiple layers, filters for protection against laser light or light from nuclear explosions, screens with different filter properties on different parts of the screen; Rotating slit-discs (optical filters per se [G02B 5/20](#))}
- A61F 9/023
- • • {with variable transmission, e.g. photochromic (~~for welding-9/06F2for~~ [welding A61F 9/067](#))}
- U A61F 13/00
- Bandages or dressings (suspensory bandages [A61F 5/40](#); { contact-avoiding wound protectors [A61F15/00P](#); bandages or dressings with incorporated medicaments [A61L 15/44](#), [A61M35/00C](#); radioactive dressings [A61N 5/1029](#)}); Absorbent pads (chemical aspects of, or use of materials for, bandages, dressings or absorbent pads [A61L 15/00](#); { absorbent pads for tracheostomy [A61M 16/047](#)})**
- WARNING
- Documents are in the process of being transferred from groups [A61F 13/00](#) and [A61F13/16](#) to [A61F 13/2051](#) to groups [A61F 13/15](#) and [A61F 13/28](#) to [A61F 13/82](#)
- U A61F 13/06
- specially adapted for feet or legs; Corn-pads; Corn-rings
- U A61F 13/064
- • {for feet (incorporating non-textile reinforcing elements, e.g. springs or stays [A61F 5/0111](#); corn-pads, corn-rings [A61F 13/063](#))}
- A61F 13/067
- • • {for the sole of the foot (~~rigid shoe insertions for supporting the sole~~ [5/14rigid shoe insertions for supporting the sole A61F 5/14](#))}

- U A61F 13/15
 - Absorbent pads, e.g. sanitary towels, swabs or tampons for external or internal application to the body (non-absorbent catamenial receptacles [A61F](#)); Supporting or fastening means therefor; Tampon applicators
- U A61F 13/20
 - • Tampons, e.g. catamenial tampons; Accessories therefor
- WARNING

For group [A61F 13/20](#) and subgroups see warning after [A61F 13/00](#)
- A61F 13/208
 - • { having means for avoiding leakage e.g. liquid impermeable withdrawal end (~~13/20B12~~[A61F 13/204](#) takes precedence)}
- U A61F 13/53
 - • characterised by the absorbing medium ([A61F 13/20](#) takes precedence)
- U A61F 13/534
 - • • having an inhomogeneous composition through the thickness of the pad ({[A61F 13/538](#), [A61F 13/539](#) take precedence; homogeneous cores with tissue wrapping [A61F 13/53](#))}
- U A61F 13/537
 - • • • characterised by a layer facilitating or inhibiting flow in one direction or plane, e.g. a wicking layer ({[A61F 13/538](#) takes precedence)}
- U A61F 13/53743
 - • • • • { characterised by the position of the layer relative to the other layers}
- A61F 13/53747
 - • • • • {the layer is facing the topsheet } (~~layer is part of the topsheet 13/511~~[layer is part of the topsheet A61F 13/511](#))

Project: N/A (A61H)**A61H 33/00**

Bathing devices for special therapeutic or hygienic purposes
 (~~35/00~~[A61H 35/00](#) takes precedence; {sprays acting on a body or body part not immersed in water [A61H 9/00](#); means for washing bed-ridden persons [A61G 7/0005](#); for subaquatic intestinal cleaning [A61M 9/00](#); {isolation tanks [A61M 21/0094](#); electric or magnetic baths, applying ionised fluids [A61N 1/44](#); {heated bath tubs [F24H 1/0072](#)})

Project: N/A (A61K)**U A61K 35/00**

Medicinal preparations containing materials or reaction products thereof with undetermined constitution

NOTE

When classifying in this group, the last place rule (applied throughout [A61K](#)) does not apply. Namely, classification is made for each active component or material.

WARNING

Groups [A61K 35/13](#) , [A61K 35/15](#) , [A61K 35/17](#) , [A61K 35/19](#) , [A61K 35/33](#) , [A61K 35/35](#) , [A61K 35/51](#) , [A61K 35/57](#) , [A61K 35/61](#) do not correspond to former or future IPC. Concordance CPC : IPC for these groups is as follows: -
[A61K 35/13](#) : [A61K 35/12](#) - [A61K 35/15](#) : [A61K 35/14](#) - [A61K 35/17](#) : [A61K 35/14](#) - [A61K 35/19](#) : [A61K 35/14](#) - [A61K 35/33](#) : [A61K 35/12](#) - [A61K 35/35](#) : [A61K 35/12](#) - [A61K 35/51](#) : [A61K 35/48](#) - [A61K 35/57](#) : [A61K 35/56](#) - [A61K 35/61](#) : [A61K 35/56](#)

- U A61K 35/56
 - Materials from animals other than mammals
- U A61K 35/58
 - • {Reptiles}
- A61K 35/583
 - • • {Snakes Lizards; Chameleons(~~therapeutic use of a snake venom protein A61K38~~[therapeutic use of a snake venom protein A61K 38/00](#))}

Project: N/A (A61M)

- U A61M 5/00** Devices for bringing media into the body in a subcutaneous, intra-vascular or intramuscular way; Accessories therefor, e.g. filling or cleaning devices, arm-rests({ vaccination appliances for veterinary use [A61D 1/025](#) } ; tube connectors, tube couplings, valves or branch units specially adapted for medical use [A61M 39/00](#) ; containers specially adapted for medical or pharmaceutical purposes [A61J 1/00](#) ; { combinations of vial and syringe for mixing or transferring their contents [A61J 1/20](#) ; holders for containers for collecting, storing or administering blood or medical fluids [A61J 1/16](#) })
- U A61M 5/178** • Syringes
- U A61M 5/31** • Details
- A61M 5/32** • • Needles; Details of needles pertaining to their connection with syringe or hub(infusion needles [A61M 5/158](#)); Accessories for bringing the needle into, or holding the needle on, the body({ [A61M 5/42](#) , ~~5/46~~[A61M 5/46](#) take precedence; guide needles for catheters [A61M 25/065](#) }); Devices for protection of needles({ apparatus specially adapted for cleaning or sterilising needles [A61M 5/001](#) })
- U A61M 2210/00** **Anatomical parts of the body**
- U A61M 2210/10** • Trunk
- A61M 2210/1025** • • Respiratory system(~~210/06C~~[A61M 2210/0618](#) take precedence)
- A61M 2210/1042** • • Alimentary tract(~~210/06C~~[A61M 2210/0618](#) takes precedence)

Project: N/A (A63B)

- U A63B 69/00** **Training appliances or apparatus for special sports(training of parachutists [B64D 23/00](#))**
- U A63B 69/36** • for golf
- A63B 69/3611** • • {not used, see ~~69/36~~[A63B 69/36](#) and subgroups}

Project: N/A (A63D)

- A63D 13/00** **Bagatelle; Similar games {(pinball games [A63F 7/025](#); pachinko [A63F 7/02](#); apparatus for projecting or rolling-off the balls ~~A63F 7/2409~~[A63F 7/2409](#))}**

Project: N/A (B01D)

- U B01D 33/00** **Filters with filtering elements which move during the filtering operation(filters comprising loose filtering material moving or fluidised during filtration [B01D 24/28](#) to [B01D 24/36](#) ; centrifuges [B04B](#))**

NOTE

See WARNING after subclass title, particularly items (7), (8), (11) and (14)

- U B01D 33/0093** • {Making filter elements(not provided for elsewhere)(see also [B01D 24/001](#) , [B01D 25/001](#) , [B01D 27/005](#) , [B01D 29/012](#) , [B01D 29/111](#))}
- B01D 33/0096** • • {moving rectilinearly(~~filters-35/10~~[filters B01D 35/10](#))}

- U B01D 53/00** Separation of gases or vapours; Recovering vapours of volatile solvents from gases; Chemical or biological purification of waste gases, e.g. engine exhaust gases, smoke, fumes, flue gases, aerosols, (recovery of volatile solvents by condensation [B01D 5/00](#) ; sublimation [B01D 7/00](#) ; cold traps, cold baffles [B01D 8/00](#) ; working-up undefined gaseous mixtures obtained by cracking hydrocarbon oils [C10G 70/00](#) ; cleaning coal gas [C10K](#) ; working-up of natural gas, or synthetic natural gas, [C10L 3/10](#) ; separation of difficult-to-condense gases or air by liquefaction [F25J](#) ; for investigating materials [G01N 30/00](#))

NOTE

Group [B01D 53/34](#) takes precedence over groups [B01D 53/02](#) to [B01D 53/32](#)

B01D 53/32

- by electrical effects other than those provided for in group ~~61/00~~[B01D 61/00](#)

Project: N/A (B01F)

- U B01F 3/00** **Mixing, e.g. dispersing, emulsifying, according to the phases to be mixed** ({[C08J 3/02](#) takes precedence})
- U B01F 3/08
- liquids with liquids; Emulsifying ({[B01F 13/0222](#) takes precedence; dispensing beverages on draught combined with mixing ~~B67D1/00F~~, [B67D 1/0043](#)})
- B01F 3/0803
- • {Methods (~~3/08C1~~[B01F 3/0811](#) takes precedence)}
- U B01F 3/12
- liquids with solids ({[B01F 1/00](#) takes precedence; } displacing one liquid by another in dispersions of solids in liquids [B01D 12/00](#))
- B01F 3/1207
- • {Methods (~~3/12C~~[B01F 3/1221](#) takes precedence; process features in the making of dispersions of dyestuffs preparations [C09B 67/0091](#))}
- U B01F 2215/00** **Auxiliary or complementary information in relation with mixing**
- U B01F 2215/0001
- Field of application of the mixing device
- B01F 2215/0081
- • Mixing ingredients for well-, earth-, deep drilling compositions or drilled material with liquids to obtain slurries (~~compositions for drilling C09K8~~; [compositions for drilling C09K 8/00](#); earth drilling [E21B](#))

Project: N/A (B01J)

- U B01J 20/00** **Solid sorbent compositions or filter aid compositions; Sorbents for chromatography; Processes for preparing, regenerating or reactivating thereof**(use of sorbent compositions in liquid separation [B01D 15/00](#) , use of filter aid compositions [B01D 37/02](#) ; use of sorbent compositions in gas separation [B01D 53/02](#) , [B01D 53/14](#))
- U B01J 20/02
- comprising inorganic material
- B01J 20/06
- • comprising oxides or hydroxides of metals not provided for in group ~~20/04~~[B01J 20/04](#)

Project: N/A (B02C)

- U B02C 23/00** **Auxiliary methods or auxiliary devices or accessories specially adapted for crushing or disintegrating not provided for in preceding groups or not specially adapted to apparatus covered by a single preceding group** ({specially adapted for grain mills [B02C 11/00](#);} separating or sorting in general [B03](#), [B04](#), [B07](#))
- B02C 23/02
- Feeding devices (~~{for grain mills 11/04~~; [{for grain mills B02C 11/04](#); for roller mills [B02C 4/286](#)}; transport devices in general [B65G](#))

Project: N/A (B05B)

- U B05B 7/00 Spraying apparatus for discharge of liquids or other fluent materials from two or more sources, e.g. of liquid and air, of powder and gas([B05B 3/00](#) , [B05B 5/00](#) { [B05B 11/06](#) } take precedence; outlets not specially modified for two media [B05B 1/00](#))
- U B05B 7/24 · with means, e.g. a container, for supplying liquid or other fluent material to a discharge device([B05B 7/14](#) , [B05B 7/16](#) , [B05B 11/00](#) take precedence)
- U B05B 7/2402 · · {Apparatus to be carried on or by a person, e.g. by hand; Apparatus comprising containers fixed to the discharge device([B05B 7/0012](#) takes precedence)}
- B05B 7/2405 · · · {using an atomising fluid as carrying fluid for feeding, e.g. by suction or pressure, a carried liquid from the container to the nozzle([7/24A5B05B 7/2459](#) to [7/24A9B05B 7/247](#) take precedence)}

Project: N/A (B22D)

- U B22D 2/00 Arrangement of indicating or measuring devices, e.g. for temperature or viscosity of the fused mass.
- B22D 2/003 · {for the level of the molten metal ([B22D 11/181](#) and [B22D 11/201](#) take precedence; ~~level indicators in general G01F23~~; *level indicators in general G01F 23/00*)}
- B22D 2/008 · {for the viscosity of the molten metal (~~measuring viscosity in general G01N11~~ *measuring viscosity in general G01N 11/00*)}

Project: N/A (B23D)

- B23D 79/00 Methods, machines, or devices not covered elsewhere, for working metal by removal of material (~~by combined operations 81/00~~; *by combined operations B23D 81/00*; cutting by electron-beam [B23K 15/00](#), by laser beam [B23K 26/00](#); by electro-erosion [B23H](#); tool holders for machine tools [B23Q 3/00](#); handles for hand implements [B25G](#))

Project: N/A (B23K)

- U B23K 9/00 Arc welding or cutting(electro-slag welding [B23K 25/00](#) ; welding transformers [H01F](#) ; welding generators [H02K](#))
- U B23K 9/0026 · {specially adapted for particular articles or work}
- B23K 9/0043 · · {Locally welding a thin plate to a thick piece(spot arc welding ~~B23K-9/007~~[B23K 9/007](#))}

Project: N/A (B26D)

- U B26D 7/00 Details of apparatus for cutting, cutting-out, stamping-out, punching, perforating, or severing by means other than cutting (cutters [B26D 1/00](#); arrangements for guiding hand cutting tools [B26B 29/06](#); punching tools or dies, cutting-out knives or dies [B26F](#))
- U B26D 7/08 · Means for treating work or cutting member to facilitate cutting (tensioning band cutters [B26D 1/48](#))
- B26D 7/10 · · by heating (~~with Laser B23K26~~; *with Laser B23K 26/00*; severing by heating [B26F](#))

Project: N/A (B29C)

- U B29C 39/00 Shaping by casting, i.e. introducing the moulding material into a mould or between confining surfaces without significant moulding pressure; Apparatus therefor([B29C 41/00](#) takes precedence)

- U B29C 39/02 • for making articles of definite length, i.e. discrete articles
- B29C 39/10 • • incorporating preformed parts or layers, e.g. casting around inserts or for coating articles{(coating a surface by casting in general [B05D 1/30](#) , [39/12B2B29C 39/126](#) takes precedence)}
- U B29C 44/00 **Shaping by internal pressure generated in the material, e.g. swelling, foaming;{Producing porous or cellular expanded plastics articles}**
WARNING
 Group [B29C 44/00](#) and subgroups are not complete, see also [B29C 67/22](#) and subgroups
- U B29C 44/34 • Auxiliary operations
- B29C 44/3442 • • {Mixing, kneading or conveying the foamable material(~~mixing plastics B29B7;~~ [mixing plastics B29B 7/00](#); mixing in general [B01F](#))}
- U B29C 49/00 **Blow-moulding, i.e. blowing a preform or parison to a desired shape within a mould; Apparatus therefor{(extrusion moulding of tubular films [B29C 47/0026](#) ; enlarging tube ends using pressure difference [B29C 57/08](#))}**
- U B29C 49/42 • Component parts, details or accessories; Auxiliary operations
- B29C 49/4242 • • {Means for deforming the parison prior to the blowing operation(~~49/08B29C 49/08~~ takes precedence)}
- U B29C 51/00 **Shaping by thermoforming,{i.e. shaping sheets or sheet like preforms after heating}, e.g. shaping sheets in matched moulds or by deep-drawing; Apparatus therefor{(blow moulding of tubular preforms [B29C 49/00](#) , deforming of tubular or hollow preforms [B29C 67/0014](#))}**
- B29C 51/008 • {without using a mould, e.g. ballooning(~~as prestretching step 51/06as~~ [prestretching step B29C 51/06](#))}
- U B29C 66/00 **{General aspects of processes or apparatus for joining preformed parts(means for handling the parts to be joined [B29C 65/78](#) ; testing the joint [B29C 65/82](#))}**
WARNING
 Groups [B29C 66/00](#) - [B29C 66/98](#) do not correspond to former or current IPC groups. Concordance CPC : IPC for these groups is as follows: - [B29C 66/00](#) - [B29C 66/98](#) : [B29C 65/00](#)]
- U B29C 66/40 • {General aspects of joining substantially flat articles, e.g. plates, sheets or web-like materials; Making flat seams in tubular or hollow articles; Joining single elements to substantially flat surfaces}
WARNING
 Group [B29C 66/40](#) and subgroups are not complete, pending a reorganisation; see also [B29C 65/00](#) and its subgroups
- U B29C 66/41 • • {Joining substantially flat articles([B29C 66/47](#) and subgroups take precedence); Making flat seams in tubular or hollow articles([B29C 66/51](#) and subgroups take precedence)}
- U B29C 66/43 • • • {Joining a relatively small portion of the surface of said articles([B29C 66/45](#) takes precedence)}
- B29C 66/433 • • • • {Casing-in, i.e. enclosing an element between two sheets by an outlined seam(for bookbinding [B42C 11/06](#) ; for packaging [B65B](#); ~~by laminating B32B37;~~ [by laminating B32B 37/00](#); enclosing tubular articles between substantially flat elements [B29C 66/53261](#))}

Project: N/A (B30B)

- U B30B 1/00 Presses, using a press ram, characterised by the features of the drive therefor, pressure being transmitted directly, or through simple thrust or tension members only, to the press ram or platen
- U B30B 1/32 · by plungers under fluid pressure
- B30B 1/34 · · involving a plurality of plungers acting on the platen(~~gas-operated 1/38~~gas operated B30B 1/38)

Project: N/A (B41J)

- U B41J 19/00 Character- or line-spacing mechanisms ({ paper carriage guides B41J 11/22; superimposed movements for serial printing B41J 25/005;} key actions B41J 25/02)
- B41J 19/76 · Line-spacing mechanisms (~~special line-feeds, e.g. long feeds 11/36~~special line-feeds, e.g. long feeds B41J 11/36)

Project: N/A (B43K)

- B43K 3/00 Nib holders (~~holders for continuously adjustable nibs 17/00~~holders for continuously adjustable nibs B43K 17/00)

Project: N/A (B60H)

- U 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)
- NOTE
- In this group and its subgroups, as well as in patent documents, the following abbreviation is used: - HVAC Heating, Ventilating and Air Conditioning
- U B60H 1/00642 · {Control systems or circuits, control members or indication devices for heating, cooling or ventilating devices (B60H 1/3201 - B60H 1/3208, B60H 1/3225 take precedence; dashboards B60K 37/00; systems for controlling or regulating non-electric variables in general G05D)}
- U B60H 1/00814 · · {Control systems or circuits characterised by their output, for controlling particular components of the heating, cooling or ventilating installation}
- U B60H 1/00821 · · · {the components being ventilating, air admitting or air distributing devices}
- B60H 1/00828 · · · · {Ventilators, e.g. speed control (~~1/00Y6A4~~ B60H 1/00864 takes precedence)}
- U B60H 1/00835 · · · · {Damper doors, e.g. position control (construction or arrangement of damper doors B60H 1/00664; B60H 1/00864 takes precedence)}
- B60H 1/00849 · · · · · {for selectively commanding the induction of outside or inside air (~~1/00Y6A3A~~ B60H 1/00842 takes precedence)}

Project: N/A (B60J)

- U B60J 3/00 Antiglare equipment associated with windows or windscreens (optical viewing arrangements for vehicles B60R 1/00); Sun visors for vehicles (sun visors having appliances for storing or holding personal property B60R 7/05)
- B60J 3/007 · {Sunglare reduction by coatings, interposed foils in laminar windows, or permanent screens (layered glass products B32B-17B32B 17/00; process of coating windows ~~C03C-17~~C03C 17/00)}

- U B60J 5/00** Doors (**B60J 10/00** takes precedence; window aspects **B60J 1/00**; { side board or tailgate structures for open load compartments **B62D 33/023**})
- U B60J 5/04** • arranged at the vehicle sides {(panel mounted arm-rests **B60N 2/466**; wall liners **B60R 13/02**; door edge guards **B60R 13/043**; padded linings associated with the side doors **B60R 21/0428**)}
- B60J 5/0468** • • { Fixation or mounting means specific for door components (~~fasteners in general F16B21~~**fasteners in general F16B 21/00**)}
- B60J 5/0469** • • • { for door panels, e.g. hemming (~~hemming equipment B21D39~~**hemming equipment B21D 39/00**)}

Project: N/A (B60Q)

- U B60Q 3/00** Arrangements or adaptations of lighting devices for vehicle interior
- U B60Q 3/02** • for lighting passenger or driving compartment
- B60Q 3/0246** • • {for mass transit vehicles(**B60Q 3/0209** , **B60Q 3/04** take precedence, illumination of sides, boards or panels in general ~~G09F 13~~**G09F 13/00**)}
- B60Q 3/0256** • • • {Emergency lighting, e.g. escape routes(illumination of emergency signs ~~G09F 13~~**G09F 13/00**)}

Project: N/A (B60R)

- U B60R 3/00** Arrangements of steps{or ladders facilitating access to or on the vehicle}, e.g. running-boards({ construction of steps for railway vehicles **B61D 23/00** } ; ladders **E06C**)
- B60R 3/002** • {Running boards(~~for vehicle tops 3/00B~~; ~~for vehicle tops B60R 3/005~~; at the sides of the vehicle for carrying loads **B60R 9/02**)}
- U B60R 19/00** Wheel guards; Radiator guards,{e.g. grilles}; Obstruction removers; Fittings damping bouncing force in collisions({ reinforcement elements for side doors **B60J 5/0412** ; }mudguards **B62D**)
- U B60R 19/02** • Bumpers, i.e. impact receiving or absorbing members for protecting vehicles or fending off blows from other vehicles or objects({ **B60R 19/56** takes precedence; } initiating brake action by contact of bumper with an external object **B60T 7/22** ; for rail vehicles **B61F 19/04** ; safety equipment for cycles **B62J 27/00** ;] integral with waterborne vessels or specially adapted therefor **B63B 59/02**)
- U B60R 19/24** • • Arrangements for mounting bumpers on vehicles
- B60R 19/26** • • • comprising yieldable mounting means({~~19/38~~**B60R 19/38** takes precedence;} springs, shock absorbers, or means for damping vibrations per se **F16F**)
- B60R 19/30** • • • Elastomeric material({~~19/34~~**B60R 19/34** takes precedence)}
- B60R 25/00** Fittings or systems for preventing or indicating unauthorised use or theft of vehicles(~~{ for accessories, see the relevant groups, e.g. for radio sets B60R 11/0205 ; anti-theft devices for wheel cover discs, rings or the like B60B 7/16 ; covers, caps or guards for hitches, e.g. comprising anti-theft devices B60D 1/60 ; anti-theft devices for spare wheels B62D 43/007 ; king pins with anti-coupling devices B62D 53/085 } ; locks for vehicles E05B 65/12 E05B 77/00-E05B 85/00~~)

WARNING

Subgroups of **B60R 25/00** corresponding to IPC2013.01 are not complete pending the completion of a reclassification; see also **B60R 25/00** and its other subgroups

Project: N/A (B61D)

B61D 19/00

Door arrangements ~~peculiar to~~ *specifically adapted for* rail vehicles (~~vehicle door arrangements in general B60J~~; ~~vehicle locks E05B 65/12~~; ~~locks for vehicles E05B 77/00 - E05B 85/00~~; door-operating mechanisms [E05F](#))

Project: N/A (B62D)

U B62D 5/00

Power-assisted or power-driven steering({ controlling steering depending on driving conditions sensed and responded to [B62D 6/00](#) ; } for non-deflectable wheels [B62D 11/00](#) ; fluid pressure servomotors in general [F15B](#))

B62D 5/001

• { Mechanical aspects of steer-by-wire systems, not otherwise provided in ~~B62D5~~ *B62D 5/00* (hydraulic steer-by-wire systems [B62D 5/091](#)) }

U B62D 53/00

Tractor-trailer combinations; Road trains(traction couplings other than fifth wheel coupling [B60D](#)){ tracked vehicles comprising at least two articulated parts [B62D 55/0655](#) }

U B62D 53/04

• comprising a vehicle carrying an essential part of the other vehicle`s load by having supporting means for the front or rear part of the other vehicle

B62D 53/08

• • Fifth wheel traction couplings{Tractors for handling trailers in terminals ~~49/00B2~~ *B62D 49/007*}

Project: N/A (B64D)

B64D 9/00

Equipment for handling freight; Equipment for facilitating passenger embarkation or the like(~~emergency equipment 17/00, 19/00, 25/00~~; *emergency equipment B64D 17/00, B64D 19/00, B64D 25/00*; structures integral with fuselage to facilitate loading, fuselage floors specially adapted for freight, steps mounted on and retractable within aircraft [B64C](#) ; ground installations [B64F](#))

B64D 43/00

Arrangements or adaptations of instruments(~~arrangements of cameras 47/08~~; *arrangements of cameras B64D 47/08*; aeronautical measuring instruments per se [G01C](#))

Project: N/A (B65B)

U B65B 21/00

Packaging or unpacking of bottles (bundling bottles [B65B 27/04](#))

U B65B 21/24

• Enclosing bottles in wrappers

B65B 21/26

• • Applying wrappers to individual bottles by operations involving rotation or rolling of the bottles (to articles in general [B65B 11/56](#); ~~{straw-made wrappers 21/24G}~~; *{straw-made wrappers B65B 21/247}*)

Project: N/A (B65D)

U B65D 2203/00

Decoration means, markings, information elements, contents indicators(see also [B65D 5/4212](#) , [B65D 33/004](#))

B65D 2203/12

• Audible, olfactory or visual signalling means(~~51/24K~~ *B65D 51/248* , ~~55/02J~~ *B65D 55/028* , ~~79/02~~ *B65D 79/02* and ~~81/24~~ *B65D 81/24* take precedence)

U B65D 2251/00

Details relating to container closures(lids or covers for box-like containers [B65D 43/00](#))(see also [B65D 43/00](#))

U B65D 2251/0003

• Two or more closures

U B65D 2251/0006

• • Upper closure

U B65D 2251/0018

• • • of the 43-type

B65D 2251/0021

• • • • of the ~~43/16~~ *B65D 43/16*-type

U B65D 2251/0037

• • Intermediate closure(s)

- U B65D 2251/005 · · · of the 43-type
- B65D 2251/0053 · · · · of the ~~43/16~~B65D 43/16 type
- U B65D 2251/0068 · · Lower closure
- U B65D 2251/0081 · · · of the 43-type
- B65D 2251/0084 · · · · of the ~~43/16~~B65D 43/16-type

Project: N/A (B65G)

- U B65G 23/00 **Driving gear for endless conveyers{control devices(for conveyers in general B65G 43/00)}; Belt or chain tensioning arrangements**
- U B65G 23/02 · Belt- or chain-engaging elements
- B65G 23/04 · · Drums, rollers, or wheels{~~23/18~~B65G 23/18 takes precedence}
- U B65G 49/00 **Conveying systems characterised by their application for specified purposes not otherwise provided for(for conveying sheet material B65H)**
- U B65G 49/05 · for fragile or damageable materials or articles
- U B65G 49/06 · · for fragile sheets, e.g. glass(transporting of glass products during their manufacture C03B 35/00)

NOTE

In group B65G 49/06 and subgroups it is desirable to add indexing codes for specific aspects of conveying systems. The indexing codes are chosen from groups B65G 2249/00 to B65G 2249/045

- B65G 49/067 · · · {Sheet handling, means, e.g. manipulators, devices for turning or tilting sheet glass(~~suction cups 49/06B~~; ~~suction cups B65G 49/061~~; combined with vertical conveyers C03B 33/00 - C03B 33/10 ; stacking and destacking B65G 49/068)}

Project: N/A (B65H)

- U B65H 23/00 **Registering, tensioning, smoothing or guiding webs(registering articles B65H 9/00 ; in connection with splicing B65H 21/00)**
- U B65H 23/04 · longitudinally
- B65H 23/042 · · {Sensing the length of a web loop(~~sensing web tension 23/04B~~~~sensing web tension B65H 23/044~~)}

Project: N/A (B81C)

- U B81C 1/00 **Manufacture or treatment of devices or systems in or on a substrate (B81C 3/00 takes precedence)**
- U B81C 1/00015 · { for manufacturing micro-systems}
- B81C 1/00134 · · { comprising flexible or deformable structures (manufacture of MEMS devices for specific applications, see relevant places, e.g. gyroscopes G01C 19/5719, pressure sensors G01L 9/0042, accelerometers G01P 15/0802, acoustic transducers or diaphragms therefor ~~H04R31~~H04R 31/00)}

Project: N/A (C01F)

- U C01F 7/00 **Compounds of aluminium**
- U C01F 7/02 · Aluminium oxide; Aluminium hydroxide; Aluminates
- C01F 7/46 · · Purification of aluminium oxide, aluminium hydroxide or aluminates {(~~7/02H~~C01F 7/028 takes precedence)}

Project: N/A (C07F)

U C07F 9/00	Compounds containing elements of the 5th Group of the Periodic System
U C07F 9/02	<ul style="list-style-type: none"> • Phosphorus compounds (sugar phosphates C07H 11/04; nucleotides C07H 19/00, C07H 21/00; nucleic acids C07H 21/00)
U C07F 9/06	<ul style="list-style-type: none"> • • without P-C bonds
U C07F 9/062	<ul style="list-style-type: none"> • • • {Organo-phosphoranes without P-C bonds}
U C07F 9/065	<ul style="list-style-type: none"> • • • • { Phosphoranes containing the structure P=N-}
C07F 9/067	<ul style="list-style-type: none"> • • • • • { Polyphosphazenes containing the structure [P=N-]_n (cyclic compounds 9/6581Fcyclic compounds C07F 9/65812)}
U C07F 9/28	<ul style="list-style-type: none"> • • with one or more P-C bonds
U C07F 9/535	<ul style="list-style-type: none"> • • • Organo-phosphoranes
U C07F 9/5355	<ul style="list-style-type: none"> • • • • { Phosphoranes containing the structure P=N-}
C07F 9/5357	<ul style="list-style-type: none"> • • • • • { Polyphosphazenes containing the structure [P=N-]_n (cyclic compounds 9/6581Fcyclic compounds C07F 9/65812)}

Project: N/A (C08G)

U C08G 59/00	Polycondensates containing more than one epoxy group per molecule (low-molecular-weight polyepoxy compounds C07); Macromolecules obtained by polymerising compounds containing more than one epoxy group per molecule using curing agents or catalysts which react with the epoxy groups
U C08G 59/18	<ul style="list-style-type: none"> • Macromolecules obtained by polymerising compounds containing more than one epoxy group per molecule using curing agents or catalysts which react with the epoxy groups; { e.g. general methods of curing}
U C08G 59/40	<ul style="list-style-type: none"> • • characterised by the curing agents used
C08G 59/4007	<ul style="list-style-type: none"> • • • {Curing agents not provided for by the groups 59/42C08G 59/42 to 59/66C08G 59/66}
U C08G 63/00	Macromolecular compounds obtained by reactions forming a carboxylic ester link in the main chain of the macromolecule (polyester-amides C08G 69/44; polyester-imides C08G 73/16)
	<u>NOTE</u> Compounds characterised by the chemical constitution of the polyesters are classified in the groups for the type of polyester compound. Compounds characterised by the preparation process of the polyesters are classified in the groups for the process employed (groups C08G 63/78 to C08G 63/87). Compounds characterised both by the chemical constitution and by the preparation process are classified according to each of these aspects.
U C08G 63/02	<ul style="list-style-type: none"> • Polyesters derived from hydroxycarboxylic acids or from polycarboxylic acids and polyhydroxy compounds
U C08G 63/12	<ul style="list-style-type: none"> • • derived from polycarboxylic acids and polyhydroxy compounds
U C08G 63/40	<ul style="list-style-type: none"> • • • Polyesters derived from ester-forming derivatives of polycarboxylic acids or of polyhydroxy compounds, other than from esters thereof
C08G 63/42	<ul style="list-style-type: none"> • • • • Cyclic ethers (59/00C08G 59/00 takes precedence); Cyclic carbonates; Cyclic sulfites; Cyclic orthoesters
U C08G 65/00	Macromolecular compounds obtained by reactions forming an ether link in the main chain of the macromolecule
C08G 65/34	<ul style="list-style-type: none"> • from hydroxy compounds or their metallic derivatives {(65/26C08G 65/26 takes precedence)}

- U C08G 69/00** **Macromolecular compounds obtained by reactions forming a carboxylic amide link in the main chain of the macromolecule (products obtained from isocyanates or isothiocyanates [C08G 18/00](#); polyamide-imides [C08G 73/14](#))**
- C08G 69/40 • Polyamides containing oxygen in the form of ether groups (~~69/12~~[C08G 69/12](#), ~~69/32~~[C08G 69/32](#) take precedence)

Project: N/A (C10M)

- U C10M 111/00** **Lubrication compositions characterised by the base-material being a mixture of two or more compounds covered by more than one of the main groups [C10M 101/00](#) to [C10M 109/00](#) , each of these compounds being essential**
- C10M 111/06 • at least one of them being a compound of the type covered by group ~~109/00~~[C10M 109/00](#)

Project: N/A (C12N)

- U C12N 9/00** **Enzymes; Proenzymes; Compositions thereof(preparations containing enzymes for cleaning teeth [A61K 8/66](#) , [A61Q 11/00](#) ; medicinal preparations containing enzymes or pro-enzymes [A61K 38/43](#) ; enzyme containing detergent compositions [C11D](#) ; { enzymes with nucleic acid structure, e.g. ribozymes, [C12N 15/113](#) }); Processes for preparing, activating, inhibiting, separating or purifying enzymes(preparation of malt [C12C 1/00](#))**

NOTE

Enzymes are generally categorized below according to the "Nomenclature and Classification of Enzymes" of the International Commission on Enzymes. Where appropriate, this designation appears in the groups below in parenthesis.

- C12N 9/10 • Transferases (2.)(~~ribonucleases 9/22~~[ribonucleases C12N 9/22](#))
- U C12N 2310/00** **Structure or type of the nucleic acid**
- U C12N 2310/10 • Type of nucleic acid
- C12N 2310/18 • • acting by a non-sequence specific mechanism(~~other than 310/16 or 310/17~~[other than C12N 2310/16 or C12N 2310/17](#))

Project: N/A (C22B)

- U C22B 34/00** **Obtaining refractory metals**
- U C22B 34/10 • Obtaining titanium, zirconium or hafnium
- U C22B 34/12 • • Obtaining titanium{ or titanium compounds from ores or scrap by metallurgical processing; preparation of titanium compounds from other titanium compounds see [C01G 23/00](#) to [C01G 23/08](#) }
- U C22B 34/1263 • • • {obtaining metallic titanium from titanium compounds, e.g. by reduction([C22B 34/129](#) takes precedence)}
- C22B 34/1281 • • • • {using carbon containing agents, e.g. C, CO, carbides(~~34/12H8~~[C22B 34/1286](#)takes precedence)}

Project: N/A (C23C)

- U C23C 14/00** **Coating by vacuum evaporation, by sputtering or by ion implantation of the coating forming material(discharge tubes with provision for introducing objects or material to be exposed to the discharge [H01J 37/00](#))**
- U C23C 14/58 • After-treatment
- C23C 14/5886 • • {Mechanical treatment(~~involving removal of material 14/58J2~~[involving removal of material C23C 14/588](#))}

Project: N/A (C30B)

- U C30B 29/00** **Single crystals or homogeneous polycrystalline material with defined structure characterised by the material or by their shape (alloys [C22C](#))**
- NOTE
In groups [C30B 29/02](#) to [C30B 29/58](#), in the absence of an indication to the contrary, a material is classified in the last appropriate place.
- U C30B 29/60** • characterised by shape
- C30B 29/607** • • {Crystals of complex geometrical shape, e.g. tubes, cylinders } (~~nanotubes 29/60B~~[nanotubes C30B 29/602](#))
- WARNING
Group [C30B 29/607](#) is not complete, see also **C30B29/60B**, **C30B29/60D**

Project: N/A (D01H)

- U D01H 4/00** **Open-end spinning machines or arrangements for imparting twist to independently moving fibres separated from slivers; Piecing arrangements therefor; Covering endless core threads with fibres by open-end spinning techniques {(arrangements with two or more spinning or twisting devices of different types in combination [D01H 7/90](#))}**
- NOTE
In this group, the expression "open-end spinning" covers such expressions as "break spinning", "ringless spinning", "rotor spinning" and "friction spinning", but does not cover the expression "spinning by false-twisting"
- U D01H 4/04** • imparting twist by contact of fibres with a running surface
- U D01H 4/16** • • Friction spinning, i.e. the running surface being provided by a pair of closely spaced friction drums, e.g. at least one suction drum {(false twisting with friction drums [D01H 1/11](#))}
- D01H 4/20** • • • Drum bearings; Arrangements for driving or stopping (~~control therefor 4/42~~[control therefor D01H 4/42](#))
- U D01H 7/00** **Spinning or twisting arrangements (for open-end spinning [D01H 4/00](#))**
- U D01H 7/02** • for imparting permanent twist
- U D01H 7/52** • • Ring-and-traveller arrangements
- D01H 7/64** • • • Ring supports, e.g. ring rails (~~poker guides or other rail supports 7/10~~[poker guides or other rail supports D01H 7/10](#))

Project: N/A (D03D)

- U D03D 11/00** **Double or multi-ply fabrics not otherwise provided for**
- D03D 11/02** • Fabrics formed with pockets, tubes, loops, folds, tucks, or flaps (~~fabrics for curtain heading tapes 1/06~~[fabrics for curtain heading tapes D03D 1/06](#); fabrics consisting of a single tube [D03D 3/02](#))

Project: N/A (D06F)

- U D06F 17/00** **Washing machines having receptacles, stationary for washing purposes, wherein the washing action is effected solely by circulation or agitation of the washing liquid (washing devices adapted to be used independently of any particular receptacle [D06F 7/00](#); using vibrations for washing purposes [D06F 19/00](#))**
- D06F 17/02** • by pumps (~~17/04~~[D06F 17/04](#)takes precedence)

Project: N/A (D06H)

- U D06H 7/00 Apparatus or processes for cutting, or otherwise severing, specially adapted for the cutting, or otherwise severing, of textile materials (severing for making buttonholes [A41H](#); hand cutting tools in general [B26B](#); cutting machines in general [B26D](#); severing otherwise than by cutting in general [B26F](#); { web delivery apparatus incorporating cutting devices [B65H 35/0006](#)}; trimming seamed edges, shearing surfaces of fabrics, shearing lace or embroidery, e.g. cutting loose threads [D06C](#))
- D06H 7/22 • Severing by heat or by chemical agents ~~{{by laser beam [B23K26/40B12C](#) [B23K 26/4055](#)}}~~

Project: N/A (D06Q)

- D06Q 1/00 Decorating textiles (partial dyeing [D06B 11/00](#); reserving parts of the material before dyeing or printing textiles [D06P 5/12](#))~~{{(making patterns or designs on fabrics [D06C23](#) making patterns or designs on fabrics [D06C 23/00](#))}}~~

Project: N/A (D21H)

- U D21H 5/00 Special paper or cardboard not otherwise provided for (duplicating or recording paper [B41M](#))
- U D21H 5/0005 • { Processes or apparatus specially adapted for applying liquids or other fluent materials to finished paper or board, e.g. impregnating, coating (applying liquids to surfaces in general [B05](#); treating textile materials by liquids, gases or vapours [D06B](#); impregnated or coated fibreboard [D21J 1/08](#); apparatus for making patterned paper [D21H 5/06](#); printing machines [B41F](#))}
- NOTE
Equipment related to specific chemical treatment, see relevant sub-groups for this treatment; e.g. parchmentising or vulcanising [D21H 5/08](#), treatment with viscose [D21H 17/25](#)
- D21H 5/005 • • { involving several different techniques of application (treatments in which the characteristics of a single treatment are of interest only, or in which all treatments have characteristics provided for in a single sub-group, see the relevant sub-groups for the single treatment; ~~several superposed coatings [19/82](#); several superposed coatings [D21H 19/82](#)~~; apparatus for making multiply material [D21H 1/06](#))}

Project: N/A (E01C)

- U E01C 19/00 Machines, tools or auxiliary devices for preparing or distributing paving materials, for working the placed materials, or for forming, consolidating, or finishing the paving(surface stabilisation [E01C 21/00](#) ; apparatus specially adapted for reconditioning or repairing paving [E01C 23/00](#))
- U E01C 19/02 • for preparing the materials~~{{([E01C 19/002](#) , [E01C 19/45](#) , [E01C 19/46](#) , [E01C 21/00](#) , [E01C 23/065](#) take precedence; producing hydraulic cement concrete in general [B28C 5/00](#) to [B28C 9/00](#))}}~~
- E01C 19/05 • • Crushing, pulverising or disintegrating apparatus~~{{(preparing and placing involving breaking [19/46C](#)); {preparing and placing involving breaking [E01C 19/466](#)}; in general [B02C](#))}~~; Aggregate screening, cleaning,{drying}or heating apparatus; {Dust-collecting arrangements specially adapted therefor}

Project: N/A (E01H)

- U E01H 1/00 Removing undesirable matter from roads or like surfaces, with or without moistening of the surface (for snow or ice [E01H 5/00](#); cleaning tramway rails [E01H 8/00](#); obstruction removers on vehicles [B60R 19/00](#); in combination with application of bitumen or the like [E01C 19/16](#); in combination with application of traffic line [E01C 23/16](#); { Sweeping apparatus, particularly for lawns [A01G 1/12](#); Removing undesirable matter from floors and similar surfaces [A47L 5/00](#) to [A47L 13/00](#)})
- U E01H 1/08
- Pneumatically dislodging or taking-up undesirable matter { or small objects} ({ [E01H 1/006](#) and [E01H 1/005](#) take precedence; } suction cleaners in general [A47L 5/00](#) to [A47L 9/00](#); { sucking-off liquids or semi-liquids [E01H 1/108](#)}); Drying by heat only or by streams of gas (permanently-installed heating or blowing devices [E01C 11/26](#); heating or drying for road- building or repairing [E01C 23/14](#); { devices for melting snow or ice in situ [E01H 5/10](#), [E01H 8/08](#); for scorching undesirable vegetation [E01H 11/00](#)}); Cleaning by projecting abrasive particles (sand-blasting in general [B24C](#); { roughening of road surfaces [E01C 23/08](#); cleaning of road joints [E01C 23/0906](#)})
- U E01H 1/0827
- {Dislodging by suction; Mechanical dislodging-cleaning apparatus with independent or dependent exhaust, e.g. dislodging-sweeping machines with independent suction nozzles (combined with blowing [E01H 1/0872](#)); Mechanical loosening devices working under vacuum}
- E01H 1/0836
- • {Apparatus dislodging all of the dirt by suction (~~liquids or semi-liquids 1/10D~~; *liquids or semi-liquids [E01H 1/108](#)*; combined with loosening by blowing [E01H 1/0863](#); for cleaning rails [E01H 8/105](#), [E01H 8/125](#); removing snow by suction [E01H 5/106](#), [E01H 8/08](#)); Suction nozzles (independent suction nozzles in mechanical dislodging-cleaning devices [E01H 1/0827](#); suction and blowing nozzles [E01H 1/0863](#))}

Project: N/A (E02F)

- U E02F 3/00 Dredgers; Soil-shifting machines (for special purposes [E02F 5/00](#); other machines or apparatus for mining [E21C](#); tunnelling [E21D](#))
- U E02F 3/04
- E02F 3/18
- mechanically-driven
 - • with digging wheels turning round an axis, { e.g. bucket-type wheels (for digging trenches [E02F 5/08](#); for laying cables underwater [E02F 5/109](#); ~~cutting machines [E21C25](#); methods or apparatus for making tunnels or galleries [E21D9](#)~~; *cutting machines [E21C 25/00](#); methods or apparatus for making tunnels or galleries [E21D 9/00](#)*)}
- U E02F 3/28
- • with digging tools mounted on a dipper- or bucket-arm, {i.e. there is either one arm or a pair of arms}, e.g. dippers, buckets
- U E02F 3/36
- • • Component parts
- U E02F 3/3604
- • • • { Devices to connect tools to arms, booms or the like}
- E02F 3/3609
- • • • { of the quick acting type, e.g. controlled from the operator seat (quick-acting couplers to connect booms or arms to tractors [E02F 3/627](#); quick-acting couplers for machines mounted on tractor [A01B 59/06](#); ~~couplings of the quick-acting type per se [F16L37](#)~~; *couplings of the quick-acting type per se [F16L 37/00](#)*)}
- E02F 3/76
- • Graders, bulldozers, or the like with scraper plates or ploughshare-like elements (soil-working [A01B](#)); Levelling { scarifying} devices {(street cleaning [E01H](#); ~~construction of roads [E01C19](#), [E01C23](#)~~; *construction of roads [E01C 19/00](#), [E01C 23/00](#)*)}

Project: N/A (E03D)

- U E03D 9/00 Sanitary or other accessories for lavatories (hand tools for cleaning the toilets bowl [A47K 11/10](#); seats or covers for closets [A47K 13/00](#); body supports, other than seats for closets [A47K 17/02](#); devices for preventing contamination of drinking-water pipes [E03C 1/10](#)){Devices for cleaning or disinfecting the toilet room or the toilet bowl; Devices for eliminating smells (cleaning, disinfecting or deodorising the seat [A47K 13/30](#))}
- E03D 9/10 • Waste-disintegrating apparatus combined with the bowl {special flushing devices ~~5/00~~[E03D 5/00](#)}

Project: N/A (E04C)

- U E04C 5/00 Reinforcing elements, e.g. for concrete; Auxiliary elements therefor ({methods or devices for making reinforcing materials [B21D](#)}; material composition {[C04B](#)}, [C21](#), [C22](#); arrangements of reinforcing elements, see the relevant subclasses)

NOTES

In this group, the following terms or expressions are used with the meanings indicated:

- "reinforcing" means increasing any physical strength characteristic of the end product, e.g. compressive or flexural strength;
- "elements" includes relatively large bodies, e.g. steel bars, as well as relatively small discrete bodies of any form, e.g. glass fibres.

Discrete reinforcing elements, which are small compared with the reinforced building element, only characterised by their composition are classified in [C04B](#), e.g. steel fibres [C04B 14/48](#), plastic elements with a shape other than granular or fibrous [C04B 16/12](#)

- U E04C 5/01 • Reinforcing elements of metal, e.g. with non-structural coatings ({[E04C 5/08](#) takes precedence})
- U E04C 5/02 • • of low bending resistance
- E04C 5/04 • • • Mats (~~{combined with reinforcing elements protruding out of the plane of the mat 5/06B; {combined with reinforcing elements protruding out of the plane of the mat E04C 5/0627; three-dimensional mats E04C 5/0636}~~); bases for plaster [E04F 13/04](#))

Project: N/A (E04F)

- U E04F 13/00 Coverings or linings, e.g. for walls or ceilings (flooring [E04F 15/00](#); decoration of surfaces, mosaic work [B44](#), e.g. paper-hanging [B44C 7/00](#); made of webs, e.g. of fabrics or wallpaper, { as such, or their manufacturing} [D03D](#), [D04G](#), [D04H](#), [D06N](#), [D21H](#); construction of { false} ceilings [E04B 9/00](#); roofings or similar water-tight coverings against precipitation [E04D](#))
- U E04F 13/07 • composed of covering or lining elements; Sub-structures therefor; Fastening means therefor
- U E04F 13/072 • • composed of specially adapted, structured or shaped covering or lining elements
- E04F 13/075 • • • for insulation or surface protection, e.g. against noise or impact {(not used; ~~for insulation, e.g. against noise E04B1; for insulation, e.g. against noise E04B 1/00~~)}

E04F 21/00

Implements for finishing work on buildings (for working or treating building elements of stone or stone-like material [B28D](#); designed specifically for special details provided for in the other groups of this subclass, see the relevant groups for the details { working measures on existing buildings [E04G 23/00](#); measuring angles or linear dimensions in general [G01B](#), [G01C](#); ~~measuring inclination, e.g. by clinometers or levels~~ [G01C9](#); ~~measuring inclination, e.g. by clinometers or levels~~ [G01C 9/00](#); reference lines, planes or sectors, generated by active optical means [G01C 15/004](#)})

Project: N/A (E04H)

E04H 1/00

Buildings or groups of buildings for dwelling or office purposes; General lay-out, e.g. modular co-ordination, staggered storeys {small buildings} ([E04H 3/00](#) takes precedence; ~~buildings for two or more purposes, e.g. drive-in buildings~~ [14/00](#); ~~buildings for two or more purposes, e.g. drive-in buildings~~ [E04H 14/00](#); building construction in general [E04B 1/00](#))

Project: N/A (E05B)

E05B 9/00

Lock [casings](#) or latch-mechanism casings; { Fastening locks or fasteners or parts thereof to the wing}{padlock casings [E05B 67/02](#); { ~~E05B 85/02 takes precedence~~; for vehicles [E05B 79/04](#), [E05B 85/02](#) }

N [E05B 77/00](#) -
[E05B 85/00](#)

Locks for vehicles other than bicycles

U [E05B 77/00](#)

Vehicle locks characterised by special functions or purposes (locks specially adapted for bicycles [E05B 71/00](#); locking arrangements for non-fixed vehicle roofs [B60J 7/185](#))

E05B 77/02

- { for accident situations }

E05B 77/04

- • { Preventing unwanted lock actuation, e.g. unlatching, at the moment of collision }

E05B 77/06

- • • { by means of inertial forces }

E05B 77/08

- • { Arrangements for protection of pedestrians }

E05B 77/10

- • { Allowing opening in case of deformed bodywork, e.g. by preventing deformation of lock parts }

E05B 77/12

- • { Automatic locking or unlocking at the moment of collision }

E05B 77/14

- { Specially controlled locking actions in case of open doors or in case of doors moved from an open to a closed position, e.g. lock-out prevention or self-cancelling }

E05B 77/16

- • { Preventing locking with the bolt in the unlatched position }, *i.e. when the door is open*

E05B 77/18

- • { Keyless locking with self-cancellation, e.g. resulting in an unlocking action when the door is ~~closed~~ *being closed* }

E05B 77/20

- • • { Override of self-cancellation, e.g. by actuation of the handle while the door is being closed }

E05B 77/22

- { Functions related to actuation of locks from the passenger compartment of the vehicle }

E05B 77/24

- • { preventing use of an inner door handle, sill button, lock knob or the like }

E05B 77/28

- • • { for anti-theft purposes, e.g. double-locking or super-locking }

E05B 77/30

- • { allowing opening by means of an inner door handle, even if the door is locked }

E05B 77/32

- { allowing simultaneous actuation of locking or unlocking elements and a handle, e.g. preventing interference between an unlocking and an unlatching action }

- E05B 77/34 • ~~{ Weather or dirt protection, e.g. against water }~~ *Protection against water, e.g. against water ingress (closures or guards for keyholes E05B 17/14)*
- E05B 77/36 • { Noise prevention; ~~-Anti-rattling means~~ }
- E05B 77/38 • • { Cushion elements, elastic guiding elements or holding elements, e.g. for cushioning or damping the impact of the bolt against the striker during closing of the wing }
- E05B 77/40 • • { Lock elements covered by silencing layers, e.g. coatings }
- E05B 77/42 • { Means for damping the movement of lock parts, e.g. slowing down the return movement of ~~the~~ *a* handle (E05B 77/38 takes precedence) }
- E05B 77/44 • { Burglar prevention, e.g. ~~by~~ protecting against opening by unauthorised tools (E05B 77/28 takes precedence) }
- E05B 77/46 • { Locking several wings simultaneously }
- E05B 77/48 • • { by electrical means }
- E05B 77/50 • • { by pneumatic or hydraulic means }
- E05B 77/52 • { Locking one wing by shutting another (~~for double doors, i.e. two wings which abut when closed~~ E05C 7/06) }
- E05B 77/54 • { Automatic securing or unlocking of bolts triggered by certain vehicle parameters, e.g. exceeding a speed threshold (triggered by vehicle collision E05B 77/12) }

- E05B 79/00** **~~{ Mounting or connecting vehicle locks or lock parts }~~ *parts thereof***
- E05B 79/02 • { Mounting of vehicle locks or parts thereof }
- E05B 79/04 • • { Mounting of lock casings to the vehicle, e.g. to the wing }
- E05B 79/06 • • { Mounting of handles, e.g. to the wing or to the lock }
- E05B 79/08 • • { Mounting of individual lock elements in the lock, e.g. levers }
- E05B 79/10 • { Connections between movable lock parts }
- E05B 79/12 • • { using connecting rods }
- E05B 79/14 • • • { the rods being linked to each other }
- E05B 79/16 • • • { characterised by the means for linking the rods to other lock parts, e.g. to levers }
- E05B 79/18 • • • { Rod guides }
- E05B 79/20 • • { using flexible connections, e.g. Bowden cables }
- E05B 79/22 • • { Operative connections between handles, sill buttons or lock knobs and the lock unit } (*mounting of non-movable base elements of a handle to a lock E05B 79/06*)

- E05B 81/00** **~~{ Power-driven vehicle locks }~~ *Power-actuated vehicle locks***
- E05B 81/02 • { characterised by the type of actuators used }
- E05B 81/04 • • ~~{ Electrical }~~ *Electrical (electrical circuits E05B 81/54)*
- E05B 81/06 • • • { using rotary motors }
- E05B 81/08 • • • { using electromagnets or solenoids }
- E05B 81/10 • • { Hydraulic or pneumatic } (*hydraulic or pneumatic circuits E05B 81/52*)
- E05B 81/12 • { characterised by the function or purpose of the powered actuators }
- E05B 81/14 • • { operating on bolt detents, e.g. for unlatching the bolt }
- E05B 81/16 • • { operating on locking elements for locking or unlocking action }
- E05B 81/18 • • { to effect movement of a bolt or bolts (E05B 81/20 takes precedence) }
- E05B 81/20 • • { for assisting final closing or for initiating opening }
- E05B 81/22 • • • { by movement of the striker }

- E05B 81/24 · { characterised by constructional features of the actuator or the power transmission }
- E05B 81/26 · · { Output elements }
- E05B 81/28 · · · { Linearly reciprocating elements }
- E05B 81/30 · · · { Rotary elements }
- E05B 81/32 · · { Details of the actuator transmission }
- E05B 81/34 · · · { of geared transmissions }
- E05B 81/36 · · · · { Geared sectors, e.g. fan-shaped gears }
- E05B 81/38 · · · · { Planetary gears }
- E05B 81/40 · · · { Nuts or nut-like elements moving along a driven threaded axle }
- E05B 81/42 · · · { Cams } Cams
- E05B 81/44 · · · · { in the form of grooves }
- E05B 81/46 · · · { Clutches } Clutches
- E05B 81/48 · · { Actuators being driven in a single direction }
- E05B 81/50 · · { Powered actuators with automatic return to the neutral position by non-powered means, e.g. by springs }
- E05B 81/52 · { Pneumatic or hydraulic circuits (~~for control of a plurality of locks on several doors simultaneously E05B 77/50~~ for locking several wings simultaneously E05B 77/50) }
- E05B 81/54 · { Electrical circuits (~~for control of a plurality of locks on several doors simultaneously E05B 77/48~~ for locking several wings simultaneously E05B 77/48) ; Components thereof }
- E05B 81/56 · · { Control of actuators }
- E05B 81/58 · · · { including time control, e.g. for controlling run-time of electric motors }
- E05B 81/60 · · · { using pulse control, e.g. pulse-width modulation }
- E05B 81/62 · · · { for opening or closing of a circuit depending on electrical parameters, e.g. increase of motor current }
- E05B 81/64 · · { Monitoring or sensing, e.g. by using switches or sensors }
- E05B 81/66 · · · { the bolt position, i.e. the latching status }
- E05B 81/68 · · · · { by sensing the position of the detent }
- E05B 81/70 · · · { ~~the door position~~ the wing position }
- E05B 81/72 · · · { the lock status, i.e. locked or unlocked condition }
- E05B 81/74 · · · · { by sensing the state of the actuator }
- E05B 81/76 · · · Detection of handle operation; { ~~Detection of door handle operation or of a user approaching a door~~ Detection of a user approaching a handle; -Electrical switching ~~action~~actions performed by door handles }
- E05B 81/78 · · · · { as part of a hands-free ~~unlocking or locking operation~~ locking or unlocking operation }
- E05B 81/80 · · { characterised by the power supply; -Emergency power operation }
- E05B 81/82 · · · { ~~by using~~ batteries other than the vehicle main battery }
- E05B 81/84 · · · { ~~by using~~ manually operated generator means }
- E05B 81/86 · · · { ~~by capacitors~~ using capacitors }
- E05B 81/88 · · · { ~~by using~~ inductive energy transmission }
- E05B 81/90 · · { Manual override in case of power failure }

E05B 83/00	{ Vehicle locks for special use or applications <i>Vehicle locks specially adapted for particular types of wing or vehicle</i> (E05B 71/00 takes precedence; <i>locks specially adapted for bicycles</i> E05B 71/00; locking arrangements for non-fixed vehicle roofs B60J 7/185; safety locks for back-rests B60N 2/433; <i>latching means for sideboards or tailgates of open load compartments</i> B62D 33/037)}
E05B 83/02	• { Locks for railway freight-cars, freight containers or the like; Locks for lorries, trucks or vans essentially for commercial use <i>the cargo compartments of commercial lorries, trucks or vans</i> (E05B 83/24, E05B 83/36 take precedence)}
E05B 83/04	• • { for sliding wings}
E05B 83/06	• • • { of railway freight-cars}
E05B 83/08	• • { with elongated bars for actuating the fastening means}
E05B 83/10	• • • { Rotary bars}
E05B 83/12	• • { for back doors of vans (E05B 83/04, E05B 83/08 take precedence)}
E05B 83/14	• • { with provisions for sealing}
E05B 83/16	• { Locks for luggage compartments, car boot lids or car bonnets}
E05B 83/18	• • { for car boot lids or rear luggage compartments}
E05B 83/20	• • • { with two or more wings, which together close a single compartment}
E05B 83/22	• • { for luggage compartments at the side of the vehicle, e.g. of buses or camper vans}
E05B 83/24	• • { for car bonnets}
E05B 83/26	• • { Emergency opening means for persons trapped in the luggage compartment}
U E05B 83/28	• Locks for glove compartments, console boxes, fuel inlet covers or the like
E05B 83/30	• • { Glove compartments <i>for glove compartments</i> }
E05B 83/32	• • { Console <i>for console</i> boxes, e.g. between passenger seats}
E05B 83/34	• • { Fuel <i>for fuel</i> inlet covers essentially flush with the vehicle surface}
U E05B 83/36	• Locks for passenger or like doors
E05B 83/38	• • { for pillar-less vehicles, i.e. front and <i>vehicles where a front and a</i> back door engage each other in the closed position}
E05B 83/40	• • { for sliding doors}
E05B 83/42	• • { for large commercial vehicles, e.g. trucks, construction vehicles or vehicles for mass transport vehicles for mass transport (for railway vehicles E05B 83/363)}
E05B 83/44	• • { for recreational vehicles, e.g. caravans or campers <i>camper vans</i> }
E05B 85/00	{ Details of vehicle lock parts <i>locks</i> not provided in groups E05B 77/00 - E05B 81/90} <i>E05B 83/00</i>
E05B 85/02	• { Lock casings (mounting of lock casings to the wing E05B 79/04)}
E05B 85/04	• { Strikers <i>Strikers</i> }
E05B 85/06	• { Lock cylinder arrangements}
E05B 85/08	• { Sill-buttons, garnish buttons or inside <i>inner</i> door lock knobs (E05B 85/13 takes precedence)}
E05B 85/10	• { Handles (mounting of handles E05B 79/06; operative connections of handles E05B 79/22)}
E05B 85/12	• • { Inside door handles <i>Inner door handles</i> }
E05B 85/14	• • { Handles pivoted around <i>Handles pivoted about</i> an axis parallel to the wing}
E05B 85/16	• • • { a longitudinal grip part being pivoted at one end around <i>about</i> an axis perpendicular to the longitudinal axis of the grip part}

- E05B 85/18
 - • • { a longitudinal grip part being pivoted ~~around~~*about* an axis parallel to the longitudinal axis of the grip part }
- E05B 85/20
 - { Bolts or detents }
- E05B 85/22
 - • { ~~with rectilinearly-moving bolts~~ } *Rectilinearly moving bolts*
- E05B 85/24
 - • { ~~with the bolt turning around an axis~~ } *Bolts rotating about an axis*
- E05B 85/26
 - • • { ~~Details of the bolt or the detent~~; Cooperation between ~~bolt and detent~~ } *bolts and detents*
- E05B 85/28
 - • • { in which the member engaging the keeper is shaped as a toothed wheel or the like }

Project: N/A (E05Y)

- U E05Y 2201/00** **Constructional elements; Accessories therefore**
- U E05Y 2201/20
 - Brakes; Disengaging means e.g. clutches; Holders e.g. locks; Stops; Accessories therefore
- E05Y 2201/25
 - • Force or torque adjustment therefore (~~400/202 takes precedence~~ *E05Y 2400/21 takes precedence*)
- U E05Y 2400/00** **Electronic control; Power supply; Power or signal transmission; User interfaces**
- U E05Y 2400/10
 - Electronic control
- U E05Y 2400/20
 - • of brakes, disengaging means, holders or stops
- E05Y 2400/202
 - • • Force or torque control (~~mechanical aspects 201/25~~ *mechanical aspects E05Y 2201/25*)
- U E05Y 2800/00** **Details, accessories and auxiliary operations not otherwise provided for**
- E05Y 2800/40
 - Protection (~~400/50, 400/52 take precedence~~ *E05Y 2400/50, E05Y 2400/52 take precedence*)
- U E05Y 2800/424
 - • against unintended use
- E05Y 2800/426
 - • • against unauthorised use (~~400/51, 400/522 take precedence~~ *E05Y 2400/51, E05Y 2400/522 take precedence*)
- E05Y 2800/74
 - Specific positions (~~400/35 takes precedence~~ *E05Y 2400/35 takes precedence*)

Project: N/A (E21B)

- U E21B 7/00** **Special methods or apparatus for drilling**
- E21B 7/007
 - {Drilling by use of explosives (underwater drilling using explosives [E21B 7/1245](#); setting-tools actuated by explosives [E21B 23/04](#), [E21B 23/065](#); cutting or destroying objects in boreholes by explosives [E21B 29/02](#); ~~freeing objects using explosives 31/107B~~; *freeing objects using explosives E21B 31/1075*; gun or shaped-charge perforators [E21B 43/116](#); fracturing by explosives [E21B 43/263](#), [E21B 43/248](#); taking samples using explosives [E21B 49/04](#)) }

Project: N/A (E21D)

- U E21D 9/00** **Tunnels or galleries, with or without linings; Methods or apparatus for making thereof ([E02D 29/045](#), [E02D 29/063](#) take precedence; linings per se [E21D 11/00](#)); Layout of tunnels or galleries**
- U E21D 9/10
 - Making by using boring or cutting machines ([E21D 9/08](#) takes precedence; mining picks [E21C 35/18](#))

E21D 9/1093

- {Devices for supporting, advancing or orientating the machine or the tool-carrier (~~measuring devices for guiding machines 9/00C~~; ~~measuring devices for guiding machines E21D 9/003~~; anchoring in the borehole [E21B 4/18](#))}

Project: N/A (F01C)**F01C****ROTARY-PISTON OR OSCILLATING-PISTON MACHINES OR ENGINES (internal-combustion aspects [F02B 53/00](#), ~~55/00~~[F02B 55/00](#))****NOTES**

This subclass covers:

- rotary-piston or oscillating-piston engines for elastic fluids, e.g. steam;
- rotary-piston or oscillating-piston engines for liquids and elastic fluids:
- rotary-piston or oscillating-piston machines for elastic fluids;
- rotary-piston or oscillating-piston machines for liquids and elastic fluids.

In this subclass, the following expression is used with the meaning indicated:

- "rotary-piston machine" includes the German expressions "Drehkolbenmaschinen", "Kreiskolbenmaschinen" and "Umlaufkolbenmaschinen".

Attention is drawn to the Notes preceding class [F01](#), especially as regards the definitions of "rotary-piston machine", "oscillating-piston machine", "rotary piston", "co-operating members", "movement of co-operating members", "teeth or tooth-equivalents" and "internal-axis".

U F01C 1/00

Rotary-piston machines or engines (with axes of co-operating members non parallel [F01C 3/00](#); with the working-chamber walls at least partly resiliently deformable [F01C 5/00](#); with fluid ring or the like [F01C 7/00](#); rotary-piston machines or engines in which the working fluid is exclusively displaced by, or exclusively displaces, one or more reciprocating pistons [F01B 13/00](#))

NOTEGroup [F01C 1/30](#) takes precedence over groups [F01C 1/02](#) to [F01C 1/28](#).**U F01C 1/30**

- having the characteristics covered by two or more groups [F01C 1/02](#), [F01C 1/08](#), [F01C 1/22](#), [F01C 1/24](#) or having the characteristics covered by one of these groups together with some other type of movement between co-operating members

F01C 1/38

- having the movement defined in group ~~1/02~~[F01C 1/02](#) and having a hinged member ([F01C 1/32](#) takes precedence)

Project: N/A (F01D)**F01D 17/00**

Regulating or controlling by varying flow (for reversing [F01D 1/30](#); by varying rotor-blade position [F01D 7/00](#); specially for starting [F01D 19/00](#); ~~shutting-down 21/00~~; ~~shutting-down F01D 21/00~~; regulating or controlling in general [G05](#)){ specially adapted for hand-held tools or the like [F01D 15/06](#)}

U F01D 25/00

Component parts, details, or accessories, not provided for in, or of interest apart from, other groups

U F01D 25/04

- Antivibration arrangements

F01D 25/06

- for preventing blade vibration (~~means on blade-carrying members or blades 5/00~~[means on blade-carrying members or blades F01D 5/00](#))

Project: N/A (F02M)

- U F02M 63/00 Other fuel-injection apparatus having pertinent characteristics not provided for in groups [F02M 39/00](#) to [F02M 57/00](#) or [F02M 67/00](#); Details, component parts, or accessories of fuel-injection apparatus, not provided for in, or of interest apart from, the apparatus of groups [F02M 39/00](#) to [F02M 61/00](#) or [F02M 67/00](#); { Combination of fuel pump with other devices, e.g. lubricating oil pump}
- NOTE
- in this group the following indexing codes are used: [F02M 2700/05](#), [F02M 2700/072](#)
- U F02M 63/02
- Fuel-injection apparatus having several injectors fed by a common pumping element, or having several pumping elements feeding a common injector; Fuel-injection apparatus having provision for cutting-out pumps, pumping elements, or injectors; Fuel-injection apparatus having provisions for variably interconnecting pumping elements and injectors alternatively
- U F02M 63/0225
- {Fuel-injection apparatus having a common rail feeding several injectors ([F02M 63/0003](#) takes precedence); Means for varying pressure in common rails; Pumps feeding common rails}
- U F02M 63/023
- • { Means for varying pressure in common rails (pressure control [F02D 41/3845](#))}
- U F02M 63/0235
- • • { by bleeding fuel pressure}
- U F02M 63/025
- • • • { from the common rail}
- D F02M 63/0255
- • • • • { using the injectors to bleed fuel, e.g. by operating the control valve of an accumulator type injector during very short periods}

Project: N/A (F02P)

- U F02P 17/00 Testing of ignition installations, e.g. in combination with adjusting (testing fuel injection apparatus [F02M 65/00](#); testing ignition installations in general [F23Q 23/00](#)); Testing of ignition timing in compression-ignition engines
- U F02P 17/02
- Checking or adjusting ignition timing
- U F02P 17/04
- • dynamically
- F02P 17/08
- • • using a cathode-ray oscilloscope (~~17/06~~[F02P 17/06](#) takes precedence)

Project: N/A (F04D)

- U F04D 23/00 Other rotary non-positive-displacement pumps(pumping installations or systems [F04D 25/00](#))
- F04D 23/008
- {Regenerative pumps(~~for liquids or for liquids and elastic fluids 5/00R~~[for liquids or for liquids and elastic fluids F04D 5/002](#))}
- U F04D 25/00 Pumping installations or systems(controlling [F04D 27/00](#))
- U F04D 25/02
- Units comprising pumps and their driving means(predominant aspect of the driving means, see the relevant classes for such means)
- F04D 25/022
- • {comprising a yielding coupling, e.g. hydraulic(~~a magnetic coupling 25/02D~~[a magnetic coupling F04D 25/026](#))}
- U F04D 25/06
- • the pump being electrically driven([F04D 25/08](#) takes precedence)
- F04D 25/068
- • • {Mechanical details of the pump control unit(~~pump control details F04D27~~[pump control details F04D 27/00](#))}

Project: N/A (F16B)

- U F16B 2/00** Friction-grip releasable fastenings (for cables or ropes, e.g. cleats [F16G 11/00](#)){connections of rods or tubes, e.g. of non-circular section, mutually, including resilient connections [F16B 7/00](#)}
- U F16B 2/02** • Clamps, i.e. with gripping action effected by positive means other than the inherent resistance to deformation of the material of the fastening
- F16B 2/16** • • using rollers or balls {(clamps for rods or tubes telescopically engaged ~~7/14B~~; *clamps for rods or tubes telescopically engaged F16B 7/1409*; used in anti-theft monitors, e.g. as used for articles of clothing in shops [E05B 73/0017](#))}
- U F16B 5/00** **Joining sheets or plates, {e.g. panels}, to one another or to strips or bars parallel to them ({[F16B 17/002](#) takes precedence}; by sticking together [F16B 11/00](#); dowel connections [F16B 13/00](#); pins, including deformable elements [F16B 19/00](#); covering of walls [E04F 13/00](#); fastening signs, plates, panels or boards to a supporting structure, fastening readily-detachable elements, e.g. letters to signs, plates, panels, or boards, [G09F 7/00](#))**
- U F16B 5/02** • by means of fastening members using screw-thread ({[F16B 5/0004](#) takes precedence}; construction of screw-threaded connections [F16B 25/00](#) to [F16B 39/00](#))
- F16B 5/0258** • • {using resiliently deformable sleeves, grommets or inserts (~~43/00B~~[F16B 43/001](#) takes precedence)}
- U F16B 5/06** • by means of clamps or clips ({[F16B 5/0004](#) takes precedence}; friction-grip releasable fastenings in general [F16B 2/00](#))
- U F16B 5/0607** • • {joining sheets or plates to each other ([F16B 5/0692](#), [F16B 21/082](#) take precedence)}
- F16B 5/0621** • • • {in parallel relationship (~~fastened by a drive-pin 19/10B2D~~; *fastened by a drive-pin F16B 19/1081*; fastened by a device locking by rotation [F16B 21/02](#))}
- U F16B 21/00** **Means for preventing relative axial movement of a pin, spigot, shaft or the like and a member surrounding it (riveted or deformable spigots [F16B 19/04](#); for gudgeon pins [F16J 1/18](#)); Stud-and-socket releasable fastenings**
- F16B 21/02** • Releasable fastening devices locking by rotation (with snap-action [F16B 21/06](#); ~~studs or coupling pins with resilient protrusions 21/08~~; *studs or coupling pins with resilient protrusions F16B 21/08*)
- F16B 35/00** **Screw-bolts; Stay-bolts; Screw-threaded studs; Screws; Set screws ({[F16B 33/008](#) takes precedence; joining sheets or plates using screws with two separate threads [F16B 5/0275](#); ~~using screws with adjustment sleeves 5/02S~~; *using screws with adjustment sleeves F16B 5/0283*); thread cutting screws [F16B 25/00](#))**
- NOTE**
The fastening of heads of screws or heads of bolts to surfaces is classified in [F16B 37/04](#)

Project: N/A (F16K)

- U F16K 27/00** **Construction of housing(methods for welding housings [B23K](#)); Use of materials therefor**
- F16K 27/02** • of lift valves(~~for reducing the flow resistance of screw-spindle lift-valves 1/06~~*for reducing the flow resistance of screw-spindle lift-valves F16K 1/06*)

Project: N/A (F16L)

F16L 5/00

Devices for use where pipes, cables or protective tubing pass through walls or partitions ({joining pipes to walls [F16L 41/00](#); joining plastic pipes to walls [F16L 47/00](#); ~~passing insulated pipes through walls 59/12F~~; ~~passing insulated pipes through walls F16L 59/121~~; for steam boilers [F22B 37/105](#)}; arrangements for leading electric cables or lines through walls, floors or ceilings [H02G 3/22](#))

Project: N/A (F23R)

U F23R 2900/00

Special features of, or arrangements for continuous combustion chambers; Combustion processes therefor

F23R 2900/03043

- Convection cooled combustion chamber walls with means for guiding the cooling air flow (~~means for creating turbulence 900/03045~~ ~~means for creating turbulence F23R 2900/03045~~)

Project: N/A (F42B)

U F42B 1/00

Explosive charges characterised by form or shape but not dependent on shape of container

F42B 1/02

- Shaped or hollow charges (~~blasting cartridges with cavities in the charge 3/08~~; ~~blasting cartridges with cavities in the charge F42B 3/08~~; oil winning using shaped-charge perforators [E21B 43/116](#))

Project: N/A (G01D)

U G01D 15/00

Component parts of recorders for measuring arrangements not specially adapted for a specific variable

G01D 15/16

- Recording elements transferring recording material, e.g. ink, to the recording surface (~~printing recording elements 15/20~~; ~~printing recording elements G01D 15/20~~; implements for writing or drawing in general [B43K](#))

Project: N/A (G01F)

U G01F 1/00

Measuring the volume flow or mass flow of fluid or fluent solid material wherein the fluid passes through the meter in a continuous flow (measuring a proportion of the volume flow [G01F 5/00](#); measuring speed of flow [G01P 5/00](#); indicating presence or absence of flow [G01P 13/00](#); regulating quantity or ratio {[G05D 7/00](#), [G05D 11/02](#)})

NOTE

[G01F 1/72](#), [G01F 1/74](#) and [G01F 1/76](#) take precedence over [G01F 1/05](#) to [G01F 1/68](#)

U G01F 1/68

- by using thermal effects

U G01F 1/684

- • Structural arrangements; Mounting of elements, e.g. in relation to fluid flow

G01F 1/688

- • • using a particular type of heating, cooling or sensing element
{(~~1/684N~~ ~~G01F 1/6847~~ takes precedence)}

Project: N/A (G01J)

U G01J 5/00

Radiation pyrometry (photometry in general [G01J 1/00](#); spectrometry in general [G01J 3/00](#)){measuring temperature in general, i.e. with a contacting sensor [G01K](#); calorimetry of radiation beams [G01K 17/00](#); direction finders for radiant sources [G01S](#); intrusion detection by radiation [G08B](#)}

U G01J 5/0022

- {for sensing the radiation of moving bodies}

G01J 5/0025

- { Living bodies (ear thermometers [G01J 5/0011](#); ~~detecting, measuring or recording for diagnostic purposes A61B5~~; *detecting, measuring or recording for diagnostic purposes A61B 5/00*)}

Project: N/A (G01L)

U G01L 9/00

Measuring steady or quasi-steady pressure of a fluid or a fluent solid material by electric or magnetic pressure-sensitive elements ([G01L 11/004](#) takes precedence); Transmitting or indicating the displacement of mechanical pressure-sensitive elements, used to measure the steady or quasi-steady pressure of a fluid or fluent solid material by electric or magnetic means (measuring differences of two or more pressure values [G01L 13/00](#); measuring two or more pressure values simultaneously [G01L 15/00](#); vacuum gauges [G01L 21/00](#); transferring the output of the sensing member to the indicating or recording part in general [G01D 5/00](#))

G01L 9/0026

- {Transmitting or indicating the displacement of flexible, deformable tubes by electric, electro-mechanical, magnetic or electro-magnetic means ([G01L 9/0008](#) takes precedence; ~~pressure sensitive flexible, deformable tubes in general 7/04~~; *pressure sensitive flexible, deformable tubes in general G01L 7/04*)}

Project: N/A (G01N)

U G01N 27/00

Investigating or analysing materials by the use of electric, electro-chemical, or magnetic means([G01N 3/00](#) to [G01N 25/00](#) take precedence; measurement or testing electric or magnetic variables or of electric or magnetic properties of materials [G01R](#))

U G01N 27/26

- by investigating electrochemical variables; by using electrolysis or electrophoresis(investigating resistance to corrosion [G01N 17/00](#) ; investigating or analysing materials by separation into components using adsorption, absorption or similar phenomena or using ion-exchange, e.g. chromatography, [G01N 30/00](#) ; immunoelectrophoresis [G01N 33/561](#) ; electrochemical processes or apparatus in general [B01J](#); standard cells [H01M 6/28](#))

U G01N 27/28

- • Electrolytic cell components

U G01N 27/30

- • Electrodes, e.g. test electrodes; Half-cells([G01N 27/414](#) takes precedence)

G01N 27/327

- • • Biochemical electrodes{electrical and mechanical details of in vitro measurements(chemical and biological details C12Q1, [G01N 33/543](#) ; ~~in vivo A61B5~~; *in vivo A61B 5/00*)}

U G01N 27/416

- • Systems([G01N 27/27](#) takes precedence { ; for testing batteries [G01R 31/36](#) })

G01N 27/447

- • using electrophoresis{(aspects concerning peptides or proteins [C07K 1/26](#) ; for non-analytical purposes [B01D 57/02](#) ; ~~separating particles by dielectrophoresis B03C5~~; *separating particles by dielectrophoresis B03C 5/00*)}

U G01N 30/00

Investigating or analysing materials by separation into components using adsorption, absorption or similar phenomena or using ion-exchange, e.g. chromatography([G01N 3/00](#) to [G01N 29/00](#) take precedence; separation for the preparation or production of components [B01D 15/00](#) , [B01D 53/02](#) , [B01D 53/14](#) ; solid sorbent compositions in general [B01J 20/00](#) ; ion-exchange in general [B01J 39/00](#) to [B01J 49/00](#))(or field flow fractionation(for preparation or production of components [B01D 21/00](#) , [B01D 43/00](#) , [B01D 45/00](#) or [B03C](#))}

NOTE

In this group, the following term is used with the meaning indicated:

- "conditioning" refers to the adjustment or control of environmental parameters, e.g. temperature or pressure.

- U G01N 30/02 • Column chromatography
- U G01N 30/86 • • Signal analysis
- G01N 30/8675 • • • {Evaluation, i.e. decoding of the signal into analytical information(for analysis of specific compounds see also [G01N 30/88](#) and subgroups of ~~G01N33~~[G01N 33/00](#); chemical libraries per se [C40B](#))}
- U G01N 33/00 Investigating or analysing materials by specific methods not covered by the preceding groups**
- U G01N 33/18 • Water{(treatment of water [C02F](#))}
- G01N 33/1813 • • {specific cations in water, e.g. heavy metals(~~electrochemical analysis 27/26~~; [electrochemical analysis G01N 27/26](#); detection of ions by colorimetry [G01N 31/22](#))}
- U G01N 33/48 • biological material, e.g. blood, urine([G01N 33/02](#) to [G01N 33/14](#) , [G01N 33/26](#) , [G01N 33/44](#) , [G01N 33/46](#) take precedence; determining the germinating capacity of seeds [A01C 1/02](#)); Haemocytometers(counting blood corpuscles distributed over a surface by scanning the surface [G06M 11/02](#))
- U G01N 33/483 • • Physical analysis of biological material
- G01N 33/4833 • • • {of solid biological material, e.g. tissue samples, cell cultures(~~tissue in vivo A61B5~~; [tissue in vivo A61B 5/00](#); cell suspensions [G01N 33/48735](#))}

Project: N/A (G01R)

- U G01R 5/00 Instruments for converting a single current or a single voltage into a mechanical displacement(vibration galvanometers [G01R 9/02](#))**
- G01R 5/28 • Electrostatic instruments(combined with radiation detector [G01T](#); ~~{electrometers without passively moving electrodes 15/16B~~;{ [electrometers without passively moving electrodes G01R 15/165](#); measuring electrostatic fields [G01R 29/12](#) ; measuring charge [G01R 29/24](#))}
- U G01R 15/00 Details of measuring arrangements of the types provided for in groups [G01R 17/00](#) to [G01R 29/00](#) and [G01R 33/00](#) to [G01R 35/00](#) (details of instruments [G01R 1/00](#) ; overload protection arrangements [G01R 1/36](#))**
- U G01R 15/14 • Adaptations providing voltage or current isolation, e.g. for high-voltage or high-current networks(instrument transformers [H01F 38/20](#) ; voltage dividers [G01R 15/04](#) ; { means for converting the output of a sensing member to another variable [G01D 5/00](#) ; visible signalling arrangements or devices [G08B 5/00](#) ; transmission systems for measured values [G08C 17/00](#) , [G08C 23/00](#))}
- G01R 15/146 • • {Measuring arrangements for current not covered by other subgroups of ~~15/14~~[G01R 15/14](#), e.g. using current dividers, shunts, or measuring a voltage drop(if no voltage isolation is involved [G01R 1/203](#) or [G01R 19/0092](#))}
- U G01R 15/24 • • using light-modulating devices
- G01R 15/247 • • • {Details of the circuitry or construction of devices covered by ~~15/24B~~[G01R 15/241](#) to ~~15/24C2~~[G01R 15/246](#)}
- U G01R 29/00 Arrangements for measuring or indicating electric quantities not covered by groups [G01R 19/00](#) to [G01R 27/00](#)**
- U G01R 29/02 • Measuring characteristics of individual pulses, e.g. deviation from pulse flatness, rise time, duration(of amplitude [G01R 19/00](#) ; of repetition rate [G01R 23/00](#) ; of phase difference of two cyclic pulse trains [G01R 25/00](#) ; monitoring pattern of pulse trains [H03K 5/19](#))
- U G01R 29/027 • • Indicating that a pulse characteristic is either above or below a predetermined value or within or beyond a predetermined range of values

- G01R 29/0276
 - • {the pulse characteristic being rise time(~~measuring rate of change 19/12~~*measuring rate of change G01R 19/12*)}
- U G01R 29/08
 - Measuring electromagnetic field characteristics{ measuring electrostatic fields [G01R 29/12](#) ; for determining a voltage [G01R 15/14](#) ; measuring magnetic fields [G01R 33/00](#) ; Receiver signal strength indication (RSSI) [H04B 17/0042](#) }
- U G01R 29/0864
 - • {characterised by constructional or functional features(not used, see subgroups)}
- G01R 29/0871
 - • {Complete apparatus or systems; circuits, e.g. receivers or amplifiers([G01R 29/0878](#) , [G01R 29/0892](#) take precedence; ~~dosimeters, warning devices 29/08A3F~~ ; *dosimeters, warning devices G01R 29/0857*)}
- U **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(measuring leads, measuring probes [G01R 1/06](#) ; { measuring superconductive properties [G01R 33/1238](#) ; data processing equipment for testing or function monitoring [G06F15/20B](#) } ; indicating electrical condition of switchgear or protective devices [H01H 71/04](#) , [H01H 73/12](#) , [H02B 11/10](#) , [H02H 3/04](#) ; testing or measuring semiconductors or solid state devices during manufacture [H01L 22/00](#) ; testing substation equipment, e.g. mobile phones [H04M 1/24](#) ; testing or monitoring of control systems [G05B 23/02](#) ; { testing or monitoring transmitters or receivers [H04B 17/00](#) })
- U G01R 31/28
 - Testing of electronic circuits, e.g. by signal tracer({ EMC, EMP or similar testing of electronic circuits [G01R 31/002](#) } ; testing for short-circuits, discontinuities, leakage or incorrect line connection [G01R 31/02](#) ; checking computers { or computer components } [G06F 11/00](#) ; checking static stores for correct operation [G11C 29/00](#) ; { testing receivers or transmitters of transmission systems [H04B 17/00](#) })
- U G01R 31/317
 - • Testing of digital circuits{ WARNING: The following subgroups of [G01R 31/317](#) are not complete due to an ongoing reorganisation : [G01R 31/31702](#) , [G01R 31/31708](#) , [G01R 31/31711](#) , [G01R 31/31717](#) , [G01R 31/31718](#) , [G01R 31/31728](#) , [G01R 31/31901](#) . See also [G01R 31/317](#) and its other subgroups }
- U G01R 31/3181
 - • Functional testing([G01R 31/3177](#) takes precedence)
- U G01R 31/319
 - • • Tester hardware, i.e. output processing circuit({ logic analyzers [G01R 31/3177](#) , Memory tester hardware [G11C 29/56](#) })
- G01R 31/3193
 - • • • with comparison between actual response and known fault free response({~~receiver details 31/319S3~~*receiver details G01R 31/31924*)}
- U G01R 31/327
 - Testing of circuit interrupters, switches or circuit-breakers(structural association with switches [H01H](#) ; { detecting faults in encased switchgear [H02B 13/065](#) ; monitoring in addition to disconnection by a protective circuit [H02H 3/04](#) })
- G01R 31/333
 - • Testing of the switching capacity of high-voltage circuit-breakers; {Testing of breaking capacity or related variables, e.g. post arc current or transient recovery voltage} (means for detecting the presence of an arc or discharge in switching devices [H01H 9/50](#) , ~~33/26~~*H01H 33/26*)

Project: N/A (G01S)

- U **G01S 7/00**

Details of systems according to groups [G01S 13/00](#) , [G01S 15/00](#) , [G01S 17/00](#) {(apparatus for measuring unknown time-intervals by electronic means, e.g. Vernier method [G04F 10/00](#))}
- U G01S 7/02
 - of systems according to group [G01S 13/00](#)

- U G01S 7/03
 - Details of HF subsystems specially adapted therefor, e.g. common to transmitter and receiver(TR boxes [H01J 17/64](#) ; waveguides or resonators or other devices of the waveguide type [H01P](#) ; aerials [H01Q](#) ; basic electronic circuitry, e.g. generation of oscillations, modulation, demodulation, amplification, pulse technique [H03](#) ; impedance networks, resonators [H03H](#))
- U G01S 7/034
 - {Duplexers(switching devices for waveguides [H01P 1/10](#) ; transmit-receive switching in transceivers [H04B 1/44](#))}
- G01S 7/036
 - {involving a transfer mixer(~~mixers in general~~, [H03D7](#)*mixers in general*, [H03D 7/00](#))}
- U G01S 7/52
 - of systems according to group [G01S 15/00](#)
- G01S 7/52004
 - {Means for monitoring or calibrating(~~short-range imaging 7/52S6~~*short-range imaging G01S 7/5205*)}

Project: N/A (G01T)

- U G01T 1/00 **Measuring X-radiation, gamma radiation, corpuscular radiation, or cosmic radiation([G01T 3/00](#) , [G01T 5/00](#) take precedence)**
- U G01T 1/16
 - Measuring radiation intensity([G01T 1/29](#) takes precedence; { self-powered detectors [G01T 3/006](#) ; using an ionisation chamber filled with a liquid or solid, e.g. frozen liquid, dielectric [G01T 3/008](#) })
- U G01T 1/17
 - Circuit arrangements not adapted to a particular type of detector({ pulse-selection circuits [H03K](#) , [G01R](#) })
- G01T 1/171
 - {Compensation of dead-time counting losses(~~see provisionally also 1/17~~*see provisionally also G01T 1/17*)}

Project: N/A (G01V)

- U G01V 1/00 **Seismology; Seismic or acoustic prospecting or detecting**
- NOTE
Groups [G01V 1/44](#) to [G01V 1/52](#) take precedence over groups [G01V 1/001](#) to [G01V 1/393](#) [G01V 1/42](#)
- WARNING
Group [G01V 1/159](#) does not correspond to former or current IPC groups.
Concordance ECLA:IPC for this group is as follows: - [G01V 1/159](#) : [G01V 1/02](#)
- U G01V 1/28
 - Processing seismic data, e.g. analysis, for interpretation, for correction([G01V 1/48](#) takes precedence)
- U G01V 1/30
 - Analysis([G01V 1/50](#) takes precedence)
- G01V 1/308
 - {Time lapse or 4D effects, e.g. production related effects to the formation(~~fluid flow per se E21B47~~*fluid flow per se E21B 47/00*)}

Project: N/A (G02B)

- U G02B 6/00 **Light guides**
- U G02B 6/24
 - Coupling light guides(for electric waveguides [H01P 1/00](#))
- U G02B 6/36
 - Mechanical coupling means({ [G02B 6/06](#) , [G02B 6/30](#) , [G02B 6/35](#) , [G02B 6/38](#) } , [G02B 6/255](#) , [G02B 6/42](#) take precedence)
- U G02B 6/38
 - having fibre to fibre mating means
- U G02B 6/3807
 - {Dismountable connectors, i.e. comprising plugs}
- U G02B 6/381
 - {of the ferrule type, e.g. fibre ends embedded in ferrules, connecting a pair of fibres}
- G02B 6/3816
 - {for use under water, high pressure connectors(~~provisionally see 6/44C6B1~~*provisionally see G02B 6/4428*)}

- U G02B 13/00** **Optical objectives specially designed for the purposes specified below (with variable magnification { in general } [G02B 15/00](#))**

NOTE

Unless specified in the title of the subgroups, this group and its subgroups do not cover objectives comprising reflecting surfaces, which are covered by [G02B 17/06](#) , [G02B 17/08](#) and their subgroups

- U G02B 13/001** • {Miniaturised objectives for electronic devices, e.g. portable telephones, webcams, PDAs, small digital cameras([G02B 23/243](#) takes precedence)}
- G02B 13/009** • • {having zoom function(~~zoom lenses per se G02B15~~[zoom lenses per se G02B 15/00](#))}

Project: N/A (G03B)**G03B 13/00**

Viewfinders; Focusing aids for cameras; Means for focusing for cameras; Autofocus systems for cameras (~~hoods, caps 11/04~~; [hoods, caps G03B 11/04](#); reflex camera arrangements [G03B 19/12](#), [G03B 19/14](#); rangefinders per se [G01C 3/00](#); automatic focusing in general [G02B 7/09](#); systems for automatic generation of focusing signals [G02B 7/28](#))

Project: N/A (G04B)

- U G04B 19/00** **Indicating the time by visual means ({ indicating the time optically by electric means [G04C 17/00](#), e.g.} by electric lamps [G04C 17/02](#); display arrangements in general [G09F](#))**
- U G04B 19/22** • Arrangements for indicating different local apparent times; Universal time pieces {(indicating by means of numbers or signs disposed on moving devices [G04B 19/20](#); illumination of dials or hands [G04B 19/30](#); combination with a terrestrial globe in general [G04B 47/02](#); electronic time-zone watches [G04G 9/0076](#))}
- U G04B 19/23** • • by means of additional hands or additional pairs of hands {(simultaneous indication on several dials [G04B 19/025](#); indicating devices giving several simultaneous indications [G04B 19/048](#))}
- G04B 19/235** • • { mechanisms for correcting the additional hand or hands (~~time-setting G04B27~~[time setting G04B 27/00](#))}

WARNING

Not complete pending reclassification; see also [G04B 19/23](#)

Project: N/A (G06F)

- U G06F 3/00** **Input arrangements for transferring data to be processed into a form capable of being handled by the computer; Output arrangements for transferring data from processing unit to output unit, e.g. interface arrangements(typewriters [B41J](#); conversion of physical variables [F15B 5/00](#) , [G01](#); image acquisition [G06T 1/00](#) , [G06F 9/00](#) ; coding, decoding or code conversion in general [H03M](#) ; transmission of digital information [H04L](#); { in regulating or control systems [G05B](#) })**
- G06F 3/06** • Digital input from or digital output to record carriers,{e.g. RAID, emulated record carriers, networked record carriers(recording or reproducing devices per se [G11B](#); ~~error detection, error correction, monitoring per se regarding storage systems G06F11~~; ~~accessing or addressing within memory systems or architectures G06F12~~; ~~error detection, error correction, monitoring per se regarding storage systems G06F 11/00~~; ~~accessing or addressing within memory systems or architectures G06F 12/00~~; information retrieval [G06F 17/30](#))}

- U G06F 9/00 Arrangements for programme control, e.g. control unit(programme control for peripheral devices [G06F 13/10](#) ; in regulating or control systems [G05B](#))**
- U G06F 9/06
 - using stored programme, i.e. using internal store of processing equipment to receive and retain programme
- U G06F 9/44
 - • Arrangements for executing specific programmes
- U G06F 9/455
 - • • Emulation; Software simulation{, i.e. virtualisation or emulation of application or operating system execution engines(instruction translation at instruction execution time [G06F 9/3017](#) ; multiprogramming in general [G06F 9/46](#) ; logical partitioning of resources or management or configuration of virtualized resources [G06F 9/5077](#) ; in-circuit emulation [G06F 11/3652](#) ; environments for testing or debugging software [G06F 11/3664](#))}
- U G06F 9/4553
 - • • • {Hypervisors; Virtual machine monitors}
- U G06F 9/4558
 - • • • • {Hypervisor-specific management and integration aspects}
- G06F 2009/45583
 - • • • • {Memory management, e.g. access, allocation(~~memory management in general G06F12;~~ *memory management in general G06F 12/00;* allocation of memory to service a request [G06F 9/5016](#))}
- U G06F 17/00 Digital computing or data processing equipment or methods, specially adapted for specific functions**
- U G06F 17/30
 - Information retrieval; Database structures therefor;{File system structures therefor(data processing systems or methods specially adapted for administrative, commercial, financial managerial, supervisory or forecasting purposes [G06Q](#))}
- U G06F 17/30017
 - • {Multimedia data retrieval; Retrieval of more than one type of audiovisual media(retrieval of image data [G06F 17/30244](#) ; retrieval of video data [G06F 17/30781](#) ; retrieval of audio data [G06F 17/3074](#) ; editing or indexing of data stored based on relative movement between record carrier and transducer G11B27)}[1207]
- WARNING
Groups [G06F 17/3002](#) - [G06F 17/30064](#) are not complete pending reclassification. See also [G06F 17/30017](#)
- U G06F 17/30023
 - • • {Querying(programmed access in sequence to addressed parts of tracks of operating discs [G11B 27/105](#))}
- G06F 17/30026
 - • • • {using audio data(details of audio retrieval [G06F 17/3074](#) ;~~general determination or detection of speech characteristics G10L11;~~ *speech recognition G10L15;* ~~speaker recognition G10L17;~~ *general determination or detection of speech characteristics G10L 11/00;* *speech recognition G10L 15/00;* *speaker recognition G10L 17/00;* electrophonic musical instruments [G10H](#))}
- G06F 17/3074
 - • {Audio data retrieval(retrieval of video data [G06F 17/30781](#) ; retrieval of multimedia data [G06F 17/30017](#) ;~~general determination or detection of speech characteristics G10L11;~~ *speech recognition G10L15;* ~~speaker recognition G10L17;~~ *general determination or detection of speech characteristics G10L 11/00;* *speech recognition G10L 15/00;* *speaker recognition G10L 17/00;* electrophonic musical instruments [G10H](#);~~editing or indexing of data stored based on relative movement between record carrier and transducer G11B27-~~ *editing or indexing of data stored based on relative movement between record carrier and transducer G11B 27/00*)}
- WARNING
Groups [G06F 17/30743](#) - [G06F 17/30778](#) are not complete pending reclassification. See also [G06F 17/3074](#)

- G06F 17/30743
- • {using features automatically derived from the audio content, e.g. descriptors, fingerprints, signatures, MEP-cepstral coefficients, musical score, tempo(content oriented musical parameter indexing, e.g. tempo [G10H](#); ~~determination or detection of speech characteristics G10L11~~; *determination or detection of speech characteristics G10L 11/00*; audio watermarking, e.g. by inserting fingerprints **G10L19/00W** ; indexing by using information signals detectable on the record carrier and recorded by the same method as the main recording [G11B 27/28](#))}
- G06F 17/30746
- • • {using automatically derived transcript of audio data, e.g. lyrics(~~speech recognition G10L15~~*speech recognition G10L 15/00*)}
- G06F 2211/00** Indexing scheme relating to details of data-processing equipment not covered by groups ~~3/00 G06F 3/00~~ to ~~13/00 G06F 13/00~~

Project: N/A (G06K)

- U G06K 7/00** **Methods or arrangements for sensing record carriers,{e.g. for reading patterns}([G06K 9/00](#) takes precedence)**
- U G06K 7/10
- by electromagnetic radiation, e.g. optical sensing; by corpuscular radiation
- U G06K 7/10009
- {sensing by radiation using wavelengths larger than 0.1 mm, e.g. radio-waves or microwaves}
- NOTE
This group covers electromagnetic interrogation as radiated by the antenna of an interrogation device while interrogating a plurality of wireless electronic memory record carriers, e.g. non-contact smart cards, RFID tags or labels, or transponders
- U G06K 7/10019
- • {resolving collision on the communication channels between simultaneously or concurrently interrogated record carriers.(collision between the communication channels used by wireless communication devices, where the solution is not particularly adapted for RFIDs or the like, [H04W 74/08](#))}
- U G06K 7/10079
- • • {the collision being resolved in the spatial domain, e.g. temporary shields for blindfolding the interrogator in specific directions}
- G06K 7/10089
- • • • {the interrogation device using at least one directional antenna or directional interrogation field to resolve the collision(~~direction or location finding, such as triangulation techniques, G01S13~~*direction or location finding, such as triangulation techniques, G01S 13/00*)}
- U G06K 9/00** **Methods or arrangements for reading or recognising printed or written characters or for recognising patterns, e.g. fingerprints(processing or analysis of tracks of nuclear particles [G01T 5/02](#) ; { information retrieval [G06F 17/30](#) ; medical diagnosis **G06F19/00A2** ; recognition of molecular sequences **G06F19/00C** ; radio frequency identification [G06K 7/00](#) ; recognition of barcodes and similar code images [G06K 7/10](#) ; computer systems based on specific computational models [G06N](#); image analysis, inspection, positioning or tracking [G06T 7/00](#) ; recognition of acoustic speech signals [G10L 15/00](#) ; acoustic speaker identification [G10L 17/00](#))}**
- NOTE
1. In this group, the following term is used with the meaning indicated:
- "recognising" includes several functions such as extracting features, clustering, classifying or matching.
2. IPC subgroups [G06K 9/20](#) , [G06K 9/36](#) , [G06K 9/62](#) and [G06K 9/74](#) refer to methods or arrangements that can be applied to a pattern independently of its nature or to that are applied to specific patterns not included in the subgroups in the range [G06K 9/00006](#) to [G06K 9/00852](#) . The CPC subgroups in the range [G06K 9/00006](#) to [G06K 9/00852](#) refer to the same methods or arrangements

when applied or specially adapted to the specific patterns to which these subgroups relate.

3. The present group does not cover the use of recognised patterns in specific applications, e.g. the use of traced gestures recognised as commands to be input to a computer is covered by the groups under [G06F 3/00](#)

- G06K 9/00006
 - {Acquiring or recognising fingerprints or palmprints(non-computerised biometric identification [A61B5/A61B 5/00](#) ; means for preventing unauthorised use of vehicles [B60R 25/00](#) ; security in computer systems [G06F 21/00](#) ; secure access to buildings [G07C 9/00](#) ; secret or secure communication [H04L 9/00](#) ; means for preventing unauthorised telephone calls [H04M 1/667](#))}
 - G06K 9/00335
 - {Recognising movements or behaviour, e.g. recognition of gestures, dynamic facial expressions; Lip-reading(using movements or postures of body parts for inputting data to a computer [G06F3/G06F 3/00](#) ; static facial expressions [G06K 9/00221](#) ; recognition of scene events [G06K 9/00624](#) ; analysis of movement [G06T 7/20](#) ; lip-reading assisted speech recognition [G10L 15/24](#))}
 - G06K 9/00496
 - {Recognising patterns in signals and combinations thereof(signature verification [G06K 9/00154](#) ; analysing specific medical signals, e.g. bioelectric signals, blood pressure [A61B5/A61B 5/00](#) ; processing radar and similar signals [G01S](#) ; analysis of chromatographic signals [G01N 30/86](#) ; processing seismic signals [G01V 1/28](#) , [G01V 1/46](#) ; acoustic speech processing [G10L](#) ; transmission systems [H04B 1/00](#))}
- WARNING**
not complete, see **G06F17/00D**
- G06K 9/00503
 - {Preprocessing, e.g. filtering(electrical circuits for filtering [H03H](#) ; adaptive filters [H03H 21/H03H 21/00](#) ; convolution-based filters [H03H 17/H03H 17/00](#) , [H03H 21/H03H 21/00](#))}
 - U G06K 9/00624
 - {Recognising scenes, i.e. recognition of a whole field of perception; recognising scene-specific objects(image retrieval [G06F 17/30244](#) ; video retrieval [G06F 17/30781](#) ; image analysis and image segmentation, e.g. pixel labelling [G06T 7/00](#) ; alarm systems [G08B](#); traffic control [G08G](#); pictorial communication [H04N](#))}
 - G06K 9/00711
 - {Recognising video content, e.g. extracting audiovisual features from movies, extracting representative key-frames, discriminating news vs. sport content(information retrieval in video databases [G06F 17/30781](#) ; recognition of movements or behaviour [G06K 9/00335](#) ; extracting overlay text [G06K9/32R1T2](#) ; fusion techniques [G06K 9/6288](#) ; ~~speech-recognition~~ [G10L15](#) ; ~~speech recognition~~ [G10L 15/00](#) ; indexing of audio and video or audiovisual data on record media using extracted features or characteristics [G11B 27/28](#))}

Project: N/A (G06N)

U G06N 99/00

G06N 99/005

Subject matter not provided for in other groups of this subclass

- { Learning machines, i.e. computer in which a programme is changed according to experience gained by the machine itself during a complete run (neural networks [G06N 3/02](#); ~~knowledge-based models~~ [G06N5](#); ~~knowledge based models~~ [G06N 5/00](#); fuzzy logic systems [G06N 7/02](#); adaptive control systems [G05B 13/00](#))}

Project: N/A (G07F)

U G07F 17/00

G07F 17/0014

Coin-freed apparatus for hiring articles; Coin-freed facilities or services

- {for vending, access and use of specific services not covered anywhere else in ~~17/00~~[G07F 17/00](#)(meter-controlled dispensing of liquid, gas or electricity [G07F 15/00](#))}

Project: N/A (G08B)

- U G08B 17/00** Fire alarms; Alarms responsive to explosion (temperature-responsive elements [G01K](#); { automatic fire-extinguishing and alarm devices [A62C 35/00](#), [A62C 37/00](#); structural combination of lighting devices with smoke detectors [F21V 33/0076](#); arrangement of safety devices on stoves [F24C 7/08](#)})
- G08B 17/12
- Actuation by presence of radiation or particles, e.g. of infra-red radiation, of ions { alarm or controlling circuits using ionisation chamber, proportional counters or Geiger-Müller tubes also functioning as u-v detectors [G01T 7/125](#); flame detection in burners [F23N5](#) [F23N 5/00](#)}
- U G08B 21/00** Alarms responsive to a single specified undesired or abnormal operating condition and not elsewhere provided for {(alarms on gas pipes [F17D 3/01](#))}
- U G08B 21/02
- Alarms for ensuring the safety of persons
- U G08B 21/04
- • responsive to non-activity, e.g. of elderly persons ([G08B 21/06](#) takes precedence)
- U G08B 21/0438
- • • { Sensor means for detecting}
- G08B 21/0453
- • • • { worn on the body to detect health condition by physiological monitoring, e.g. electrocardiogram, temperature, breathing (~~detecting, measuring or recording for diagnostic purposes~~ [A61B5](#) ~~detecting, measuring or recording for diagnostic purposes~~ [A61B 5/00](#))}

Project: N/A (G21D)

- U G21D 1/00** Details of nuclear power plant (control [G21D 3/00](#))
- G21D 1/006
- { primary side of steam generators (~~secondary side of steam generators~~ [F22B1](#); [F22B35](#) ~~or~~ [F22B37](#) ~~secondary side of steam generators~~ [F22B 1/00](#), [F22B 35/00](#) ~~or~~ [F22B 37/00](#))}

Project: N/A (H01J)

- U 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 [H01J 3/00](#))
- H01J 1/53
- Electrodes intimately associated with a screen on or from which an image or pattern is formed, picked up, converted, or stored{ see provisionally also [H01J 29/08](#) to [29/36](#) [H01J 29/36](#) }
- U H01J 17/00** Gas-filled discharge tubes with solid cathode([H01J 25/00](#) , [H01J 27/00](#) , [H01J 31/00](#) to [H01J 41/00](#) { [H01J 11/00](#) } take precedence; gas or vapour discharge lamps [H01J 61/00](#) ; gas filled spark gaps [H01T](#); Marx converters [H02M 7/26](#) ; tubes for generating potential differences by charges carried in a gas stream [H02N](#))
- U H01J 17/38
- Cold-cathode tubes(TR boxes [H01J 17/64](#))
- U H01J 17/48
- • with more than one cathode or anode, e.g. sequence-discharge tube, counting tube, dekatron
- H01J 17/49
- • • Display panels, e.g. with crossed electrodes{e.g. making use of direct current} (gas discharge type indicating arrangements effected by the combination of a number of individual lamps [G09F 9/313](#) {display panels making use of alternating current ~~[H01J11](#)~~ [H01J 11/00](#)})
- U H01J 49/00** Particle spectrometer or separator tubes

NOTE

In classifying particle separators, no distinction is made between spectrometry and spectrography, the difference being only in the manner of detection which in

the first case is electrical and in the second case is by means of a photographic film.

- U H01J 49/02 · Details
- U H01J 49/10 · · Ion sources; Ion guns
- U H01J 49/16 · · · using surface ionisation, e.g. field-, thermionic- or photo-emission
- U H01J 49/165 · · · · {Electrospray ionisation}
- H01J 49/167 · · · · · {Capillaries and nozzles specially adapted therefor; (~~electrostatic spraying per se B05B5~~~~electrostatic spraying per se B05B 5/00~~)}
- H01J 49/168 · · · · · {field ionisation, e.g. corona discharge(~~atmospheric pressure corona discharge per se H01T19~~~~atmospheric pressure corona discharge per se H01T 19/00~~)}

- U H01J 2237/00 **Discharge tubes exposing object to beam, e.g. for analysis treatment, etching, imaging**
 NOTES
 For features of general interest which may be found in other types of discharge tubes, an indexing code corresponding to general schemes T01J201 to T01J207 is given, e.g. for cathodes, vessels, cooling means or the like
 Same rules apply for manufacturing procedures (T01J209), unless really specific to the tube concerned.
 The codes in this main group are grouped according to the following principle:
 details common to gas or plasma discharge of the above mentioned tubes: [H01J 2237/00](#) to T01J237/248D2
 Imaging or analysing: [H01J 2237/25](#) to [H01J 2237/2857](#)
 particle beam processing: [H01J 2237/30](#) to [H01J 2237/31798](#)
 plasma processing: [H01J 2237/32](#) to [H01J 2237/339](#)
- U H01J 2237/30 · Electron or ion beam tubes for processing objects
- U H01J 2237/317 · · Processing objects on a micro-scale
- H01J 2237/31715 · · · Particle-beam lithography, e.g. electron beam lithographyWARNING
 This group and subgroups thereof are not complete, see provisionally ~~237/317L~~~~H01J 2237/3175~~ and subgroups

Project: N/A (H01R)

- U H01R 43/00 **Apparatus or processes specially adapted for manufacturing, assembling, maintaining, or repairing of line connectors or current connectors or for joining electric conductors (of trolley lines [B60M 1/28](#); joining cables [H02G 1/14](#))**
- U H01R 43/04 · for forming connections by deformation, e.g. crimping tool
- H01R 43/048 · · Crimping apparatus or processes (~~43/042~~~~H01R 43/042~~ takes precedence)

Project: N/A (H01S)

- U H01S 5/00 **Semiconductor lasers{(superluminescent diodes [H01L 33/0045](#))}**
- U H01S 5/02 · Structural details or components not essential to laser action
- H01S 5/022 · · {Mountings; Housings(~~packaging and electrical lead-through per se H01L23~~~~packaging and electrical lead-through per se H01L 23/00~~)}

Project: N/A (H02G)

- U H02G 3/00** Installations of electric cables or lines in or on buildings, equivalent structures or vehicles(installations of bus-bars [H02G 5/00](#) ; overhead installations [H02G 7/00](#) ; installations in or on the ground [H02G 9/00](#) ; channels or vertical ducts for receiving utility lines [E04F 17/08](#) ; wiring of electric apparatus in general [H05K](#))
- H02G 3/36 • Installation of cables or lines in walls, floors or ceilings([3/22](#)[H02G 3/22](#) takes precedence)

Project: N/A (H03K)

- U H03K 5/00** Manipulating pulses not covered by one of the other main groups in this subclass (circuits with regenerative action [H03K 3/00](#), [H03K 4/00](#); by the use of non-linear magnetic or dielectric devices [H03K 3/45](#))

NOTE

In this group, the input signals are of the pulse type.

- U H03K 5/13** • Arrangements having a single output and transforming input signals into pulses delivered at desired time intervals {(measuring time intervals using electronic timing, e.g. counting means [G04F 1/005](#))}
- H03K 5/131 • • ~~{digitally controlled}~~ *Digitally controlled*
- D H03K 5/132** • • {using a chain of active delay devices}
- H03K 5/133 • • • ~~{with field-effect transistors}~~ *using a chain of active delay devices*
- N H03K 5/134** • • • *with field-effect transistors*

Project: N/A (H03M)

- U H03M 1/00** Analogue/digital conversion; Digital/analogue conversion(conversion of analogue values to or from differential modulation [H03M 3/00](#))
- U H03M 1/06** • Continuously compensating for, or preventing, undesired influence of physical parameters(periodically,{ e.g. by using stored correction values, } [H03M 1/10](#))
- U H03M 1/0617** • • {characterised by the use of methods or means not specific to a particular type of detrimental influence}
- U H03M 1/0634** • • • {by averaging out the errors, e.g. using sliding scale}
- U H03M 1/0656** • • • • {in the time domain}
- U H03M 1/066** • • • • • {by continuously permuting the elements used, i.e. dynamic element matching}
- H03M 1/0673 • • • • • {using random selection of the elements(~~with data-controlled random generator 1/06M7T3D~~ *with data-controlled random generator [H03M 1/0665](#)*)}
- U H03M 1/0675** • • • {using redundancy}
- H03M 1/0687 • • • • {using fault-tolerant coding, e.g. parity check, error correcting codes(~~1/06M9R~~ [H03M 1/069](#) takes precedence)}
- U H03M 1/10** • Calibration or testing
- U H03M 1/1071** • • {Measuring or testing}
- H03M 1/109 • • • {for dc performance, i.e. static testing(~~1/10T4~~ [H03M 1/1085](#) takes precedence)}
- H03M 1/1095 • • • {for ac performance, i.e. dynamic testing(~~1/10T4~~ [H03M 1/1085](#) takes precedence)}
- U H03M 3/00** Conversion of analogue values to or from differential modulation
- U H03M 3/02** • Delta modulation, i.e. one-bit differential modulation{([H03M 3/30](#) takes precedence)}

- H03M 3/022 • • {with adaptable step size, ~~i.e.~~[e.g.](#) adaptive delta modulation [ADM]}
- U H03M 3/30 • {Delta-sigma modulation}
- NOTE
In this group branch, in the absence of an indication of the contrary, classification is made in the first appropriate place
- U H03M 3/322 • • {Continuously compensating for, or preventing, undesired influence of physical parameters(periodically, e.g. by using stored correction values, [H03M 3/378](#))}
- H03M 3/324 • • • {characterised by means or methods [for](#) compensating or preventing more than one type of error at a time, e.g. by synchronisation, ~~or~~ using a ratiometric arrangement}
- H03M 3/378 • • {~~Calibration or testing~~ [Testing](#)}
- H03M 3/38 • • • {Calibration}
- H03M 3/382 • • • • {at one point of the transfer characteristic, i.e. by adjusting a single reference value, e.g. bias or gain error(~~gain~~ setting for range control [H03M 3/478](#))}
- H03M 3/384 • • • • • {Offset correction(removal of offset already present on the analogue input signal [H03M 3/494](#))}
- H03M 3/386 • • • • {over the full range of the converter, e.g. for correcting differential non-linearity}
- H03M 3/388 • • • • • {by storing corrected or correction values in one or more digital look-up tables}

Project: N/A (H04L)

- U H04L 1/00 **Arrangements for detecting or preventing errors in the information received(correcting synchronisation [H04L 7/00](#) ; { for digital computers [G06F 11/00](#) } ; arrangements in the transmission path [H04B](#))**
- U H04L 1/12 • by using return channel
- U H04L 1/16 • • in which the return channel carries supervisory signals, e.g. repetition request signals
- U H04L 1/18 • • • Automatic repetition systems, e.g. van Duuren system;{ARQ protocols}
- U H04L 1/1867 • • • • {Arrangements specific to the transmitter end}
- H04L 1/1893 • • • • • {Physical mapping arrangements(~~physical resource mapping in general~~ [H04L5physical resource mapping in general H04L 5/00](#))}
- U H04L 9/00 **{Cryptographic mechanisms or cryptographic}arrangements for secret or secure communication{(network architectures or network communication protocols for network security [H04L 63/00](#) or for wireless network security [H04W 12/00](#) ; security arrangements for protecting computers or computer systems against unauthorized activity [G06F 21/00](#))}**

NOTE

1. This group covers: 1.1 Cryptographic mechanisms including cryptographic protocols and cryptographic algorithms, whereby a cryptographic protocol is a distributed cryptographic algorithm defined by a sequence of steps precisely specifying the actions required of two or more entities to achieve specific security objectives (e.g. cryptographic protocol for key agreement), and whereby a cryptographic algorithm is specifying the steps followed by a single entity to achieve specific security objectives (e.g. cryptographic algorithm for symmetric key encryption). 1.2 [H04L 9/00](#) focuses on cryptographic mechanisms such as encryption schemes, digital signatures, hash functions, random number generation, key management, said cryptographic mechanisms

providing information security such as privacy or confidentiality, data integrity, message authentication, entity authentication, authorization, validation, certification, time-stamping, anonymity, revocation, non-repudiation. 1.3 [H04L 9/00](#) covers also countermeasures against attacks on cryptographic mechanisms. 2. This group does not cover: 2.1 Networking architectures or network communication protocols for securing the traffic flowing through data packet networks and providing secure exchanges among applications communicating through data packet networks, which are covered by [H04L 63/00](#). Attention is drawn to the Note 1. after group [H04L 63/00](#) 2.2 Security arrangements for protecting computers or computer systems against unauthorised activity, which are covered by **G06F21/00N**

- U H04L 9/08
 - Key distribution{or management, e.g. generation, sharing or updating, of cryptographic keys or passwords(network architectures or network communication protocols for supporting key management in a packet data network [H04L 63/06](#))}
 - WARNING
The former subgroup [H04L 9/08](#) was a 2-dot subgroup placed under [H04L 9/06](#) . However since the former subgroup [H04L 9/08](#) comprises both symmetric and asymmetric key distribution the subgroup [H04L 9/08](#) was promoted to one-dot-level, unlike the corresponding IPC subgroup
- U H04L 9/0816
 - {Key establishment, i.e. cryptographic processes or cryptographic protocols whereby a shared secret becomes available to two or more parties, for subsequent use}
- H04L 9/0852
 - • {Quantum cryptography(~~transmission systems employing electromagnetic waves other than radio waves, e.g. light, infra-red H04B10;~~ *transmission systems employing electromagnetic waves other than radio waves, e.g. light, infra-red H04B 10/00;* wavelength-division multiplex systems [H04J 14/02](#))}"
- U H04L 12/00

Data switching networks(interconnection of, or transfer of information or other signals between, memories, input/output devices or central processing units [G06F 13/00](#))
- U H04L 12/02
 - Details
- H04L 12/14
 - {Metering,}charging{or billing}arrangements{specially adapted for data wireline or wireless communications(~~payment schemes, architectures or protocols per se G06Q20~~*payment schemes, architectures or protocols per se [G06Q 20/00](#)*)}
- U H04L 29/00

Arrangements, apparatus, circuits or systems, not covered by a single one of groups [H04L 1/00](#) to [H04L 27/00](#) (interconnection of, or transfer of information or other signals between, memories, input/output devices or central processing units [G06F 13/00](#)){contains provisionally no documents}
- U H04L 29/02
 - Communication control(in satellite networks [H04B 7/185](#)); Communication processing([H04L 29/12](#) , [H04L 29/14](#) take precedence){contains provisionally no documents}
- U H04L 29/06
 - • characterised by a protocol
- U H04L 29/08
 - • • Transmission control procedure, e.g. data link level control procedure
- U H04L 29/08009
 - • • {Open systems interconnection (OSI) architecture, e.g. layering, entities, standards; Interface between layers; Software aspects}

- H04L 29/08072 {Application layer, i.e. layer seven(not used)}{ WARNING: from 01.01.2006 onwards, documents relating to the application layer, and in particular to protocols for network applications are classified in [H04L 29/08081](#) and subgroups. All documents previously classified in ~~29/08A7~~ [H04L 29/08072](#) are reclassified in these groups }
- H04L 45/00 {Routing or path finding of packets in data switching networks(specially adapted for wireless routing [H04W 40/00](#))}{ WARNING Groups [H04L 45/00](#) - [H04L 45/74](#) do not correspond to former or current IPC groups. Concordance CPC : IPC for this groups is as follows: - [H04L 45/00](#) - ~~45/74~~[H04L 45/74](#) : [H04L 12/56](#) }
- H04L 65/00 {Network arrangements or protocols for real-time communications(computer conference [H04L 12/1813](#) ; real time or near real time messaging in message switching systems e.g. instant messaging [H04L 12/581](#) ; television systems [H04N 7/00](#) ; ~~selective video distribution~~ [H04N21](#) ; ~~selective video distribution~~ [H04N 21/00](#) ; interconnection arrangements between switching centres for working between exchanges having different types of switching equipment where the types of switching equipment comprise PSTN/ISDN equipment and equipment of networks other than PSTN/ISDN [H04M 7/1205](#) ; systems providing special services to telephonic subscribers [H04M 3/42](#) ; network applications in general [H04L 67/00](#))}

NOTEWARNING

Groups [H04L 65/00](#) - [H04L 65/80](#) do not correspond to former or current IPC groups. Concordance CPC : IPC for these groups is as follows: - [H04L 65/00](#) - [H04L 65/80](#) : [H04L 29/06](#)] Notes 1. This group covers: - only communications which fulfill the following two conditions: i. they are based on packet data; ii. there is real-time or pseudo-real-time temporal association between source and destination, or source and network, or destination and network; - provided that the above two conditions are met, this group covers arrangements relating to a. the transmission of the multimedia data itself, b. the user-to-user, user-to-network, inter-network or intra-network signalling supporting: b1. the establishment of a session for the subsequent transmission of the multimedia data, or b2. the maintenance of the session or b3. the application services available to the user during the session (unless explicitly excluded in certain cases). 2. This group does not cover: - non-real-time multimedia file transfer, which is covered by [H04L 67/06](#) - multimedia store or forward messaging as in e-mail, MMS or the like, which is covered by [H04L 12/58](#) - analogue video streaming, as in analogue television systems, which is covered by [H04N 7/00](#) - selective distribution of MPEG elementary or transport streams, containing video and additional data, which is covered by [H04N 21/00](#) - bit streaming, i.e. not packet-based, as in ISDN which is covered by ~~H04Q11/40~~ - instant messaging, which is covered by [H04L 12/581](#) - any other multimodal data communications which do not meet the conditions of being packet-based and real-time or pseudo-real-time - flow control in packet switching networks, which is covered by [H04L 12/56](#) D. 3. In this group the following terms or expressions are used with the meaning indicated: - H.323 means International Telecommunication Union Recommendation no. 323, series H, entitled "Packet-based multimedia communications systems" - IP means Internet Protocol - IMS means IP Multimedia Subsystem - ISDN means Integrated Services Digital Network - MGC means Media Gateway Control/Controller - MGCP means Media Gateway Control Protocol - MMS means Multimedia Messaging Service - PBX means Private Branch Exchange - PSTN means Public Switched Telephone Network - QoS means Quality of Service - RTP means Real Time Protocol - RTCP means Real Time Control Protocol - RTSP means Real Time Streaming

Protocol. - SIP means Session Initiation Protocol - SPAM means unsolicited electronic mail - SPIT means SPAM Prevention in IP Telephony]

U H04L 67/00

{Network-specific arrangements or communication protocols supporting networked applications(message switching systems [H04L 51/00](#) ; network management protocols [H04L 41/00](#) ; routing or path finding of packets in data switching networks [H04L 45/00](#) ; protocols for real-time multimedia communication [H04L 65/00](#) ; information retrieval [G06F 17/30](#) ; services or facilities specially adapted for wireless communication networks [H04W 4/00](#) ; network structures or processes for video distribution between server and client or between remote clients [H04N 21/00](#) ; exchange systems providing special services or facilities to subscribers involving telephonic communications [H04M 3/42](#) ; distributed information systems [G06F 9/00](#) , [G06F 17/00](#) ; lower layer network functionalities which support application layer provisions [H04L 12/00](#))}

NOTE

This group covers: (1) Networking arrangements or communication protocols to support networked applications which occur at the abstract network layers 5 to 7 of the OSI layer model. The higher layers constitute the interface between the network and the computer applications that use the network to communicate. (2) Network-specific aspects of client-server applications as well as of networking arrangements supporting networked/distributed applications, e.g. data transport, scheduling. This group also covers specific networked application layer protocols, e.g. FTP, WAP, HTTP. This group does not cover: (1) Distributed applications which are network-agnostic, i.e. distributed information systems for which the network functions are transparent. These field are covered, e.g. by [G06F 9/00](#) , [G06F 17/00](#) . Data switching network provisions in general and the lower layer network functionalities which support application layer provisions are covered by [H04L 12/00](#)]

WARNING

Groups [H04L 67/00](#) - [H04L 67/42](#) do not correspond to former or current IPC groups. Concordance CPC : IPC for these groups is as follows: - [H04L 67/00](#) - [H04L 67/36](#) : [H04L 29/08](#) - [H04L 67/38](#) - [H04L 67/42](#) : [H04L 29/06](#)]

H04L 67/04

- {adapted for terminals or networks with limited resources or for terminal portability, e.g. wireless application protocol [WAP](~~services or facilities specially adapted for wireless communication networks H04W4~~~~services or facilities specially adapted for wireless communication networks H04W 4/00~~)}

H04L 69/00

{Application independent communication protocol aspects or techniques in packet data networks(interconnection arrangements between CPUs, memories, or peripherals within a single computer [G06F 13/00](#) ; ~~data switching networks H04L12~~ ; ~~data switching networks H04L 12/00~~ ; flow control [H04L 12/569](#) ; routing of packets [H04L 12/5689](#) ; network management [H04L 12/24](#) ; network monitoring or testing [H04L 12/26](#) ; network topologies, i.e. networks characterized by the path configuration, media access control [H04L 12/28](#) ; intermediate storage or scheduling [H04L 12/5694](#) ; packet switches and switching fabrics [H04L 12/5696](#) ; message switching systems, e.g. email, [H04L 12/58](#) ; broadcast or multicast [H04L 12/18](#) ; hybrid switching systems [H04L 12/64](#) ; gateways [H04L 12/66](#) ; networks specially adapted for wireless communication [H04W](#) ; transmission systems [H04B](#))}

WARNING

Groups [H04L 69/00](#) - [H04L 69/40](#) do not correspond to former or current IPC groups. Concordance CPC :

IPC for these groups is as follows: - [H04L 69/00](#) -
[H04L 69/28](#) : [H04L 29/06](#) - [H04L 69/30](#)
- [H04L 69/329](#) : [H04L 29/08](#) -
[H04L 69/40](#) : [H04L 29/14](#)]

Project: N/A (H04M)

- U H04M 1/00** Substation equipment, e.g. for use by subscribers; Analogous equipment at exchanges (prepayment telephone coin boxes [H04M 17/00](#); current supply arrangements [H04M 19/00](#); {telephone sets particularly adapted for data transmission [H04M 11/066](#); network interface devices [H04Q 1/028](#)})
- U H04M 1/02** • Constructional features of telephone sets
- U H04M 1/0202** • { Portable telephone sets, e.g. cordless phones, mobile phones or bar type handsets (constructional features of telephone transmitters or receivers, e.g. of speakers or microphones [H04M 1/03](#); mounting of the dialing module [H04M 1/23](#); with protection against RF exposure [H04B 1/3838](#))}
- WARNING**
Groups [H04M 1/0249](#) to [H04M 1/0285](#) are not complete pending a reorganisation. See also group [H04M 1/0202](#)
- U H04M 1/026** • • { Details of the structure or mounting of specific components}
- H04M 1/0272** • • • { for a projector or beamer module assembly (~~constructional features of projectors per se G03B21~~; *constructional features of projectors per se G03B 21/00*; constructional details of projectors using electronic spatial light modulators per se [H04N 9/31](#))}
- U H04M 1/72** • Substation extension arrangements; Cordless telephones, i.e. devices for establishing wireless links to base stations without route selecting {(constructional features of cordless telephones [H04M 1/0202](#))}
- U H04M 1/725** • • Cordless telephones {(for handsfree use [H04M 1/6041](#))}
- U H04M 1/72519** • • • {Portable communication terminals with improved user interface to control a main telephone operation mode or to indicate the communication status}
- U H04M 1/72522** • • • • {With means for supporting locally a plurality of applications to increase the functionality (for selecting a function in a menu [H04M 1/2477](#))}
- H04M 1/72558** • • • • { for playing back music files (~~portable music players per se G11B27~~ *portable music players per se G11B 27/00*)}

Project: N/A (H04N)

- U H04N 5/00** Details of television systems(scanning details or combination thereof with generation of supply voltages [H04N 3/00](#) ; specially adapted for colour television [H04N 9/00](#) ; { servers specially adapted for the distribution of content [H04N 21/20](#) ; client devices specially adapted for the reception of or interaction with content [H04N 21/40](#) })
- NOTE**
Groups [H04N 5/341](#) to [H04N 5/378](#) are based on IPC2012.01
- U H04N 5/222** • Studio circuitry; Studio devices; Studio equipment;{Cameras comprising an electronic image sensor, e.g. digital cameras, video cameras, TV cameras, video cameras, camcorders, webcams, camera modules for embedding in other devices e.g. mobile phones, computers or vehicles}

- U H04N 5/225
 - • Television cameras;{Cameras comprising an electronic image sensor, e.g. digital cameras, video cameras, video cameras, camcorders, webcams, camera modules for embedding in other devices e.g. mobile phones, computers or vehicles(optical systems [G02B](#); associated working of recording or reproducing apparatus with TV camera or receiver in which the television signal is not significantly involved [G11B 31/006](#) ; tubes [H01J](#))}
 - U H04N 5/232
 - • • Devices for controlling television cameras, e.g. remote control;{Control of cameras comprising an electronic image sensor, e.g. digital cameras, video cameras, TV cameras, video cameras, camcorders, webcams, camera modules for embedding in e.g. mobile phones, computers or vehicles}{[H04N 5/235](#) takes precedence; { varying magnification for cameras, e.g. angle of view, by optical means only [G02B 7/00](#) }, [G03B](#))}
 - H04N 5/23238
 - • • {Control of image capture or reproduction to achieve a very large field of view, e.g. panorama(~~panoramic or widescreen photography~~ [G03B27](#)~~panoramic or widescreen photography~~ [G03B 27/00](#))}
 - U H04N 7/00

Television systems(details [H04N 3/00](#) , [H04N 5/00](#) ; systems specific to colour television [H04N 11/00](#) ; stereoscopic television systems [H04N 13/00](#) ; selective content distribution [H04N 21/00](#))
 - U H04N 7/24
 - Systems for the transmission of television signals using pulse code modulation([H04N 21/00](#) takes precedence)
 - U H04N 7/26
 - • using bandwidth reduction;{Source coding or decoding of digital video signal, e.g. digital video signal compression; Pre- or postprocessing therefor} (information reduction by code conversion in general [H03M 7/30](#))
- NOTE
- In this group classification is done in all relevant subgroups, e.g. a document disclosing a motion-adaptive MPEG bitrate transcoder using vector quantisation must be classified in [H04N 7/26](#) T, [H04N 7/28](#) , [H04N 7/50](#) , [H04N 7/26053](#) , [H04N 7/26132](#) and any other relevant group
- WARNING
- This subgroup is no longer used for the classification of new documents as from 01.06.2012 and the backlog is being continuously reclassified in [H04N 19/00](#) and subgroups
- U H04N 7/26388
 - • • {involving sub-band coding}
 - U H04N 7/26393
 - • • • {of a single image}
 - U H04N 7/26409
 - • • • • {Control aspects therefor}
 - U H04N 7/26446
 - • • • • • {Unit of control}
 - U H04N 7/26452
 - • • • • • • {relating to sub-band structure}
 - H04N 7/26457
 - • • • • • • {Hierarchical level(~~7/26H30E5A~~[H04N 7/26526](#), ~~7/26H50E5A~~[H04N 7/26617](#) take precedence)}
 - H04N 7/26531
 - • • • • {with prediction other than mere runlength(~~7/26H50~~[H04N 7/26585](#) takes precedence)}

Project: N/A (H04S)

- U H04S 7/00

Indicating arrangements; Control arrangements, e.g. balance control

WARNING

Groups [H04S 7/30](#) to [H04S 7/40](#) do not correspond to former or current IPC groups.

- U H04S 7/30
- { Control circuits for electronic adaptation of the sound field (non-adaptive circuits, i.e. manually adjustable or static, for enhancing the sound image or the spatial distribution [H04S 1/002](#), [H04S 3/002](#))}
- H04S 7/307
- • { Frequency adjustment, e.g. tone control ([H04S 7/301](#) takes precedence; circuits for correcting the frequency response of transducers [H04R 3/04](#); ~~tone control circuits in amplifiers per se H03G5~~; *tone control circuits in amplifiers per se H03G 5/00*)}

Project: N/A (H04W)

- U H04W 4/00
- {Mobile application}services or facilities specially adapted for wireless communication networks{(network arrangements or communication protocols for networked applications [H04L 67/00](#) ; network arrangements or protocols for real-time communications [H04L 65/00](#) ; network arrangements or network protocols for addressing or naming [H04L 61/00](#) ; application independent communication protocol aspects and techniques in packet data networks [H04L 69/00](#) ; network architectures or network communication protocols for network security [H04L 63/00](#) ; wireless network security [H04W 12/00](#) ; message switching systems [H04L 12/58](#) ; arrangements for broadcast or conference [H04L 12/18](#) ; telephonic communication, substation extension arrangements, cordless telephones, portable communication terminals with improved user interface to control a main telephone operation mode or to indicate the communication status [H04M 1/72522](#) ; automatic or semi-automatic exchanges for telephonic communication - systems providing special services or facilities to subscribers [H04M 3/42](#))}**

NOTE

1. This groups covers mobile application services or application service signalling for communication over wireless networks. 2. This group focuses on application services specially adapted for wireless networks or adjusted to the wireless environment

- H04W 4/005
- {for Machine-to-Machine communication [M2M, MTC], e.g. 3GPP M2M, OMA M2M, 3GPP MTC or Wireless Sensor Networks [WSN](self-organizing networks [H04W 84/18](#) ; network arrangements or communication protocols for networked applications adapted for proprietary or special purpose networking environments, e.g. medical networks, sensor networks, networks in a car, remote metering networks [H04L 67/12](#) ; ~~mechanical means for transferring the output of a sensing member G01D5~~; *mechanical means for transferring the output of a sensing member G01D 5/00*)}
- H04W 4/008
- {using short range communication, e.g. NFC, RFID or PAN(telephonic substation extension arrangements interfacing with an external accessory using a two-way short-range wireless interface [H04M 1/7253](#) ; ~~mechanical means for transferring the output of a sensing member G01D5~~; *mechanical means for transferring the output of a sensing member G01D 5/00*; near-field transmission systems [H04B 5/00](#))}

Project: N/A (H05H)

- U H05H 1/00
- Generating plasma; Handling plasma**
- U H05H 1/24
- Generating plasma {(gas-filled discharge reactors [H01J 37/32](#); nuclear fusion reactors [G21B 1/00](#); ohmic heating [H05H 1/20](#); injection heating [H05H 1/22](#))}
- U H05H 1/26
- • Plasma torches {(metal working with constricted arc [B23K 10/00](#), **H05H10/02**; metal spraying [B05B 7/18](#), [B05B 7/20](#))}
- U H05H 1/32
- • • using an arc ([H05H 1/28](#) takes precedence)
- U H05H 1/34
- • • Details, e.g. electrodes, nozzles {cf. [B23K 9/24](#)}

H05H 2001/3415 indexing scheme associated with ~~1/34~~H05H 1/34