Compilation of Changes to the CPC Scheme Between 2021.01 and 2021.02

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~~

- 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: MP0491 (A01N)

M A01N

PRESERVATION OF BODIES OF HUMANS OR ANIMALS OR PLANTS OR PARTS THEREOF *(preservation of food or foodstuff A23)*; BIOCIDES, e.g. AS DISINFECTANTS, AS PESTICIDES~~,~~ *OR* AS HERBICIDES (preparations for medical, dental or toilet purposes *which kill or prevent the growth or proliferation of unwanted organisms* A61K~~; methods or apparatus for disinfection or sterilisation in general, or for deodorising of air A61L~~); PEST REPELLANTS OR ATTRACTANTS ~~(decoys A01M 1/06; medicinal preparations A61K)~~; PLANT GROWTH REGULATORS ~~(compounds in general C01, C07, C08; fertilisers C05; soil conditioners or stabilisers C09K 17/00)~~

NOTES

1. This subclass covers:
   - compositions, physical forms, methods of application of specific materials or the use of single compounds or compositions
   - chemosterilants for the sexual sterilisation of invertebrates, e.g. insects, whereas sex sterilants for other purposes are covered by A61K.

2. This subclass does not cover materials which affect the growth of a plant solely by supplying nutrients, i.e. plant food, ordinarily required for growth or materials which are used to prevent or cure mineral deficiencies in plants, e.g. addition of iron chelates to cure iron chlorosis, which materials are covered by class C05.

3. In this subclass, the following expression is used with the meaning indicated:
   - "plant growth regulators" are those materials which alter the plant through a chemical modification of the plant metabolism, such as auxins.

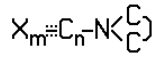
WARNING

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

A01N 43/824	covered by	A01N 43/82
A01N 43/828	covered by	A01N 43/82
A01N 43/832	covered by	A01N 43/82
A01N 43/836	covered by	A01N 43/82
A01N 53/02	covered by	A01N 53/00
A01N 53/04	covered by	A01N 53/00
A01N 53/06	covered by	A01N 53/00
A01N 53/08	covered by	A01N 53/00
A01N 53/10	covered by	A01N 53/00
A01N 53/12	covered by	A01N 53/00
A01N 53/14	covered by	A01N 53/00

A01N 55/10 covered by A01N 55/00

~~2. In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.~~

M	**A01N 1/00**	**Preservation of bodies of humans or animals, or parts thereof ~~(preservation of foodstuffs A23; medicinal preparations containing materials from mammals or birds, e.g. blood, sperm, A61K 35/12; cell or tissue culture C12N 5/00)~~**
U	A01N 1/02	・Preservation of living parts
U	A01N 1/0236	・・{Mechanical aspects}
M	A01N 1/0263	・・・{Non-refrigerated containers specially adapted for transporting or storing living parts whilst preserving, e.g. cool boxes, blood bags or "straws" for cryopreservation ~~(containers for collecting, administering, analyzing and storing without specific measures for preservation, e.g. blood bags as such, A61J 1/10)~~}
M	**A01N 3/00**	**Preservation of plants or parts thereof, e.g. inhibiting evaporation, improvement of the appearance of leaves {or protection against physical influences such as UV radiation using chemical compositions*}* *(preservation or chemical ripening of fruit or vegetables A23B 7/00)~~;~~ ~~Grafting wax} (preservation of foodstuffs A23; preservation or chemical ripening of fruit or vegetables A23B 7/00)~~; ~~{(protective coverings A01G 13/02)}~~ Grafting wax**
M	A01N 3/02	・Keeping cut flowers fresh chemically ~~(apparatus therefor A01G 5/06)~~
M	**A01N 25/00**	**Biocides, pest repellants or attractants, or plant growth regulators, characterised by their forms, or by their non-active ingredients or by their methods of application~~, {~~ *{,* e.g. seed treatment or sequential application*}* ~~;}~~ ~~(apparatus for the destruction of noxious animals or noxious plants A01M; fungicidal, bactericidal, insecticidal, disinfecting or antiseptic paper D21H)~~; Substances for reducing the noxious effect of the active ingredients to organisms other than pests**
M	A01N 25/18	・Vapour or smoke emitting compositions with delayed or sustained release ~~(fumigators A01M 13/00)~~
M	**A01N 37/00**	**Biocides, pest repellants or attractants, or plant growth regulators containing organic compounds containing a carbon atom having three bonds to hetero atoms with at the most two bonds to halogen, e.g. carboxylic acids (containing cyclopropane carboxylic acids *or derivatives thereof, e.g. cyclopropane carboxylic acid nitriles,* A01N 53/00)**
M	**A01N 43/00**	**Biocides, pest repellants or attractants, or plant growth regulators containing heterocyclic compounds (containing cyclic anhydrides, cyclic imides A01N 37/00; containing compounds of the formula  containing only one heterocyclic ring, wherein m>=1 and n>=0 and  is unsubstituted or alkylsubstituted pyrrolidine, piperidine, morpholine, thiomorpholine, piperazine or a polymethyleneimine with four or more CH_2 groups, A01N 33/00 - A01N 41/12*; containing cyclopropane carboxylic acids or derivatives thereof, e.g. esters having heterocyclic rings, A01N 53/00*)**

NOTES

1. In group A01N 43/00, the following terms or expressions are used with the meanings indicated:
   - "Hetero ring" is a ring having at least one halogen nitrogen, oxygen or sulfur atom as a ring member.

- "Bridged" means the presence of at least one fusion other than ortho, peri and spiro.
- Two rings are "condensed" if they share at least one ring member, i.e. "spiro" and "bridged" are considered as condensed.
- "Condensed ring system" is a ring system in which all rings are condensed among themselves.

2. In group A01N 43/00, the number of rings in a condensed system equals the number of scissions necessary to convert the ring system into one acyclic chain. The relevant rings in a condensed system are chosen according to the following criteria consecutively:

i. lowest number of ring members,
ii. highest number of hetero atoms as ring members.
Ring members shared by two or more rings are regarded as being a member of each of these rings.

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)**
M	A01N 47/40	・the carbon atom having a double or triple bond to nitrogen, e.g. cyanates, cyanamides ~~(inorganic cyanamides A01N 59/24)~~
U	**A01N 59/00**	**Biocides, pest repellants or attractants, or plant growth regulators containing elements or inorganic compounds**
M	A01N 59/04	・Carbon disulfide; Carbon monoxide; Carbon dioxide ~~(treatment of plants with carbon dioxide A01G 7/02)~~

Project: MP0478 (A24B)

M	**A24B 1/00**	**Preparation of tobacco on the plantation ~~(harvesters for tobacco A01D 45/16)~~**
M	A24B 1/04	・Sifting, sorting, cleaning or removing impurities from tobacco ~~(purifying by sifting or sorting in general B07B)~~
U	**A24B 3/00**	**Preparing tobacco in the factory**
M	A24B 3/02	・Humidifying packed raw tobacco ~~(containers for packaging contents in moist condition B65D 81/22)~~
M	A24B 3/14	・Forming reconstituted tobacco products, e.g. wrapper materials, sheets, imitation leaves, rods, cakes; Forms of such products (delustering A24C 1/40~~; tobacco or cigarette paper D21H~~) WARNING Group A24B 3/14 is impacted by reclassification into group A24C 5/01. Groups A24B 3/14 and A24C 5/01 should be considered in order to perform a complete search.
M	**A24B 7/00**	**Cutting tobacco ~~(hand cutting tools B26B; slicing in general B26D 1/00, B26D 3/00)~~**
M	**A24B 13/00**	**Tobacco for pipes, for cigars, e.g. cigar inserts, or for cigarettes; Chewing tobacco; Snuff (~~mechanical treatment A24B 3/00 - A24B 11/00;~~ reconstituted tobacco products A24B 3/14~~; chemical features or treatment of tobacco A24B 15/00~~)**

Project: RP0407-F (A61K)

U	**A61K 8/00**	**Cosmetics or similar toilet preparations (casings or accessories for storing or handling of solid or pasty toilet or cosmetic substances A45D 40/00)** NOTES 1. Use of cosmetics or similar toilet preparations is further classified in subclass A61Q. 2. Use of cosmetics or similar toilet preparations is mandatorily further classified in subclass A61Q. 3. Attention is drawn to the Notes in class C07, for example the notes following the title of subclass C07D, setting forth the rules for classifying organic compounds in that class, which rules are also applicable, if not otherwise indicated, to the classification of organic compounds in group A61K 8/00. 4. Salts or complexes of organic compounds are classified according to the base compounds. If a complex is formed between two or more compounds, classification is made for each compound.
U	A61K 8/18	・characterised by the composition NOTE In this group, the last place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, classification is made in the last appropriate place.
U	A61K 8/96	・・containing materials, or derivatives thereof of undetermined constitution
M	A61K 8/97	・・・from algae, fungi, lichens or plants; from derivatives thereof ~~WARNING~~ ~~Group A61K 8/97 is impacted by reclassification into groups A61K 8/97 - A61K 8/9794.~~ ~~All groups listed in this Warning should be considered in order to perform a complete search.~~
M	A61K 8/9706	・・・・Algae ~~WARNING~~ ~~Group A61K 8/9706 is incomplete pending reclassification of documents from group A61K 8/97. Groups A61K 8/9706 and A61K 8/97 should be considered in order to perform a complete search.~~ ~~Groups A61K 8/9706 is also impacted by reclassification into groups A61K 8/9706 -A61K 8/9794. All groups listed in this Warning should be considered in order to perform a complete search~~
M	A61K 8/9711	・・・・・Phaeophycota or Phaeophyta [brown algae], e.g. Fucus ~~WARNING~~ ~~Group A61K 8/9711 is incomplete pending reclassification of documents from groups A61K 8/97 and A61K 8/9706.~~ ~~Groups A61K 8/97, A61K 8/9706 and A61K 8/9711 should be considered in order to perform a complete search.~~
M	A61K 8/9717	・・・・・Rhodophycota or Rhodophyta [red algae], e.g. Porphyra ~~WARNING~~ ~~Group A61K 8/9717 is incomplete pending reclassification of documents from groups A61K 8/97 and A61K 8/9706.~~ ~~Groups A61K 8/97, A61K 8/9706 and A61K 8/9717 should be considered in order to perform a complete search.~~

M A61K 8/9722 · · · · ·Chlorophycota or Chlorophyta [green algae], e.g. Chlorella

~~WARNING~~
~~Group A61K 8/9722 is incomplete pending reclassification of documents from groups A61K 8/97 and A61K 8/9706.~~
~~Groups A61K 8/97, A61K 8/9706 and A61K 8/9722 should be considered in order to perform a complete search.~~

M A61K 8/9728 · · · ·Fungi, e.g. yeasts

~~WARNING~~
~~Group A61K 8/9728 is incomplete pending reclassification of documents from groups A61K 8/97 and A61K 8/9706.~~
~~Groups A61K 8/9728, A61K 8/97 and A61K 8/9706 should be considered in order to perform a complete search.~~

M A61K 8/9733 · · · ·Lichens

~~WARNING~~
~~Group A61K 8/9733 is incomplete pending reclassification of documents from groups A61K 8/97 and A61K 8/9706.~~
~~Groups A61K 8/9733 and A61K 8/97 should be considered in order to perform a complete search.~~

M A61K 8/9739 · · · ·Bryophyta [mosses]

~~WARNING~~
~~Group A61K 8/9739 is incomplete pending reclassification of documents from group A61K 8/97.~~
~~Groups A61K 8/9739, A61K 8/97 and A61K 8/9706 should be considered in order to perform a complete search.~~

M A61K 8/9741 · · · ·Pteridophyta [ferns]

~~WARNING~~
~~Groups A61K 8/9741 and A61K 8/9749 are incomplete pending reclassification of documents from groups A61K 8/97 and A61K 8/9706.~~
~~All the groups listed in this Warning should be considered in order to perform a complete search~~

M A61K 8/9755 · · · ·Gymnosperms [Coniferophyta]

~~WARNING~~
~~Groups A61K 8/9755, A61K 8/9761 and A61K 8/9767 are incomplete pending reclassification of documents from groups A61K 8/97 and A61K 8/9706.~~
~~All the groups listed in this Warning should be considered in order to perform a complete search..~~

M A61K 8/9771 · · · ·Ginkgophyta, e.g. Ginkgoaceae [Ginkgo family]

~~WARNING~~
~~Group A61K 8/9771 is incomplete pending reclassification of documents from groups A61K 8/97 and A61K 8/9706.~~
~~Groups A61K 8/9771 and A61K 8/97 should be considered in order to perform a complete search.~~

M A61K 8/9778 · · · ·Gnetophyta, e.g. Ephedraceae [Mormon-tea family]

~~WARNING~~
~~Group A61K 8/9778 is incomplete pending reclassification of documents from groups A61K 8/97 and A61K 8/9706.~~

~~Groups A61K 8/9778, A61K 8/97 and A61K 8/9706 should be considered in order to perform a complete search.~~

M A61K 8/9783 · · · · Angiosperms [Magnoliophyta]

~~WARNING~~
~~Groups A61K 8/9783, A61K 8/9789 and A61K 8/9794 are incomplete pending reclassification of documents from groups A61K 8/97 and A61K 8/9706.~~
~~All the groups listed in this Warning should be considered in order to perform a complete search.~~

M A61K 8/99 · · · from microorganisms other than algae or fungi, e.g. protozoa or bacteria

~~WARNING~~
~~Group A61K 8/99 is impacted by reclassification into groups A61K 8/9706 and A61K 8/9728.~~
~~All groups listed in this Warning should be considered in order to perform a complete search.~~

Project: MP0489 (A61K)

U A61K 31/00 Medicinal preparations containing organic active ingredients

NOTES

1. When classifying in groups A61K 31/00 - A61K 41/00 the symbol A61K 2300/00 may be added, using Combination Sets, to indicate a mixture of active ingredients.

2. In the preparation of new organic compounds and their use in medicinal preparations, classification is only made in the relevant subclasses C07C - C07J according to the type of compound. However, the inventions dealing with medicinal preparations containing at least two active organic ingredients are always classified in this group in addition to the classification for the type of compounds in C07C - C07J.

3. Attention is drawn to the notes in class C07, particularly to the definition of steroids given in Note (1) following the title of C07J and to the definition of carbohydrates and sugars given in the notes following the title of C07H.

4. Salts and complexes of organic active compounds are always classified according to the free active compounds. If a complex is formed between two or more active compounds, then they are classified according to all compounds forming the salts or complexes followed by the symbol A61K 2300/00 (i.e. as a mixture of active organic compounds). According to the last place rule, organic active compounds forming salts with heavy metals should be classified in A61K 33/24 - A61K 33/38 and not in subgroups A61K 31/28 - A61K 31/32, A61K 31/555 or A61K 31/714.
This does not apply to complexes, as apparent from the A61K 31/00 scheme, wherein the complexes hemin and hematin are classified in A61K 31/555 and cyanocobalamin in A61K 31/714.

5. From January 2003 onwards, the EPO copies into CPC the IPC classification of the first document received (family representative). However, blends of active ingredients receive the additional symbol A61K 2300/00 as Combination Set.

M A61K 31/56 · Compounds containing cyclopenta[a]hydrophenanthrene ring systems; Derivatives *thereof*, e.g. steroids

NOTE

Attention is drawn to Note (1) following the title of subclass C07J which explains what is covered by the term "steroids"

M	A61K 31/57	・・substituted in position 17 beta by a chain of two carbon atoms, e.g. pregnane~~,~~ *or* progesterone
M	A61K 31/573	・・・substituted in position 21, e.g. cortisone, dexamethasone, prednisone ~~{~~or aldosterone~~}~~
M	A61K 31/58	・・containing heterocyclic rings, e.g. danazol, stanozolol, pancuronium or digitogenin ~~{~~(digitoxin {A61K 31/7048})~~}~~
U	A61K 31/70	・Carbohydrates; Sugars; Derivatives thereof (sorbitol A61K 31/047) NOTE In this group, the expressions are used with the meanings indicated in Note (3) following the title of the subclass C07H
U	A61K 31/7042	・・Compounds having saccharide radicals and heterocyclic rings
M	A61K 31/7048	・・・having oxygen as a ring hetero atom, e.g. leucoglucosan, hesperidin, erythromycin, nystatin {, digitoxin or digoxin}

Project: RP0407-F (A61K)

U	**A61K 47/00**	**Medicinal preparations characterised by the non-active ingredients used, e.g. carriers or inert additives; Targeting or modifying agents chemically bound to the active ingredient**
U	A61K 47/06	・Organic compounds, e.g. natural or synthetic hydrocarbons, polyolefins, mineral oil, petrolatum or ozokerite
U	A61K 47/16	・・containing nitrogen, {e.g. nitro-, nitroso-, azo-compounds, nitriles, cyanates}
U	A61K 47/18	・・・Amines; Amides; Ureas; Quaternary ammonium compounds; Amino acids; Oligopeptides having up to five amino acids
M	A61K 47/183	・・・・{Amino acids, e.g. glycine, EDTA or aspartame} ~~WARNING~~ ~~Group A61K 47/183 is impacted by reclassification into groups A61K 47/20, A61K 47/22, A61K 47/26 and A61K 47/28.~~ ~~All groups listed in this Warning should be considered in order to perform a complete search.~~
M	A61K 47/186	・・・・{Quaternary ammonium compounds, e.g. benzalkonium chloride or cetrimide} ~~WARNING~~ ~~Group A61K 47/186 is impacted by reclassification into groups A61K 47/20, A61K 47/22, A61K 47/26 and A61K 47/28.~~ ~~All groups listed in this Warning should be considered in order to perform a complete search.~~
M	A61K 47/20	・・containing sulfur, e.g. dimethyl sulfoxide [DMSO], docusate, sodium lauryl sulfate or aminosulfonic acids ~~WARNING~~ ~~Group A61K 47/20 is incomplete pending reclassification of documents from groups A61K 47/183 and A61K 47/186.~~ ~~All groups listed in this Warning should be considered in order to perform a complete search.~~
M	A61K 47/22	・・Heterocyclic compounds, e.g. ascorbic acid, tocopherol or pyrrolidones ~~WARNING~~ ~~Group A61K 47/22 is incomplete pending reclassification of documents from groups A61K 47/183 and A61K 47/186.~~

~~All groups listed in this Warning should be considered in order to perform a complete search.~~

M A61K 47/26 ・・Carbohydrates, e.g. sugar alcohols, amino sugars, nucleic acids, mono-, di- or oligo-saccharides; Derivatives thereof, e.g. polysorbates, sorbitan fatty acid esters or glycyrrhizin

~~WARNING~~
~~Group A61K 47/26 is incomplete pending reclassification of documents from groups A61K 47/183 and A61K 47/186.~~
~~All groups listed in this Warning should be considered in order to perform a complete search.~~

M A61K 47/28 ・・Steroids, e.g. cholesterol, bile acids or glycyrrhetinic acid

~~WARNING~~
~~Group A61K 47/28 is incomplete pending reclassification of documents from groups A61K 47/183 and A61K 47/186.~~
~~All groups listed in this Warning should be considered in order to perform a complete search.~~

Project: RP0002-F (A61N)

U A61N 1/00 Electrotherapy; Circuits therefor (A61N 2/00 takes precedence; irradiation apparatus A61N 5/00)

U A61N 1/02 ・Details

M A61N 1/08 ・・Arrangements or circuits for monitoring, protecting, controlling or indicating {(for external stimulators A61N 1/3603; for implantable neurostimulators A61N 1/36128; for heart stimulators A61N 1/37; for defibrillators A61N 1/3925)}

~~WARNING~~
~~Group A61N 1/08 is impacted by reclassification into group A61N 1/3603.~~
~~Groups A61N 1/08 and A61N 1/3603 should be considered in order to perform a complete search.~~

M A61N 2001/083 ・・・{Monitoring integrity of contacts, e.g. by impedance measurement}

~~WARNING~~
~~Group A61N 2001/083 is impacted by reclassification into group A61N 1/3603.~~
~~Groups A61N 2001/083 and A61N 1/3603 should be considered in order to perform a complete search.~~

U A61N 1/18 ・Applying electric currents by contact electrodes

U A61N 1/32 ・・alternating or intermittent currents {(applying electric fields by inductive or capacitive coupling A61N 1/40; microwave apparatus A61N 5/02)}

M A61N 1/36 ・・・for stimulation

~~WARNING~~
~~Group A61N 1/36 is impacted by reclassification into group A61N 1/36002.~~
~~Groups A61N 1/36 and A61N 1/36002 should be considered in order to perform a complete search.~~

M A61N 1/36002 ・・・・{Cancer treatment, e.g. tumour}

~~WARNING~~
~~Group A61N 1/36002 is incomplete pending reclassification of documents from group A61N 1/36.~~

~~Groups A61N 1/36002 and A61N 1/36 should be considered in order to perform a complete search~~

M A61N 1/36014 · · · ·{External stimulators, e.g. with patch electrodes (external pacemakers A61N 1/3625)}

~~WARNING~~
~~Group A61N 1/36014 is impacted by reclassification into groups A61N 1/3603, A61N 1/36031 and A61N 1/36034.~~
~~All groups listed in this Warning should be considered in order to perform a complete search.~~

M A61N 1/3603 · · · · ·{Control systems}

~~WARNING~~
~~Group A61N 1/3603 is incomplete pending reclassification of documents from groups A61N 1/08, A61N 2001/083 and A61N 1/36014.~~
~~All groups listed in this Warning should be considered in order to perform a complete search.~~

M A61N 1/36031 · · · · · ·{using physiological parameters for adjustment}

~~WARNING~~
~~Group A61N 1/36031 is incomplete pending reclassification of documents from group A61N 1/36014.~~
~~Groups A61N 1/36031 and A61N 1/36014 should be considered in order to perform a complete search.~~

M A61N 1/36034 · · · · · ·{specified by the stimulation parameters}

~~WARNING~~
~~Group A61N 1/36034 is incomplete pending reclassification of documents from group A61N 1/36014.~~
~~Groups A61N 1/36034 and A61N 1/36014 should be considered in order to perform a complete search.~~

M A61N 1/36036 · · · ·{of the outer, middle or inner ear}

~~WARNING~~
~~Group A61N 1/36036 is impacted by reclassification into groups A61N 1/36038 and A61N 1/36039.~~
~~Groups A61N 1/36036, A61N 1/36038 and A61N 1/36039 should be considered in order to perform a complete search.~~

M A61N 1/36038 · · · · ·{Cochlear stimulation}

~~WARNING~~
~~Groups A61N 1/36038 and A61N 1/36039 are incomplete pending reclassification of documents from group A61N 1/36036.~~
~~Groups A61N 1/36036, A61N 1/36038 and A61N 1/36039 should be considered in order to perform a complete search.~~

U A61N 1/3605 · · · ·{Implantable neurostimulators for stimulating central or peripheral nerve system}

M A61N 1/3606 · · · · ·{adapted for a particular treatment}

~~WARNING~~
~~Group A61N 1/3606 is impacted by reclassification into group A61N 1/36062.~~

~~Groups A61N 1/3606 and A61N 1/36062 should be considered in order to perform a complete search.~~

M A61N 1/36062 · · · · · ·{Spinal stimulation}

~~WARNING~~
~~Group A61N 1/36062 is incomplete pending reclassification of documents from group A61N 1/3606.~~
~~Groups A61N 1/36062 and A61N 1/3606 should be considered in order to perform a complete search.~~

U A61N 1/36128 · · · · ·{Control systems}

M A61N 1/36135 · · · · · ·{using physiological parameters}

~~WARNING~~
~~Group A61N 1/36135 is impacted by reclassification into group A61N 1/3614.~~
~~Groups A61N 1/36135 and A61N 1/3614 should be considered in order to perform a complete search.~~

M A61N 1/3614 · · · · · · ·{based on impedance measurement}

~~WARNING~~
~~Group A61N 1/3614 is incomplete pending reclassification of documents from group A61N 1/36135.~~
~~Groups A61N 1/3614 and A61N 1/36135 should be considered in order to perform a complete search.~~

U A61N 1/36146 · · · · · ·{specified by the stimulation parameters}

U A61N 1/3615 · · · · · · ·{Intensity}

M A61N 1/36153 · · · · · · · ·{Voltage (A61N 1/3616 takes precedence)}

~~WARNING~~
~~Group A61N 1/36153 is impacted by reclassification into group A61N 1/3616.~~
~~Groups A61N 1/36153 and A61N 1/3616 should be considered in order to perform a complete search.~~

M A61N 1/36157 · · · · · · · ·{Current (A61N 1/3616 takes precedence)}

~~WARNING~~
~~Group A61N 1/36157 is impacted by reclassification into group A61N 1/3616.~~
~~Groups A61N 1/36157 and A61N 1/3616 should be considered in order to perform a complete search.~~

M A61N 1/3616 · · · · · · · ·{Voltage density or current density}

~~WARNING~~
~~Group A61N 1/3616 is incomplete pending reclassification of documents from groups A61N 1/36153 and A61N 1/36157.~~
~~Groups A61N 1/3616, A61N 1/36153, and A61N 1/36157 should be considered in order to perform a complete search.~~

M A61N 1/362 · · · ·Heart stimulators (heart defibrillators A61N 1/39)

~~WARNING~~
~~Group A61N 1/362 is impacted by reclassification into group A61N 1/3629.~~
~~Groups A61N 1/362 and A61N 1/3629 should be considered in order to perform a complete search.~~

M A61N 1/3629 · · · · ·{in combination with non-electric therapy}

~~WARNING~~
~~Group A61N 1/3629 is incomplete pending reclassification of documents from group A61N 1/362.~~
~~Groups A61N 1/3629 and A61N 1/362 should be considered in order to perform a complete search.~~

U A61N 1/365 · · · · ·controlled by a physiological parameter, e.g. heart potential {(evoked response A61N 1/371)}

U A61N 1/368 · · · · · ·comprising more than one electrode co-operating with different heart regions {(A61N 1/3622, A61N 1/3627 take precedence)}

M A61N 1/3684 · · · · · · ·{for stimulating the heart at multiple sites of the ventricle or the atrium}

~~WARNING~~
~~Group A61N 1/3684 is impacted by reclassification into groups A61N 1/36842 and A61N 1/36843.~~
~~Groups A61N 1/3684, A61N 1/36842 and A61N 1/36843 should be considered in order to perform a complete search.~~

M A61N 1/36842 · · · · · · · ·{Multi-site stimulation in the same chamber}

~~WARNING~~
~~Group A61N 1/36842 is incomplete pending reclassification of documents from group A61N 1/3684.~~
~~Groups A61N 1/36842 and A61N 1/3684 should be considered in order to perform a complete search.~~

M A61N 1/36843 · · · · · · · ·{Bi-ventricular stimulation}

~~WARNING~~
~~Group A61N 1/36843 is incomplete pending reclassification of documents from group A61N 1/3684.~~
~~Groups A61N 1/36843 and A61N 1/3684 should be considered in order to perform a complete search.~~

U A61N 1/372 · · · ·Arrangements in connection with the implantation of stimulators

U A61N 1/37211 · · · · ·{Means for communicating with stimulators}

M A61N 1/37252 · · · · · ·{Details of algorithms or data aspects of communication system, e.g. handshaking, transmitting specific data or segmenting data}

~~WARNING~~
~~Group A61N 1/37252 is impacted by reclassification into group A61N 1/37254.~~
~~Groups A61N 1/37252 and A61N 1/37254 should be considered in order to perform a complete search.~~

M A61N 1/37254 · · · · · · ·{Pacemaker or defibrillator security, e.g. to prevent or inhibit programming alterations by hackers or unauthorised individuals}

~~WARNING~~
~~Group A61N 1/37254 is incomplete pending reclassification of documents from group A61N 1/37252.~~
~~Groups A61N 1/37254 and A61N 1/37252 should be considered in order to perform a complete search.~~

M A61N 1/375 · · · · ·Constructional arrangements, e.g. casings

~~WARNING~~
~~Group A61N 1/375 is impacted by reclassification into groups A61N 1/37512, A61N 1/37514, A61N 1/37516 and A61N 1/37518.~~
~~All groups listed in this Warning should be considered in order to perform a complete search.~~

M A61N 1/37512 · · · · · ·{Pacemakers}

~~WARNING~~
~~Group A61N 1/37512 is incomplete pending reclassification of documents from group A61N 1/375.~~
~~Groups A61N 1/37512 and A61N 1/375 should be considered in order to perform a complete search.~~

M A61N 1/37514 · · · · · ·{Brain implants}

~~WARNING~~
~~Group A61N 1/37514 is incomplete pending reclassification of documents from group A61N 1/375.~~
~~Groups A61N 1/37514 and A61N 1/375 should be considered in order to perform a complete search.~~

M A61N 1/37516 · · · · · ·{Intravascular implants}

~~WARNING~~
~~Group A61N 1/37516 is incomplete pending reclassification of documents from group A61N 1/375.~~
~~Groups A61N 1/37516 and A61N 1/375 should be considered in order to perform a complete search.~~

M A61N 1/37518 · · · · · ·{Anchoring of the implants, e.g. fixation}

~~WARNING~~
~~Group A61N 1/37518 is incomplete pending reclassification of documents from group A61N 1/375.~~
~~Groups A61N 1/37518 and A61N 1/375 should be considered in order to perform a complete search.~~

U A61N 1/38 · · · for producing shock effects

M A61N 1/39 · · · · Heart defibrillators

~~WARNING~~
~~Group A61N 1/39 is impacted by reclassification into groups A61N 1/3904, A61N 1/39044 and A61N 1/39046.~~
~~All groups listed in this Warning should be considered in order to perform a complete search.~~

M A61N 1/3904 · · · · · ·{External heart defibrillators [EHD]}

~~WARNING~~
~~Group A61N 1/3904 is incomplete pending reclassification of documents from group A61N 1/39.~~
~~Groups A61N 1/3904 and A61N 1/39 should be considered in order to perform a complete search.~~

M A61N 1/39044 · · · · · ·{in combination with cardiopulmonary resuscitation [CPR] therapy}

~~WARNING~~
~~Group A61N 1/39044 is incomplete pending reclassification of documents from group A61N 1/39.~~

~~Groups A61N 1/39044 and A61N 1/39 should be considered in order to perform a complete search.~~

M A61N 1/39046 · · · · · ·{User protection from shock}

~~WARNING~~
~~Group A61N 1/39046 is incomplete pending reclassification of documents from group A61N 1/39.~~
~~Groups A61N 1/39046 and A61N 1/39 should be considered in order to perform a complete search.~~

U A61N 1/3956 · · · · ·{Implantable devices for applying electric shocks to the heart, e.g. for cardioversion}

M A61N 1/3962 · · · · · ·{in combination with another heart therapy}

~~WARNING~~
~~Group A61N 1/3962 is impacted by reclassification into groups A61N 1/39622 and A61N 1/39624.~~
~~Groups A61N 1/3962, A61N 1/39622 and A61N 1/39624 should be considered in order to perform a complete search.~~

M A61N 1/39622 · · · · · · ·{Pacing therapy}

~~WARNING~~
~~Group A61N 1/39622 is incomplete pending reclassification of documents from group A61N 1/3962.~~
~~Groups A61N 1/39622 and A61N 1/3962 should be considered in order to perform a complete search.~~

M A61N 1/39624 · · · · · · ·{Pain reduction therapy}

~~WARNING~~
~~Group A61N 1/39624 is incomplete pending reclassification of documents from group A61N 1/3962.~~
~~Groups A61N 1/39624 and A61N 1/3962 should be considered in order to perform a complete search.~~

Project: N/A (A61P)

U **A61P 7/00** **Drugs for disorders of the blood or the extracellular fluid**

A61P 7/04 · Antihaemorrhagics; Procoagulants; ~~Haemostatatic~~*Haemostatic* agents; Antifibrinolytic agents

Project: MP0499 (B33Y)

M **B33Y** **ADDITIVE MANUFACTURING, i.e. MANUFACTURING OF THREE-DIMENSIONAL [3-D] OBJECTS BY ADDITIVE DEPOSITION, ADDITIVE AGGLOMERATION OR ADDITIVE LAYERING, e.g. BY 3-D PRINTING, STEREOLITHOGRAPHY OR SELECTIVE LASER SINTERING**

NOTES

1. This subclass covers additive manufacturing, irrespective of the process or material used.

2. This subclass is intended to enable a comprehensive search of subject matter related to additive manufacturing by combination of classification symbols of this subclass with classification symbols from other subclasses. Therefore this

subclass covers aspects of additive manufacturing (e.g. 3D printing) that might also be entirely or partially covered elsewhere in CPC.

3. This subclass is for obligatory supplementary classification of subject matter already classified as such in other classification places, when the subject matter contains an aspect of additive manufacturing.

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

~~5. In this subclass, multi-aspect classification is applied, so aspects of subject matter characterised by aspects covered by more than one of its groups should be classified in each of those groups.~~

Project: RP0491-F (C09D)

U C09D 7/00 Features of coating compositions, not provided for in group C09D 5/00 (driers C09F 9/00); Processes for incorporating ingredients in coating compositions

U C09D 7/40 ・Additives

M C09D 7/41 ・・Organic pigments; Organic dyes

~~WARNING~~
~~Group C09D 7/41 is incomplete pending reclassification of documents from groups C09D 7/60, C09D 7/61, C09D 7/62, C09D 7/63, C09D 7/65 and C09D 7/70.~~
~~All groups listed in this Warning should be considered in order to perform a complete search.~~

M C09D 7/42 ・・Gloss-reducing agents

~~WARNING~~
~~Group C09D 7/42 is incomplete pending reclassification of documents from groups C09D 7/60, C09D 7/61, C09D 7/62, C09D 7/63, C09D 7/65 and C09D 7/70.~~
~~All groups listed in this Warning should be considered in order to perform a complete search.~~

M C09D 7/43 ・・Thickening agents

~~WARNING~~
~~Group C09D 7/43 is incomplete pending reclassification of documents from groups C09D 7/60, C09D 7/61, C09D 7/62, C09D 7/63, C09D 7/65 and C09D 7/70.~~
~~All groups listed in this Warning should be considered in order to perform a complete search.~~

M C09D 7/44 ・・・Combinations of two or more thickening agents

~~WARNING~~
~~Group C09D 7/44 is incomplete pending reclassification of documents from groups C09D 7/60, C09D 7/61, C09D 7/62, C09D 7/63, C09D 7/65 and C09D 7/70.~~
~~All groups listed in this Warning should be considered in order to perform a complete search.~~

M C09D 7/45 ・・Anti-settling agents

~~WARNING~~
~~Group C09D 7/45 is incomplete pending reclassification of documents from groups C09D 7/60, C09D 7/61, C09D 7/62, C09D 7/63, C09D 7/65 and C09D 7/70.~~

~~All groups listed in this Warning should be considered in order to perform a complete search.~~

M C09D 7/46 ・・Anti-skinning agents

~~WARNING~~
~~Group C09D 7/46 is incomplete pending reclassification of documents from groups C09D 7/60, C09D 7/61, C09D 7/62, C09D 7/63, C09D 7/65 and C09D 7/70.~~
~~All groups listed in this Warning should be considered in order to perform a complete search.~~

M C09D 7/47 ・・Levelling agents

~~WARNING~~
~~Group C09D 7/47 is incomplete pending reclassification of documents from groups C09D 7/60, C09D 7/61, C09D 7/62, C09D 7/63, C09D 7/65 and C09D 7/70.~~
~~All groups listed in this Warning should be considered in order to perform a complete search.~~

M C09D 7/48 ・・Stabilisers against degradation by oxygen, light or heat

~~WARNING~~
~~Group C09D 7/48 is incomplete pending reclassification of documents from groups C09D 7/60, C09D 7/61, C09D 7/62, C09D 7/63, C09D 7/65 and C09D 7/70.~~
~~All groups listed in this Warning should be considered in order to perform a complete search.~~

M C09D 7/60 ・・non-macromolecular (C09D 7/41-C09D 7/48 take precedence)

~~WARNING~~
~~Group C09D 7/60 is impacted by reclassification into groups C09D 7/41, C09D 7/42, C09D 7/43, C09D 7/44, C09D 7/45, C09D 7/46, C09D 7/47, and C09D 7/48.~~
~~All groups listed in this Warning should be considered in order to perform a complete search.~~

M C09D 7/61 ・・・inorganic

~~WARNING~~
~~Group C09D 7/61 is incomplete pending reclassification of documents from group C09D 7/70. Group C09D 7/61 is also impacted by reclassification into groups C09D 7/41, C09D 7/42, C09D 7/43, C09D 7/44, C09D 7/45, C09D 7/46, C09D 7/47, and C09D 7/48.~~
~~All groups listed in this Warning should be considered in order to perform a complete search.~~

M C09D 7/62 ・・・・modified by treatment with other compounds

~~WARNING~~
~~Group C09D 7/62 is incomplete pending reclassification of documents from group C09D 7/70. Group C09D 7/62 is also impacted by reclassification into groups C09D 7/41, C09D 7/42, C09D 7/43, C09D 7/44, C09D 7/45, C09D 7/46, C09D 7/47, and C09D 7/48.~~
~~All groups listed in this Warning should be considered in order to perform a complete search.~~

M C09D 7/63 ・・・organic

~~WARNING~~
~~Group C09D 7/63 is impacted by reclassification into groups C09D 7/41, C09D 7/42, C09D 7/43, C09D 7/44, C09D 7/45, C09D 7/46, C09D 7/47, and C09D 7/48.~~
~~All groups listed in this Warning should be considered in order to perform a complete search.~~

M C09D 7/65 ・・macromolecular (C09D 7/41-C09D 7/48 take precedence)

~~WARNING~~
~~Group C09D 7/65 is incomplete pending reclassification of documents from group C09D 7/70. Group C09D 7/65 is also impacted by reclassification into groups C09D 7/41, C09D 7/42, C09D 7/43, C09D 7/44, C09D 7/45, C09D 7/46, C09D 7/47, and C09D 7/48.~~
~~All groups listed in this Warning should be considered in order to perform a complete search.~~

M C09D 7/70 ・・{characterised by shape, e.g. fibres, flakes or microspheres}

~~WARNING~~
~~Group C09D 7/70 is impacted by reclassification into groups C09D 7/41, C09D 7/42, C09D 7/43, C09D 7/44, C09D 7/45, C09D 7/46, C09D 7/47, C09D 7/48, C09D 7/61, C09D 7/62 and C09D 7/65.~~
~~All groups listed in this Warning should be considered in order to perform a complete search.~~

Project: MP0501 (C09J)

M C09J **ADHESIVES; NON-MECHANICAL ASPECTS OF ADHESIVE PROCESSES IN GENERAL; ADHESIVE PROCESSES NOT PROVIDED FOR ELSEWHERE; USE OF ~~MATERIAL~~*MATERIALS* AS ADHESIVES (~~surgical adhesives A61L 24/00; adhesives on the basis of non- specified organic macromolecular compounds used as bonding agents in layered products B32B; organic labelling fabrics or comparable materials or articles with deformable surface using adhesives and thermo-activatable adhesives respectively B65C 5/02, B65C 5/04;~~ preparation of glue or gelatine C09H~~; adhesive labels, tag tickets or similar identification of indication means G09F 3/10~~)**

NOTES

1. In this subclass, the following terms or expressions are used with the meanings indicated:

- *"use of materials as adhesives" means the use of known or new polymers or products;*
- *"rubber" includes:*
  a. *natural or conjugated diene rubbers;*
  b. *rubber in general (for a specific rubber, other than a natural rubber or a conjugated diene rubber, see the group provided for adhesives based on such macromolecular compounds);*
     - *"based on" is defined by means of Note (3), below.*

~~2. "use of materials as adhesives" means the use of known or new polymers or products;~~

- ~~"rubber" includes:~~
  ~~a. natural or conjugated diene rubbers;~~
  ~~b. rubber in general (for a specific rubber, other than a natural rubber or a conjugated diene rubber, see the group provided for adhesives based on such macromolecular compounds);~~

- ~~"based on" is defined by means of Note 3, below.~~

~~3.~~ *2.* In this subclass, adhesives containing specific macromolecular substances are classified only according to the macromolecular substance, non-macromolecular substances not being taken into account.

- Example: an adhesive containing polyethene and amino-propyltrimethoxysilane is classified in group C09J 123/06.
- However, adhesives containing combinations of organic non-macromolecular compounds having at least one polymerisable carbon-to-carbon unsaturated bond with prepolymers or polymers other than unsaturated polymers of groups C09J 159/00 - C09J 187/00 are classified according to the unsaturated non-macromolecular component in group ~~C09J 4/00~~*C09J 4/06*.
- Example: an adhesive containing polyethene and styrene monomer is classified in group C09J 4/06.
- Aspects relating to the physical nature of the adhesives or to the effects produced, as defined in group C09J 9/00, if clearly and explicitly stated, are also classified in this subclass.
- Adhesives characterised by other features, e.g. additives, are classified in group C09J 11/00, unless the macromolecular constituent is specified.

~~4.~~ *3.* In this subclass, adhesives comprising two or more macromolecular constituents are classified according to the macromolecular constituent or constituents present in the highest proportion, i.e. the constituent on which the adhesive is based. If the adhesive is based on two or more constituents, present in equal proportions, the adhesive is classified according to each of these constituents.

- ~~Examples~~*Example*: An adhesive containing 80 parts of polyethene and 20 parts of polyvinylchloride is classified in group C09J 123/06~~;~~ ~~a n~~. *An* adhesive containing 40 parts of polyethene and 40 parts of polyvinylchloride is classified in groups C09J 123/06 and C09J 127/06.

4. {In groups C09J 101/00 - C09J 201/00, any macromolecular constituent of an adhesive composition which is not identified by the classification according to Note (3) after the title of subclass C09J, and the use of which is determined to be novel and non-obvious, must also be classified in a group chosen from groups C09J 101/00 - C09J 201/00. This Note corresponds to IPC Note (1) relating to C09J 101/00 - C09J 201/00.}

5. *{*Any macromolecular constituent of an adhesive composition which is not identified by the classification according to Note (3) after the title of subclass C09J or Note (~~1~~*4*) above, and which is considered to represent information of interest for search, may also be classified in a group chosen from groups C09J 101/00 - C09J 201/00. This can, for example, be the case when it is considered of interest to enable searching of adhesive compositions using a combination of classification symbols. Such non-obligatory classification should be given as "additional information". {This Note corresponds to IPC Note (2) relating to C09J 101/00 - C09J 201/00.}

6. *{*In groups C09J 165/00 - C09J 185/00, in the absence of an indication to the contrary, adhesives based on macromolecular compounds obtained by reactions forming two different linkages in the main chain are classified only according to the linkage present in excess.

{This Note corresponds to IPC Note (1) relating to C09J 165/00 - C09J 185/00.}

7. {An adhesive composition containing polyethylene and amino-propyltrimethoxysilane is classified in groups C09J 123/06 and C08K 5/544.}

~~7.~~ *8.* {In this subclass, combination sets [C-Sets] are used. The detailed information about the C-Sets construction and the associated syntax rules are found in the Definitions of C09J~~.~~ }

~~8.~~ *9.* {In addition to ~~note (5~~*Note (8*), C08L 2666/00 indexing codes were used for C-Sets classification of documents before April 2012 (see also C-Sets search rules in C08L, C09D~~, in~~ *and in the* C09J definition)~~.~~ }

WARNINGS

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

C09J 4/02	covered by	C09J 4/00
C09J 4/04	covered by	C09J 4/00
C09J 161/08 - C09J 161/10	covered by	C09J 161/06
C09J 163/02	covered by	C09J 163/00
C09J 183/05	covered by	C09J 183/04
C09J 183/07	covered by	C09J 183/04

2. In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: RP0271-F (C23C)

U C23C 18/00 **Chemical coating by decomposition of either liquid compounds or solutions of the coating forming compounds, without leaving reaction products of surface material in the coating; Contact plating**

NOTE

This groups covers also suspensions containing reactive liquids and non-reactive solid particles.

M C23C 18/14 ・Decomposition by irradiation, e.g. photolysis, particle radiation {or by mixed irradiation sources}

~~WARNING~~
~~Group C23C 18/14 is impacted by reclassification into groups C23C 18/143 and C23C 18/145.~~
~~Groups C23C 18/14, C23C 18/143, and C23C 18/145 should be considered in order to perform a complete search.~~

M C23C 18/143 ・・{Radiation by light, e.g. photolysis or pyrolysis}

~~WARNING~~
~~Group C23C 18/143 is incomplete pending reclassification of documents from group C23C 18/14.~~
~~Groups C23C 18/14 and C23C 18/143 should be considered in order to perform a complete search.~~

M C23C 18/145 ・・{Radiation by charged particles, e.g. electron beams or ion irradiation}

~~WARNING~~
~~Group C23C 18/145 is incomplete pending reclassification of documents from group C23C 18/14.~~
~~Groups C23C 18/14 and C23C 18/145 should be considered in order to perform a complete search.~~

Project: MP0492 (C40B)

M C40B **COMBINATORIAL CHEMISTRY; LIBRARIES, e.g. CHEMICAL LIBRARIES~~,~~ ~~IN SILICO LIBRARIES~~*(in silico combinatorial libraries of nucleic acids, proteins or peptides G16B 35/00; in silico combinatorial chemistry G16C 20/60)*

NOTES

1. In this subclass, the first place priority rule is applied, i.e. at each hierarchical level, classification is made in the first appropriate place.

2. When classifying in this subclass*{*, subject matter of interest is also classified in other appropriate places:~~-~~*}*

- library members are also classified in the appropriate places elsewhere in the IPC, (e.g. in section C) according to established procedure relating to "Markush"-type formulae (see paragraph *100 and* 101 of the Guide);
- *{*methods or apparatus covered by this subclass are also classified for their biological, chemical, physical or other features in the appropriate places in the IPC, if such features are of interest, e.g.

A01N	Biocides
A61K	Preparations for medical, dental or toilet purposes
A61P	Specific therapeutic activity of chemical compounds or medicinal preparations
B01D	Separation
B01J	Chemical or physical processes, e.g. catalysis; Apparatus therefor
B01L	Chemical or physical laboratory apparatus
B29	Shaped plastics
C01, C07, C08	Inorganic, organic or organic macromolecular compounds; Methods of preparation or separation thereof
C12	Biochemistry. microbiology, enzymology including microorganisms or enzymes, preparing them, using them to ~~synthesis~~*synthesise* compounds or compositions; Measuring or testing processes involving microorganisms or enzymes; Mutation or genetic engineering
C22	Metal alloys
G01N	Chemical or physical analysis
G01R, G01T	Physical measurements methods; Apparatus ~~thereof~~*therefor*
G03F	Photomechanical methods
G06F	Electrical digital data processing
G06K	Data processing
G06T	Image data processing
G09F	Displaying; Advertising.

}

3. {C12N 15/1034 - C12N 15/1093 always take precedence over C40B.}

Project: MP0482 (F16H)

M F16H GEARING

NOTES

1. Combinations including mechanical gearings are classified in groups F16H 37/00 or F16H 47/00, unless they are provided for in groups F16H 1/00 - F16H 35/00.

2. In this subclass, sets of rigidly-connected members are regarded as single members.

3. In this subclass, the following terms or expressions are used with the meanings indicated:

- "toothed gearing" includes worm gearing and other gearing involving at least one wheel or sector provided with teeth or the equivalent, EXCEPT gearing with chains or toothed belts, which is treated as friction gearing;
- "conveying motion" includes transmitting energy, and means that the applied and resultant motions are of the same kind, though they may differ in, e.g. speed, direction extent:
- "rotary" implies that the motion may continue indefinitely;
- "oscillating" means moving about an axis to an extent which is limited by the construction of the gearing, and which may exceed one revolution, the movement being alternately forwards and backwards during continued operation of the gearing;
- "reciprocating" means moving substantially in a straight line, the movement being alternately forwards and backwards during continued operation of the gearing;
- "reversing" or "reversal" means that an applied movement in one direction may produce a resultant movement in either of two opposed directions at will;
- "central gears" includes any gears whose axis is the main axis of the gearing.

4. Attention is drawn to the following places:

A01D 69/06	Gearings in harvesting machines
A63H 31/00	Gearing for toys
B21B 35/12	Toothed-wheel gearing for metal-rolling mills
B60K	Arrangement of transmissions in vehicles
B61C 9/00	Transmissions for railway locomotives
B62D 3/00	Vehicle steering gears
B62M	Transmissions for cycles
B63H 23/00	Transmissions for marine propulsions
B63H 25/00	Marine steering gears
{B64C 27/12, B64C 27/58}	{Transmissions for helicopters}
{B64D 35/00}	{Transmissions for aircraft}
F01-F04	Machines, engines, pumps
F15B 15/00	Gearings associated with fluid-actuated devices
G01D 5/04	Gearing used in indicating or recording apparatus in connection with measuring devices
H03J 1/00	Driving arrangements for tuning resonant circuits
H04L 13/04	Driving mechanisms for apparatus for transmission of coded digital information.

WARNING

{In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.}

U	**F16H 3/00**	**Toothed gearings for conveying rotary motion with variable gear ratio or for reversing rotary motion (speed-changing or reversing mechanisms F16H 59/00 - F16H 63/00)**
U	F16H 3/02	· without gears having orbital motion
U	F16H 3/08	· · exclusively or essentially with continuously meshing gears, that can be disengaged from their shafts NOTE In this group, gears which can be put out of mesh are not taken into consideration if they are used for reversal only.
M	F16H 3/12	· · · with means for synchronisation not incorporated in the clutches ~~(synchronised clutches F16D 23/02)~~
M	**F16H 7/00**	**Gearings for conveying rotary motion by endless flexible members (specific for conveying rotary motion with variable gear ratio or for reversing rotary motion F16H 9/00 *{*~~; {Belts, V-belts, ropes, cables, and chains F16G, chain-wheels F16H 55/30; pulleys F16H 55/36}~~*; chainwheels F16H 55/30}*)**
M	F16H 7/24	· Equipment for mounting belts, ropes, or chains
U	**F16H 9/00**	**Gearings for conveying rotary motion with variable gear ratio, or for reversing rotary motion, by endless flexible members (control of change-speed or reversing-gearings conveying rotary motion F16H 59/00 - F16H 63/00)**
U	F16H 9/02	· without members having orbital motion
M	F16H 9/24	· · using chains or toothed belts, belts in the form of links; Chains or belts specially adapted to such gearing ~~(toothed belts F16G 1/28; V-belts in the form of links F16G 5/18; toothed V-belts F16G 5/20)~~
M	**F16H 13/00**	~~**Gearings for conveying rotary motion by friction between rotary members**~~ ***Gearing for conveying rotary motion with constant gear ratio by friction between rotary members {*~~**specific for conveying rotary motion with variable gear ratio or for reversing rotary motion F16H 15/00; {**~~**friction discs F16H 55/32}**~~***)}***
M	**F16H 19/00**	**Gearings comprising essentially only toothed gears or friction members and not capable of conveying indefinitely-continuing rotary motion (with intermittently-driving members F16H 27/00 - F16H 31/00~~; rope or like tackle for lifting or haulage B66D 3/00~~)**
M	**F16H 21/00 - F16H 25/00**	**Gearing for conveying or converting motion by means of levers, links, ~~or cams~~ *cams or screw-and-nut mechanisms* ~~(combination of gearings of different types F16H 37/00)~~**
U	**F16H 21/00**	**Gearings comprising primarily only links or levers, with or without slides**
M	F16H 21/04	· Guiding mechanisms, e.g. for straight-line guidance ~~(for drawing-machines B43L)~~
M	F16H 21/10	· all movement being in, or parallel to, a single plane
U	F16H 21/16	· · for interconverting rotary motion and reciprocating motion
U	F16H 21/18	· · · Crank gearings; Eccentric gearings
M	F16H 21/20	· · · · with adjustment of throw ~~(adjustable cranks or eccentrics F16C 3/28; adjustable connecting-rods F16C 7/06)~~
M	F16H 21/36	· · · · without swinging connecting-rod, e.g. with epicyclic parallel motion, slot ~~and~~ *-and-* crank motion
U	F16H 21/46	· with movements in three dimensions
M	F16H 21/50	· · for interconverting rotary motion and reciprocating motion *{*(F16H 23/00 takes precedence)*}*

U	**F16H 23/00**	**Wobble-plate gearings; Oblique-crank gearings {(conveying rotary motion with toothed nutating gears F16H 1/321)}**
M	F16H 23/02	· with adjustment of throw by changing the position of the wobble-member (~~F16H 29/04, F16H 33/10 take precedence~~*gearings in which the transmission ratio is changed by adjustment of a wobble-plate F16H 29/04; gearings with gyroscopic action, e.g. comprising wobble-plates F16H 33/10*)
U	**F16H 25/00**	**Gearings comprising primarily only cams, cam-followers and screw-and-nut mechanisms**
U	F16H 25/08	· for interconverting rotary motion and reciprocating motion (F16H 23/00 takes precedence)
M	F16H 25/10	· · with adjustable throw ~~(adjustable cams F16H 53/04)~~
M	F16H 25/12	· · with reciprocation along the axis of rotation, e.g. gearings with helical grooves and automatic reversal~~,~~ {or cams}~~(screw mechanisms without automatic reversal F16H 25/20)~~
M	F16H 25/14	· · with reciprocation perpendicular to the axis of rotation (~~F16H 21/36 takes precedence~~*crank or eccentric gearings without swinging connecting-rod F16H 21/36*)
M	**F16H 27/00**	**Step-by-step mechanisms without freewheel members, e.g. Geneva ~~driven~~ *drives* ~~(rotary gearings with cyclically-varying velocity ratio F16H 35/02; impulse couplings F16D 5/00; clockwork escapements G04B 15/00)~~**
M	**F16H 29/00**	**Gearings for conveying rotary motion with intermittently-driving members, e.g. with freewheel action *{*(~~freewheels F16D 41/00 {; Gearings for converting oscillating or reciprocating movement with freewheeling members or other intermittently-driving members into a rotary movement F16H 31/00}~~*gearings for converting oscillating or reciprocating movement with freewheeling members or other intermittently-driving members into a rotary movement F16H 31/00*)*}***
U	F16H 29/02	· between one of the shafts and an oscillating or reciprocating intermediate member, not rotating with either of the shafts (F16H 29/20, F16H 29/22 take precedence)
M	F16H 29/04	· · in which the transmission ratio is changed by adjustment of a crank, an eccentric*,* a wobble-plate, or *a* cam, on one of the shafts
M	F16H 29/10	· · in which the transmission ratio is changed by directly ~~operating~~*acting* on the intermittently driving members
M	**F16H 31/00**	**Other gearings with freewheeling members or other intermittently driving members (F16H 21/00, F16H 23/00, F16H 25/00 take precedence~~; gearings involving the use of automatic changing-mechanisms, e.g. cyclically-actuated reversal gearings, see the appropriate groups~~)**
U	**F16H 33/00**	**Gearings based on repeated accumulation and delivery of energy**
U	F16H 33/02	· Rotary transmissions with mechanical accumulators, e.g. weights, springs, intermittently-connected flywheels
U	F16H 33/04	· · Gearings for conveying rotary motion with variable velocity ratio, in which self-regulation is sought
M	F16H 33/06	· · · based essentially on spring action ~~(ratchet slip couplings F16D 7/04)~~
U	**F16H 35/00**	**Gearings or mechanisms with other special functional features**
M	F16H 35/02	· for conveying rotary motion with cyclically varying velocity ratio ~~(speed-changing mechanisms operating cyclically, see the appropriate groups)~~

M	F16H 35/06	· Gearings designed to allow relative movement between supports thereof without ill effects (~~F16H 1/26, F16H 1/48 take precedence {;~~ *special means compensating for misalignment of axes F16H 1/26, F16H 1/48 {;* mounting or supporting gearboxes F16H 57/025})
M	F16H 35/10	· Arrangements or devices for absorbing overload or preventing damage by overload *{*({for screw mechanisms F16H 25/2021~~}; couplings for transmitting rotation F16D~~)*}*
M	F16H 35/12	· Transmitting mechanisms with delayed effect ~~(vibration- or shock-dampers in general F16F)~~
M	F16H 35/16	· Mechanisms for movements or movement relations conforming to mathematical formulae ~~(devices in which computing operations are performed mechanically G06G 3/00)~~
M	F16H 35/18	· Turning devices for rotatable members, e.g. shafts ~~(starting devices for internal-combustion engines F02N)~~
M	**F16H 37/00**	**Combinations of mechanical gearings, not ~~hereinbefore provided for~~*provided for in groups F16H 1/00 - F16H 35/00* (~~applications of "underdrives" or "overdrives" in motor vehicles, combinations with differential gearings in motor vehicles B60K~~*combinations of mechanical gearing with fluid clutches or fluid gearing F16H 47/00*)**
M	F16H 37/12	· Gearings comprising primarily toothed or friction gearing, links or levers, and cams, or members of at least two of these types (~~F16H 21/14, F16H 21/28, F16H 21/30 take precedence; toothed or friction gearing or cam gearing with only an additional lever or link, see the appropriate group for the main gearing~~*gearings with cranks, eccentrics, or like members fixed to one rotary member and guided along tracks on the other F16H 21/14; crank or eccentric gearings with cams or additional guides, or with members having rolling contact F16H 21/28, F16H 21/30*)
M	**F16H 39/00 - F16H 49/00**	**Fluid gearing ~~(fluid actuators F15B; couplings or clutches with a fluid or semi-fluid as power-transmitting means F16D 31/00 - F16D 39/00; fluid-resistance brakes F16D 57/00)~~**
M	**F16H 39/00**	**Rotary fluid gearing using pumps and motors of the volumetric type, i.e. passing a predetermined volume of fluid per revolution (~~{application to motor vehicles B60K} ; application to lifting or pushing equipment B66F;~~ control of exclusively fluid gearing F16H 61/38)**
M	F16H 39/01	· Pneumatic gearing; Gearing working with subatmospheric pressure ~~(pneumatic hammers B25D 9/00)~~
U	F16H 39/04	· with liquid motor and pump combined in one unit
U	F16H 39/06	· · pump and motor being of the same type
U	F16H 39/08	· · · each with one main shaft and provided with pistons reciprocating in cylinders
M	F16H 39/10	· · · · with cylinders arranged around, and parallel or approximately parallel to the main axis of the gearing
U	**F16H 41/00**	**Rotary fluid gearing of the hydrokinetic type (control of exclusively fluid gearing F16H 61/38)**
M	F16H 41/32	· Selection of working fluids ~~(chemical aspects, see the relevant classes)~~

M	**F16H 45/00**	**Combinations of fluid gearings for conveying rotary motion with couplings or clutches (~~F16H 41/22, {F16H 47/085} take precedence; conjoint control of driveline clutches and change-speed gearing in vehicles B60W 10/02, B60W 10/10 {and B60W 30/18}~~*gearing systems consisting of a plurality of hydrokinetic units operating alternatively F16H 41/22 {, F16H 47/085}*)** NOTE Clutches for varying working conditions in fluid torque-converters are regarded as part of the torque converter
M	**F16H 47/00**	**Combinations of mechanical gearing with fluid clutches or fluid gearing ~~(conjoint control of driveline clutches and change-speed gearing in vehicles B60W 10/02 and B60W 10/10)~~**
M	**F16H 51/00 - F16H 57/00**	**Details of gearing or mechanisms ~~(of screw-and-nut gearing F16H 25/00; of fluid gearing F16H 39/00 - F16H 43/00; shafts, Bowden mechanisms, cranks, eccentrics, bearings, pivotal, pivotal connections, crossheads, connecting-rods F16C; chains, belts F16G; piston-rods F16J 7/00)~~**
M	**F16H 51/00**	**Levers of gearing mechanisms ~~({connecting rods or links pivoted at both ends F16C 7/00; gear levers F16H 59/00}; manipulating levers G05G)~~**
M	**F16H 53/00**	**Cams *{*; Non-rotary cams; ~~Cam followers, e.g. rollers~~*} or cam-followers, e.g. rollers for gearing mechanisms***
M	**F16H 55/00**	**Elements with teeth or friction surfaces for conveying motion~~; Worms; Pulleys~~; ~~Sheaves~~*Worms, pulleys or sheaves for gearing mechanisms* (~~pulley-blocks B66D 3/04~~*of screw-and-nut gearing F16H 25/00*)**
U	F16H 55/02	· Toothed members; Worms
M	F16H 55/14	· · Construction providing resilience or vibration-damping (F16H 55/06 takes precedence~~; resilient coupling of wheel or wheel-rim with shaft F16D 3/50, F16D 3/80~~)
M	F16H 55/22	· · for transmissions with crossing shafts, especially worms, worm-gears ~~(bevel gears, crown wheels, helical gears F16H 55/17)~~
M	F16H 55/30	· · Chain-wheels ~~(specially adapted for cycles B62M)~~
M	F16H 55/32	· Friction members ~~(friction surfaces F16D 69/00)~~
M	F16H 55/36	· · Pulleys (with features essential for ~~adjustments~~*adjustment* F16H 55/52)
M	F16H 55/38	· · · Means or measures for increasing adhesion ~~(in general F16D 69/00)~~
U	**F16H 57/00**	**General details of gearing (of screw-and-nut gearing F16H 25/00; of fluid gearing F16H 39/00 - F16H 43/00)**
M	F16H 57/01	· Monitoring wear or stress of ~~transmission~~*gearing* elements, e.g. for triggering maintenance
U	F16H 57/02	· Gearboxes; Mounting gearing therein NOTE When classifying in this group, in the absence of an indication to the contrary, classification is made in all appropriate subgroups.
U	F16H 57/021	· · Shaft support structures, e.g. partition walls, bearing eyes, casing walls or covers with bearings
M	F16H 57/022	· · · Adjustment of ~~transmission~~*gear* shafts or bearings (for compensating misalignment of axes of toothed gearings without orbital motion F16H 1/26; for compensating misalignment of axes of planetary gears F16H 1/48)
M	F16H 57/023	· · Mounting or installation of gears or shafts in the ~~gearbox casing~~*gearboxes*, e.g. methods or means for assembly

M	F16H 57/025	・・Support of ~~transmission casing~~*gearboxes*, e.g. torque arms, or attachment to other devices ~~(mounting of transmissions in vehicles B60K 17/00)~~
M	F16H 57/027	・・~~Means~~*characterised by means* for venting gearboxes, e.g. air breathers
M	F16H 57/029	・・characterised by means for sealing the ~~gearbox casing~~*gearboxes*, e.g. to improve airtightness
M	F16H 57/035	・・Gearboxes for ~~transmissions~~*gearing* with endless flexible members
U	F16H 57/04	・Features relating to lubrication or cooling {or heating}({in hydrokinetic gearing F16H 41/30; } control of lubrication or cooling in hydrostatic gearing F16H 61/4165)
M	F16H 57/05	・・of chains ~~(for conveyors B65G 45/02)~~
U	**F16H 61/00**	**Control functions within {control units of} change-speed- or reversing-gearings for conveying rotary motion {; Control of exclusively fluid gearing, friction gearing, gearings with endless flexible members or other particular types of gearing}**
M	F16H 61/18	・Preventing unintentional or unsafe shift~~, {~~ *{,* e.g. preventing manual shift from highest gear to reverse gear}
M	F16H 61/22	・Locking {of the control input devices} (~~F16H 63/34 takes precedence {; vehicle fittings for preventing unauthorised use, e.g. ignition keys interlocked with gear box or gear lever B60R 25/06}~~*constructional features of locking or disabling mechanisms F16H 63/34*)
U	F16H 61/38	・Control of exclusively fluid gearing
M	F16H 61/40	・・hydrostatic ~~(involving modification of the gearing F16H 39/02, F16H 39/04)~~
M	F16H 61/4061	・・・Control related to directional control valves, e.g. change-over valves, for crossing the feeding conduits ~~(forward reverse switching by using swash plate F16H 61/438)~~
M	F16H 61/4069	・・・Valves related to the control of neutral, e.g. shut off valves ~~(zero tilt rotation holding means F16H 61/439)~~
U	F16H 61/42	・・・involving adjustment of a pump or motor with adjustable output or capacity {(F16H 61/46 takes precedence)}
M	F16H 61/438	・・・・Control of forward-reverse switching, e.g. control of the swash plate causing discharge in two directions ~~(using a directional control valve F16H 61/4061)~~
M	F16H 61/439	・・・・Control of the neutral position, e.g. by zero tilt rotation holding means ~~(using a neutral valve or a shutoff valve F16H 61/4069)~~
U	F16H 61/44	・・・with more than one pump or motor in operation
M	F16H 61/456	・・・・Control of the balance of torque or speed between pumps or motors ~~(hydrostatic differentials F16H 48/18)~~
U	F16H 61/48	・・hydrodynamic
U	F16H 61/50	・・・controlled by changing the flow, force, or reaction of the liquid in the working circuit, while maintaining a completely filled working circuit
U	F16H 61/58	・・・・by change of the mechanical connection of, or between, the runners
M	F16H 61/62	・・・・・involving use of a speed-changing gearing or of a clutch in the connection between runners (~~F16H 45/02,~~ F16H 61/60 ~~take~~*takes* precedence*; combinations of fluid gearings for conveying rotary motion with mechanical clutches for bridging a fluid gearing of the hydrokinetic type F16H 45/02*)
M	F16H 61/66	・specially adapted for continuously variable gearings (~~F16H 61/38 takes precedence~~*control of exclusively fluid gearing F16H 61/38*)
M	F16H 61/662	・・with endless flexible ~~means~~*members*

Project: RP0708 (F23H)

M	**F23H 1/00**	**Grates with solid bars *(double grates F23H 5/00)***
M	F23H 1/06	・having bars at different levels ~~(double grates F23H 5/00)~~
M	**F23H 9/00**	**Revolving-grates; Rocking~~-~~ *or shaking* grates (~~F23H 7/00 takes precedence~~*inclined grates F23H 7/00*)**
M	F23H 9/08	・the bars being rocked about their longitudinal axes *(inclined grates with movable bars disposed parallel to the direction of fuel feeding and rocking about their axes F23H 7/10)*
M	**F23H 13/00**	**Grates not covered by any ~~preceding group~~*of groups F23H 1/00-F23H 11/00***
M	F23H 13/04	・Telescoping~~-~~ grates
M	F23H 13/06	・Dumping~~-~~ grates
M	**F23H 15/00**	**Cleaning arrangements for grates (not forming part of the grate F23J 1/00); Moving fuel along ~~grate~~*grates* (~~rocking-grates modified for moving fuel F23H 9/10;~~ *grates with bars rocked about their longitudinal axes and specially adapted for moving fuel along the grate F23H 9/10;* for travelling-grates F23H 11/22)**

Project: RP0500-F (G01N)

U	**G01N 23/00**	**Investigating or analysing materials by the use of wave or particle radiation, e.g. X-rays or neutrons, not covered by groups G01N 3/00 – G01N 17/00, G01N 21/00 or G01N 22/00**
U	G01N 23/02	・by transmitting the radiation through the material
M	G01N 23/04	・・and forming images of the material

~~WARNING~~
~~Group G01N 23/04 is impacted by reclassification into groups G01N 23/041 and G01N 23/044.~~
~~Groups G01N 23/04, G01N 23/041, and G01N 23/044 should be considered in order to perform a complete search.~~

M	G01N 23/041	・・・Phase-contrast imaging, e.g. using grating interferometers

~~WARNING~~
~~Group G01N 23/041 is incomplete pending reclassification of documents from groups G01N 23/04 and G01N 23/043.~~
~~Groups G01N 23/04, G01N 23/043, and G01N 23/041 should be considered in order to perform a complete search.~~

M	G01N 23/043	・・・{using fluoroscopic examination, with visual observation or video transmission of fluoroscopic images}

~~WARNING~~
~~Group G01N 23/043 is impacted by reclassification into groups G01N 23/041 and G01N 23/044.~~
~~Groups G01N 23/043, G01N 23/041, and G01N 23/044 should be considered in order to perform a complete search.~~

M	G01N 23/044	・・・using laminography or tomosynthesis

~~WARNING~~
~~Group G01N 23/044 is incomplete pending reclassification of documents from groups G01N 23/04 and G01N 23/043.~~
~~Groups G01N 23/04, G01N 23/043, and G01N 23/044 should be considered in order to perform a complete search.~~

M G01N 23/06 · · and measuring the absorption

~~WARNING~~
~~Group G01N 23/06 is impacted by reclassification into group G01N 23/083.~~
~~All groups listed in this Warning should be considered in order to perform a complete search.~~

M G01N 23/083 · · · the radiation being X-rays

~~WARNING~~
~~Group G01N 23/083 is incomplete pending reclassification of documents from groups G01N 23/06 and G01N 23/10 – G01N 23/185.~~
~~All groups listed in this Warning should be considered in order to perform a complete search.~~

M G01N 23/09 · · · the radiation being neutrons

~~WARNING~~
~~Group G01N 23/09 is impacted by reclassification into groups G01N 23/10, G01N 23/12, G01N 23/125, G01N 23/16, and G01N 23/18.~~
~~All groups listed in this Warning should be considered in order to perform a complete search.~~

M G01N 23/10 · · · the material being confined in a container, e.g. in a luggage X-ray scanners

~~WARNING~~
~~Group G01N 23/10 is incomplete pending reclassification of documents from group G01N 23/09.~~
~~Group G01N 23/10 is also impacted by reclassification into group G01N 23/083.~~
~~Groups G01N 23/09, G01N 23/10, and G01N 23/083 should be considered in order to perform a complete search.~~

M G01N 23/12 · · · the material being a flowing fluid or a flowing granular solid

~~WARNING~~
~~Group G01N 23/12 is incomplete pending reclassification of documents from group G01N 23/09.~~
~~Group G01N 23/12 is also impacted by reclassification into group G01N 23/083.~~
~~Groups G01N 23/09, G01N 23/12, and G01N 23/083 should be considered in order to perform a complete search.~~

M G01N 23/125 · · · · {with immerged detecting head}

~~WARNING~~
~~Group G01N 23/125 is incomplete pending reclassification of documents from group G01N 23/09.~~
~~Group G01N 23/125 is also impacted by reclassification into group G01N 23/083.~~
~~Groups G01N 23/09, G01N 23/125, and G01N 23/083 should be considered in order to perform a complete search.~~

M G01N 23/16 · · · the material being a moving sheet or film

~~WARNING~~
~~Group G01N 23/16 is incomplete pending reclassification of documents from groups G01N 23/09, G01N 23/18, and G01N 23/185.~~
~~Group G01N 23/16 is also impacted by reclassification into group G01N 23/083.~~
~~All groups listed in this Warning should be considered in order to perform a complete search.~~

M G01N 23/18 ・・・Investigating the presence of flaws defects or foreign matter

~~WARNING~~
~~Group G01N 23/18 is incomplete pending reclassification of documents from group G01N 23/09.~~
~~Group G01N 23/18 is also impacted by reclassification into groups G01N 23/083, and G01N 23/16.~~
~~Groups G01N 23/09, G01N 23/18, and G01N 23/16 should be considered in order to perform a complete search.~~

M G01N 23/185 ・・・・{in tyres}

~~WARNING~~
~~Group G01N 23/185 is impacted by reclassification into groups G01N 23/083, and G01N 23/16.~~
~~All groups listed in this Warning should be considered in order to perform a complete search.~~

U G01N 23/20 ・by using diffraction of the radiation by the materials, e.g. for investigating crystal structure; by using scattering of the radiation by the materials, e.g. for investigating non-crystalline materials; by using reflection of the radiation by the materials

M G01N 23/201 ・・by measuring small-angle scattering

~~WARNING~~
~~Group G01N 23/201 is impacted by reclassification into groups G01N 23/205, G01N 23/207, and G01N 23/2073.~~
~~All groups listed in this Warning should be considered in order to perform a complete search.~~

M G01N 23/202 ・・・using neutrons

~~WARNING~~
~~Group G01N 23/202 is impacted by reclassification into groups G01N 23/205, G01N 23/207, and G01N 23/2073.~~
~~All groups listed in this Warning should be considered in order to perform a complete search.~~

M G01N 23/205 ・・using diffraction cameras

~~WARNING~~
~~Group G01N 23/205 is incomplete pending reclassification of documents from groups G01N 23/201 and G01N 23/202.~~
~~Groups G01N 23/201, G01N 23/202 and G01N 23/205 should be considered in order to perform a complete search.~~

M G01N 23/207 ・・Diffractometry using detectors, e.g. using a probe in a central position and one or more displaceable detectors in circumferential positions

~~WARNING~~
~~Group G01N 23/207 is incomplete pending reclassification of documents from groups G01N 23/201 and G01N 23/202.~~
~~Groups G01N 23/201, G01N 23/202 and G01N 23/207 should be considered in order to perform a complete search.~~

M G01N 23/2073 ・・・{using neutron detectors (neutron spectrometry G01T 3/00)}

~~WARNING~~
~~Group G01N 23/2073 is incomplete pending reclassification of documents from groups G01N 23/201 and G01N 23/202.~~

~~Groups G01N 23/201, G01N 23/202 and G01N 23/2073 should be considered in order to perform a complete search.~~

M G01N 23/2076 ・・・{for spectrometry, i.e. using an analysing crystal, e.g. for measuring X-ray fluorescence spectrum of a sample with wavelength-dispersion, i.e. WDXFS}

~~WARNING~~
~~Group G01N 23/2076 is impacted by reclassification into group G01N 23/223.~~
~~Groups G01N 23/2076 and G01N 23/223 should be considered in order to perform a complete search.~~

M G01N 23/22 ・by measuring secondary emission from the material

NOTE
Devices per se are classified in the relevant places, e.g. H01J 37/00, H01J 49/00

~~WARNING~~
~~Group G01N 23/22 is impacted by reclassification into group G01N 23/2209.~~
~~Groups G01N 23/22 and G01N 23/2209 should be considered in order to perform a complete search.~~

M G01N 23/2209 ・・using wavelength dispersive spectroscopy [WDS]

~~WARNING~~
~~Group G01N 23/2209 is incomplete pending reclassification of documents from group G01N 23/22.~~
~~Groups G01N 23/22 and G01N 23/2209 should be considered in order to perform a complete search.~~

M G01N 23/223 ・・by irradiating the sample with X-rays or gamma-rays and by measuring X-ray fluorescence

~~WARNING~~
~~Group G01N 23/223 is incomplete pending reclassification of documents from group G01N 23/2076.~~
~~Groups G01N 23/2076 and G01N 23/223 should be considered in order to perform a complete search.~~

U G01N 23/225 ・・using electron or ion

U G01N 23/2255 ・・・using incident ion beams, e.g. proton beams

M G01N 23/2258 ・・・・Measuring secondary ion emission, e.g. secondary ion mass spectrometry [SIMS] (mass-to-charge ratio analysis aspects of SIMS for material analysis G01N 27/62)

~~WARNING~~
~~Group G01N 23/2258 is impacted by reclassification into group G01N 27/62.~~
~~Groups G01N 23/2258 and G01N 27/62 should be considered in order to perform a complete search.~~

U G01N 27/00 Investigating or analysing materials by the use of electric, electrochemical, or magnetic means (G01N 3/00 – G01N 25/00 take precedence; measurement or testing of electric or magnetic variables or of electric or magnetic properties of materials G01R)

M G01N 27/62 ・by investigating the ionisation of gases, e.g. aerosols; by investigating electric discharges, e.g. emission of cathode

WARNING

~~1. Group G01N 27/62 is incomplete pending reclassification of documents from group G01N 23/2258.~~
~~Groups G01N 23/2258 and G01N 27/62 should be considered in order to perform a complete search.~~

~~2.~~ *1.* Group G01N 27/62 is impacted by reclassification into group G01N 27/623.
Groups G01N 27/62 and G01N 27/623 should be considered in order to perform a complete search.

Project: RP0559-F (G07D)

M G07D 11/00 Devices accepting coins; Devices accepting, dispensing, sorting or counting valuable papers

~~WARNING~~
~~Group G07D 11/00 is impacted by reclassification into group G07D 11/60.~~
~~Groups G07D 11/00 and G07D 11/60 should be considered in order to perform a complete search.~~

M G07D 11/60 ・User-interface arrangements

~~WARNING~~
~~Group G07D 11/60 is incomplete pending reclassification of documents from group G07D 11/00.~~
~~Groups G07D 11/00 and G07D 11/60 should be considered in order to perform a complete search.~~

Project: MP0489 (G11B)

U G11B 11/00 Recording on or reproducing from the same record carrier wherein for these two operations the methods are covered by different main groups of groups G11B 3/00 - G11B 7/00 or by different subgroups of group G11B 9/00; Record carriers therefor {(driving or moving of heads G11B 3/02, G11B 5/48, G11B 7/08, G11B 21/02)}

NOTES

1. Groups G11B 11/00 - G11B 11/14 mainly cover:
   - combined systems or apparatus comprising both recording and reproducing using different methods;
   - record carriers therefor.
2. Reading only or recording only using mechanical, magnetic, optical or other methods is covered by groups G11B 3/00 - G11B 9/08

U G11B 11/10 ・using recording by magnetic means {or other means for magnetisation or demagnetisation of a record carrier, e.g. light induced spin magnetisation; Demagnetisation by thermal or stress means in the presence or not of an orienting magnetic field}

M G11B 11/105 ・ ・using a beam of light or a magnetic field for recording {by change of magnetisation} and a beam of light for reproducing, {i.e. magneto-optical,} e.g. light-induced ~~thermo-magnetic~~*thermomagnetic* recording, {spin magnetisation recording,} Kerr {or Faraday} effect reproducing

Project: MP0483 (G11C)

M	**G11C**	**STATIC STORES (~~information storage based on relative movement between record carrier and transducer G11B;~~ semiconductor devices for storage H01L, e.g. H01L 27/108 ~~-~~– H01L 27/11597~~; pulse technique in general H03K, e.g. electronic switches H03K 17/00~~)**

NOTES

1. This subclass covers devices or arrangements for storage of digital or analogue information ~~in which no relative movement takes place between an information storage element and a transducer; which incorporate a selecting-device for writing-in or reading-out the information into or from the store~~*:*
   - *in which no relative movement takes place between an information storage element and a transducer;*
   - *which incorporate a selecting-device for writing-in or reading-out the information into or from the store.*

2. This subclass does not cover elements not adapted for storage and not provided with such means as referred to in Note (3) below, which elements are classified in the appropriate subclass, e.g. of H01, H03K.

3. In this subclass, the following terms are used with the meaning indicated:
   - "storage element" is an element which can hold at least one item of information and is provided with means for writing-in or reading-out this information;
   - "memory" is a device, including storage elements, which can hold information to be extracted when desired.

WARNINGS

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

G11C 8/02	covered by	G11C 8/00, H03K 17/00
G11C 11/4193	covered by	G11C 11/00
G11C 11/4195	covered by	G11C 11/00
G11C 11/4197	covered by	G11C 11/00

2. In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

M	**G11C 5/00**	**Details of stores covered by *group* G11C 11/00**
M	G11C 5/005	・{Circuit means for protection against loss of information of semiconductor storage devices ~~(manufacturing semi-conductor by using bombardement with radiation H01L 21/26; error detection, monitoring G06F 11/00)~~}
M	G11C 5/14	・~~Power supply arrangements (in general G05F, H02J, H02M), {e.g. Power down/chip (de)selection, layout of wiring/power grids,~~*Power supply arrangements {, e.g. power down, chip selection or deselection, layout of wirings or power grids, or* multiple supply levels}
M	G11C 5/141	・・{Battery and back-up supplies ~~(back-up supplies per se H02J 9/061)~~}
M	G11C 5/142	・・{Contactless power supplies, e.g. RF, induction, ~~IR~~ *or IR}* ~~(in general H02J 5/00)}~~
M	G11C 5/143	・・{Detection of memory cassette insertion~~/~~ *or* removal; Continuity checks of supply ~~and~~*or* ground lines ~~(in general G01R 31/50)~~; Detection of supply variations~~/interruptions/~~*, interruptions or* levels (G11C 5/148 takes precedence); Switching between alternative supplies (~~back-up supplies per se H02J 9/061,~~ G11C 5/141 takes precedence)}
M	G11C 5/145	・・{Applications of charge pumps ~~(charge pumps per se H02M 3/07)~~; Boosted voltage circuits ~~(for logic circuits or inverting circuits H03K 19/00)~~; Clamp circuits therefor (G11C 5/141 takes precedence)}

M G11C 5/146 ・・・{Substrate bias generators (G11C 5/141 takes precedence~~; in general G05F 3/205~~)}

M G11C 5/147 ・・{Voltage reference generators, voltage ~~and~~*or* current regulators ~~(in general G05F 3/24)~~; Internally lowered supply ~~level~~ *levels* ~~(in general G05F 1/462)~~; Compensation for voltage drops (G11C 5/141 takes precedence)}

M G11C 7/00 Arrangements for writing information into, or reading information out from, a digital store (G11C 5/00 takes precedence; auxiliary circuits for stores using semiconductor devices G11C 11/4063, G11C 11/413~~-~~)

M G11C 7/06 ・Sense amplifiers; Associated circuits~~, {~~ *{,* e.g. timing or triggering circuits}~~(amplifiers per se H03F, H03K)~~

U G11C 7/10 ・Input/output [I/O] data interface arrangements, e.g. I/O data control circuits, I/O data buffers

U G11C 7/1051 ・・{Data output circuits, e.g. read-out amplifiers, data output buffers, data output registers, data output level conversion circuits}

M G11C 7/1069 ・・・{I/O lines read out arrangements ~~(global or local sense amplifiers for bit lines G11C 7/06)~~}

M G11C 7/20 ・Memory *cell* initialisation circuits, e.g. when powering up or down, memory clear, latent image memory

M G11C 8/00 Arrangements for selecting an address in a digital store (for stores using transistors G11C 11/407, G11C 11/413~~; {switching or gating circuits for general use H03K 17/00}~~)

M G11C 8/04 ・using a sequential addressing device, e.g. shift register, counter ~~(using first in first out [FIFO] registers for changing speed of digital data flow G06F 5/06; using last in first out [LIFO] registers for processing digital data by operating upon their order G06F 7/00)~~

M G11C 8/06 ・Address interface arrangements, e.g. address buffers ~~(level conversion circuits in general H03K 19/0175)~~

M G11C 8/12 ・Group selection circuits, e.g. for memory block ~~selections~~*selection*, chip selection, array selection

M G11C 8/16 ・Multiple access memory array, e.g. addressing one storage element via at least *two* independent addressing line groups ~~{(multiport memories in general G11C 7/1075)}~~

M G11C 8/20 ・Address safety or protection circuits, i.e. arrangements for preventing ~~unauthorised~~*unauthorized* or accidental access

U G11C 11/00 Digital stores characterised by the use of particular electric or magnetic storage elements; Storage elements therefor (G11C 14/00 - G11C 21/00 take precedence)

NOTE

Group G11C 11/56 takes precedence over groups G11C 11/02 - G11C 11/54.
{This Note corresponds to IPC Note (1) relating to G11C 11/02 - G11C 11/56.}

M G11C 11/02 ・using magnetic elements ~~{(using multibit magnetic storage elements G11C 11/5607; counters with magnetic elements H03K 23/76; pulse generators, static switches, logic circuits with such elements H03K 3/45, H03K 17/80, H03K 19/16; measurement of magnetic variables G01R 33/00)}~~

M G11C 11/04 ・・using storage elements having cylindrical form, e.g. rod, wire (~~{G11C 11/06085,}~~ G11C 11/12, G11C 11/14 take precedence)

U G11C 11/06 ・・using single-aperture storage elements, e.g. ring core; using multi-aperture plates in which each individual aperture forms a storage element

U	G11C 11/06007	· · ·{using a single aperture or single magnetic closed circuit} NOTE Provisionally contains the following details; control write -, read -, address circuitry (pulse generators in general H03K 5/00, H03K 17/00); arrangements for temperature compensation; checking of the correct functioning and repair arrangements (checking methods in general G06F 11/00, G06F 11/28; testing magnetic elements per se G01R 33/00); magnetic properties, choice of materials or the like (materials per se H01F 1/00)
U	G11C 11/06014	· · · ·{using one such element per bit}
U	G11C 11/06021	· · · · ·{with destructive read-out}
U	G11C 11/06028	· · · · · ·{Matrixes}
M	G11C 11/06035	· · · · · · ·{~~"bit"- organised, e.g. 2 1/2D, 3D or a similar organisation, i.e. bit~~*Bit* core selection for writing or reading, by at least two coincident partial currents*, e.g. "bit"- organised, 2L/2D, or 3D*}
M	G11C 11/06078	· · · ·{using two or more such elements ~~pro~~*per* bit}
M	G11C 11/08	· ·using multi-aperture storage elements, e.g. using transfluxors; using plates incorporating several individual multi-aperture storage elements (G11C 11/10 takes precedence~~; using multi-aperture plates in which each individual aperture forms a storage element G11C 11/06~~)
M	G11C 11/16	· ·using elements in which the storage effect is based on magnetic spin effect ~~{(sensors using magnetoresistive multilayer structures G01R 33/093; thin layer magnetic read heads for magnetic discs G11B 5/31; non-reciprocal magnetic elements in waveguides H01P; composition of ferromagnetic material H01F 1/00; gyrators H03H 7/002)}~~
U	G11C 11/19	·using non-linear reactive devices in resonant circuits
M	G11C 11/20	· ·using parametrons ~~{, i.e. ferroresonant triggers; with overcritica feedback magnetic amplifiers or similar (pulse generators using parametrons and ferroresonant devices H03K 19/162, H03K 19/164; counters using such elements H03K 23/001)}~~
U	G11C 11/21	·using electric elements
M	G11C 11/22	· ·using ferroelectric elements ~~{(using multibit ferroelectric storage elements G11C 11/5657; pulse generators using ferroelectric elements H03K 3/45; counters using such elements H03K 23/76)}~~
M	G11C 11/23	· ·using electrostatic storage on a common layer, e.g. Forrester-~~Haef tubes, {~~*Haeff tubes {or* William tubes}(G11C 11/22 takes precedence~~; {construction of Williams tubes H01J 31/00}~~)
M	G11C 11/26	· ·using discharge tubes ~~{(counters using such elements H03K 25/00)}~~
M	G11C 11/265	· · ·{counting tubes, e.g. decatrons~~, trochotrons~~ *or trochotrons}*~~{counters using such elements H03K 29/00)}~~
M	G11C 11/28	· · ·using gas-filled tubes ~~{(counting tubes G11C 11/265; pulse generators, electronic switches, logic circuits using such elements H03K 3/37, H03K 17/52, H03K 19/04)}~~
M	G11C 11/30	· · ·using vacuum tubes ~~{~~(~~counting tubes G11C 11/265; pulse generators, electronic switches, logic circuits using such elements H03K 3/37, H03K 17/52, H03K 19/04~~*G11C 11/23 takes precedence*)~~}~~
M	G11C 11/34	· ·using semiconductor devices ~~{(processes or apparatus for the manufacture or treatment of semiconductor or solid state devices H01L 21/00; integrated circuit devices H01L 27/00; generating electric pulses, e.g. bistable devices using semiconductor devices H03K 3/00)}~~
M	G11C 11/35	· · ·with charge storage in a depletion layer, e.g. charge coupled devices ~~{(in shift registers G11C 19/282)}~~

U	G11C 11/40	···using transistors
U	G11C 11/401	····forming cells needing refreshing or charge regeneration, i.e. dynamic cells
U	G11C 11/4063	·····Auxiliary circuits, e.g. for addressing, decoding, driving, writing, sensing or timing
U	G11C 11/407	·····for memory cells of the field-effect type
M	G11C 11/4072	·····Circuits for ~~initialisation~~*initialization*, powering up or down, clearing memory or presetting
U	G11C 11/41	····forming {static} cells with positive feedback, i.e. cells not needing refreshing or charge regeneration, e.g. bistable multivibrator or Schmitt trigger
M	G11C 11/412	·····using field-effect transistors only ~~{(latent image memory G11C 7/20; multi-port cells G11C 8/16)}~~
M	G11C 11/4125	·····{Cells incorporating circuit means for ~~protection~~*protecting* against loss of information ~~(in general G11C 5/005)~~}
M	G11C 11/413	·····Auxiliary circuits, e.g. for addressing, decoding, driving, writing, sensing, timing~~,~~ *or* power reduction ~~(in general G11C 5/00 - G11C 8/00)~~
M	G11C 11/42	···using opto-electronic devices, i.e. light-emitting and photoelectric devices electrically~~-~~ or optically~~-~~ ~~{feedback -}~~ coupled*coupled {or feedback-coupled}*
M	G11C 11/44	···using ~~superconductive~~*super-conductive* elements, e.g. cryotron
M	G11C 11/50	·using actuation of electric contacts to store the information ~~(mechanical stores G11C 23/00; switches providing a selected number of consecutive operations of the contacts by a single manual actuation of the operating part H01H 41/00)~~
M	G11C 11/56	·using storage elements with more than two stable states represented by steps, e.g. of voltage, current, phase, frequency ~~(counting arrangements comprising multi-stable elements of this type H03K 25/00, H03K 29/00)~~
M	**G11C 13/00**	**Digital stores characterised by the use of storage elements not covered by groups G11C 11/00, G11C 23/00 ~~-~~*, or* G11C 25/00**
M	G11C 13/02	·using elements whose operation depends upon chemical change *{*({G11C 13/0009 takes precedence~~}; using electrochemical charge G11C 11/00~~)*}*
M	G11C 13/04	·*using optical elements {;* ~~using optical elements {~~ using other beam accessed elements, e.g. electron~~, ion beam~~ *or ion beam}* ~~(using electrostatic memory tubes G11C 11/23; recording of television signals H04N 5/76)}~~
M	G11C 13/042	···{using information stored in the form of ~~an~~ interference pattern ~~(hologram, lippman; holography G03H, G02B 5/32)~~}
M	G11C 13/06	···using magneto-optical elements *{*({G11C 13/042 takes precedence~~}~~ ~~magneto-optics in general G02F~~)*}*
M	**G11C 14/00**	**Digital stores characterised by arrangements of cells having volatile and non-volatile storage properties for back-up when the power is down ~~{(bistable elements storing the actual state when the supply voltage fails H03K 3/02335, H03K 3/0375, H03K 3/2865, H03K 3/356008)}~~**
M	**G11C 15/00**	**Digital stores in which information comprising one or more characteristic parts is written into the store and in which information is read-out by searching for one or more of these characteristic parts, i.e. associative or content-addressed stores ~~(in which information is addressed to a specific location G11C 11/00 {; selection information using addressing means, e.g. hashing, tree addressing, chaining G06F 11/22; information retrieval systems using a computer G06F 16/00 })~~**
U	**G11C 16/00**	**Erasable programmable read-only memories (G11C 14/00 takes precedence)**

M	G11C 16/02	·electrically programmable ~~{(programmable multibit digital storage elements G11C 11/5621)}~~
U	G11C 16/04	· ·using variable threshold transistors, e.g. FAMOS
U	G11C 16/0408	· · ·{comprising cells containing floating gate transistors (G11C 16/0483, G11C 16/0491 take precedence)}
U	G11C 16/0441	· · · ·{comprising cells containing multiple floating gate devices, e.g. separate read-and-write FAMOS transistors with connected floating gates}
M	G11C 16/0458	· · · · ·{comprising ~~plural~~*two or more* independent floating gates which store independent data ~~(for storage of more than two stable states at a single floating gate G11C 11/5621)~~}
U	G11C 16/0466	· · ·{comprising cells with charge storage in an insulating layer, e.g. metal-nitride-oxide-silicon [MNOS], silicon-oxide-nitride-oxide-silicon [SONOS] (G11C 16/0483, G11C 16/0491 take precedence)}
M	G11C 16/0475	· · · ·{comprising ~~plural~~*two or more* independent storage sites which store independent data ~~(for storage of more than two stable states at a single storage site G11C 11/5621)~~}
M	G11C 16/06	· ·Auxiliary circuits, e.g. for writing into memory ~~(in general G11C 7/00)~~
M	**G11C 17/00**	**Read-only memories programmable only once; Semi-permanent stores, e.g. manually-replaceable information cards ~~{(multibit read-only memories G11C 11/5692; } erasable programmable read-only memories G11C 16/00; coding, decoding or code conversion, in general H03M {; combination of ROM and RAM G11C 11/005, G11C 14/00; for electrical control of combustion engines F02D 41/2406})~~**
U	G11C 17/14	·in which contents are determined by selectively establishing, breaking or modifying connecting links by permanently altering the state of coupling elements, e.g. PROM
M	G11C 17/18	· ·Auxiliary circuits, e.g. for writing into memory ~~(in general G11C 7/00)~~
M	**G11C 19/00**	**Digital stores in which the information is moved stepwise, e.g. shift ~~register~~ *registers* ~~(counting chains H03K 23/00){stack stores, push-down stores (linear pulse counters H03K 23/54, pulse distributors H03K 5/15, methods and arrangements for shifting data G06F 5/01)}~~**
U	G11C 19/02	·using magnetic elements (G11C 19/14 takes precedence)
M	G11C 19/08	· ·using thin films in plane structure ~~{(thin magnetic films and apparatus or processes specially adapted for manufacturing or assembling the same H01F 10/00, H01F 41/14)}~~
M	G11C 19/085	· · ·{Generating magnetic fields therefor, e.g. uniform magnetic field for magnetic domain stabilisation ~~(coil construction H01F 5/00; electromagnets H01F 7/06)~~}
M	G11C 19/0866	· · ·{Detecting magnetic domains ~~(measuring or detecting magnetic fields in general G01R 33/02)~~}
M	G11C 19/0875	· · ·{Organisation of a plurality of magnetic shift registers ~~(FIFO G06F 5/06; LIFO G06F 7/78)~~}
M	G11C 19/0883	· · · ·{Means for switching magnetic domains from one path into another path, i.e. transfer switches, swap gates~~, decoders~~ *or decoders}* ~~(logic circuits using magnetic domains H03K 19/168))~~
U	G11C 19/18	·using capacitors as main elements of the stages {(if capacitors are used as auxiliary stage in between main stages with other elements, the latter take precedence; G11C 19/005 takes precedence)}
U	G11C 19/182	· ·{in combination with semiconductor elements, e.g. bipolar transistors, diodes}
M	G11C 19/188	· · ·{Organisation of a multiplicity of shift registers, e.g. regeneration, timing~~,~~ *or* input-output circuits ~~(FIFO G06F 5/06; LIFO G06F 7/78)~~}

M	G11C 19/28	・using semiconductor elements (G11C 19/14 ~~takes~~, *G11C 19/36 take* precedence)
M	G11C 19/287	・・{Organisation of a multiplicity of shift registers ~~(FIFO G06F 5/06; LIFO G06F 7/78)~~}
M	G11C 19/30	・using opto-electronic devices, i.e. light-~~-~~emitting and photoelectric devices electrically~~-~~ or optically~~-~~coupled
M	G11C 19/32	・using ~~superconductive~~*super-conductive* elements
M	G11C 19/34	・using storage elements with more than two stable states represented by steps, e.g. of voltage, current, phase, frequency ~~{(in RAM multistable cells G11C 11/56; in capacitive analog stores G11C 27/04)}~~
U	**G11C 21/00**	**Digital stores in which the information circulates {continuously}(stepwise G11C 19/00)**
M	G11C 21/005	・{using electrical delay ~~line~~ *lines}* ~~(construction of such lines H03H 7/30, H03H 11/26)}~~
M	G11C 21/02	・using electromechanical delay lines, e.g. using a mercury tank ~~{(construction of such lines H03H 9/00)}~~
M	**G11C 23/00**	**Digital stores characterised by movement of mechanical parts to effect storage, e.g. using balls; Storage elements therefor ~~(storing by actuating contacts G11C 11/50)~~**
M	**G11C 25/00**	**Digital stores characterised by the use of flowing media; Storage elements therefor ~~{(multiple fluid-circuit element arrangements for performing digital operations F15C 1/12)}~~**
M	**G11C 27/00**	**Electric analogue stores, e.g. for storing instantaneous values ~~{(integrating circuits acting as stores G06G 7/18; pulse counters with step by step integration and static storage H03K 25/00)}~~**
M	G11C 27/02	・Sample-and-hold arrangements (G11C 27/04 takes precedence~~; sampling electrical signals, in general H03K~~)
M	G11C 27/04	・Shift registers ~~(charge coupled devices per se H01L 29/76)~~
M	**G11C 29/00**	**Checking stores for correct operation {; Subsequent repair}; Testing stores during standby or offline operation ~~{(testing of electronic circuits in general G01R 31/28; error detection or error correction in computer memories during normal operation G06F 11/1008, G06F 11/1666; testing of computers during standby G06F 11/22)}~~**
M	G11C 29/006	・{at wafer scale level, i.e. ~~WSI~~ *wafer scale integration [WSI]}* ~~(for test and configuration during manufacture H01L 22/00)}~~
U	G11C 29/04	・Detection or location of defective memory elements {, e.g. cell constructio details, timing of test signals}
U	G11C 29/08	・・Functional testing, e.g. testing during refresh, power-on self testing [POST] or distributed testing
M	G11C 29/48	・・・Arrangements in static stores specially adapted for testing by means external to the store, e.g. using direct memory access [DMA] or using auxiliary access paths ~~(external testing equipment G11C 29/56)~~
U	G11C 29/70	・{Masking faults in memories by using spares or by reconfiguring}
U	G11C 29/78	・・{using programmable devices}
U	G11C 29/785	・・・{with redundancy programming schemes}
M	G11C 29/787	・・・・{using a fuse hierarchy ~~(for memories using fuses in general G11C 17/16)~~}
M	G11C 29/789	・・・・{using non-volatile cells or latches ~~(erasable programmable memory cells in general G11C 16/00)~~}

Project: MP0489 (H01L)

U	**H01L 35/00**	**Thermoelectric devices comprising a junction of dissimilar materials, i.e. exhibiting Seebeck or Peltier effect with or without other thermoelectric effects or thermomagnetic effects; Processes or apparatus peculiar to the manufacture or treatment thereof or of parts thereof; Details thereof (devices consisting of a plurality of solid state components formed in or on a common substrate H01L 27/00)**
U	H01L 35/28	・operating with Peltier or Seebeck effect only
M	H01L 35/32	・・characterised by the structure or configuration of the cell or ~~thermo-couple~~*thermocouple* forming the device {including details about~~, e.g.,~~ housing, insulation, geometry~~,~~ *or* module}
M	H01L 35/325	・・・{Cascades of ~~thermo-couples~~*thermocouples*}

Project: MP0494 (H02M)

M	**H02M**	**APPARATUS FOR CONVERSION BETWEEN AC AND AC, BETWEEN AC AND DC, OR BETWEEN DC AND DC, AND FOR USE WITH MAINS OR SIMILAR POWER SUPPLY SYSTEMS; CONVERSION OF DC OR AC INPUT POWER INTO SURGE OUTPUT POWER; CONTROL OR REGULATION THEREOF (~~systems for regulating electric or magnetic variables in general, e.g. using transformers, reactors or choke coils, combination of such systems with static converters G05F; {digital function or clock generators} for digital computers G06F 1/00, {G06F 1/025, G06F 1/04};~~ transformers H01F~~; connection or control of one converter with regard to conjoint operation with a similar or other source of supply H02J~~; dynamo-electric converters H02K 47/00; controlling transformers, reactors or choke coils, control or regulation of electric motors, generators or dynamo-electric converters H02P~~; pulse generators H03K; {static converters specially adapted for igniting or operating discharge lamps H05B 41/28}~~)** NOTES 1. This subclass covers only circuits or apparatus for the conversion of electric power, or arrangements for control or regulation of such circuits or apparatus. The electrotechnical elements employed are dealt within the appropriate subclasses, e.g. inductors, transformers H01F, capacitors, electrolytic rectifiers H01G, mercury rectifying or other discharge tubes H01J, semiconductor devices H01L, impedance networks or resonant circuit not primarily concerned with the transfer of electric power H03H. 2. In this subclass, the following term is used with the meaning indicated: • "conversion", in respect of an electric variable, e.g. voltage or current, means the change of one or more of the parameters of the variable, e.g. amplitude, frequency, phase, polarity. WARNINGS 1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups: H02M 9/00 covered by H03K 3/53 H02M 9/02 covered by H03K 3/53 H02M 9/04 covered by H03K 3/53 H02M 9/06 covered by H03K 3/53 2. In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.
U	**H02M 1/00**	**Details of apparatus for conversion**

M	H02M 1/32	・Means for protecting converters other than automatic disconnection ~~(emergency protective circuit arrangements specially adapted for converters with automatic disconnection H02H 7/10)~~
U	**H02M 3/00**	**Conversion of dc power input into dc power output**
U	H02M 3/02	・without intermediate conversion into ac
U	H02M 3/04	・・by static converters
U	H02M 3/06	・・・using resistors or capacitors, e.g. potential divider
M	H02M 3/07	・・・・using capacitors charged and discharged alternately by semiconductor devices with control electrode {, e.g. charge pumps ~~(for substrate bias voltage generators G05F 3/205; for static stores G11C 5/145, G11C 16/06; charge pumping structures for internal polarisation H01L 27/0222)~~}
U	H02M 3/22	・with intermediate conversion into ac
U	H02M 3/34	・・by dynamic converters
U	H02M 3/38	・・・using mechanical contact-making and -breaking parts to interrupt a single potential
M	H02M 3/42	・・・・with electromagnetically-operated vibrating contacts, e.g. chopper ~~(self-interrupters in general H01H 51/34)~~
U	**H02M 5/00**	**Conversion of ac power input into ac power output, e.g. for change of voltage, for change of frequency, for change of number of phases**
U	H02M 5/02	・without intermediate conversion into dc
U	H02M 5/04	・・by static converters (controlling transformers, reactors or choke coils, e.g. by tap changing H02P 13/00)
U	H02M 5/22	・・・using discharge tubes with control electrode or semiconductor devices with control electrode
M	H02M 5/25	・・・・using devices of a thyratron or thyristor type requiring extinguishing means ~~({H02M 5/225}, H02M 5/27 take precedence)~~
M	H02M 5/275	・・・・using devices of a triode or transistor type requiring continuous application of a control signal ~~({H02M 5/225}, H02M 5/297 take precedence)~~
U	**H02M 7/00**	**Conversion of ac power input into dc power output; Conversion of dc power input into ac power output**
U	H02M 7/02	・Conversion of ac power input into dc power output without possibility of reversal
U	H02M 7/30	・・by dynamic converters
U	H02M 7/32	・・・using mechanical contact-making and -breaking parts
M	H02M 7/36	・・・・with electromagnetically-operated vibrating contacts, e.g. chopper ~~(self-interrupters in general H01H 51/34)~~
U	H02M 7/42	・Conversion of dc power input into ac power output without possibility of reversal
U	H02M 7/54	・・by dynamic converters
U	H02M 7/58	・・・using mechanical contact-making and -breaking parts to interrupt a single potential
M	H02M 7/62	・・・・with electromagnetically-operated vibrating contacts, e.g. chopper ~~(self-interrupters in general H01H 51/34)~~
U	H02M 7/66	・with possibility of reversal
U	H02M 7/68	・・by static converters
U	H02M 7/72	・・・using discharge tubes with control electrode or semiconductor devices with control electrode

M	H02M 7/75	· · · ·using devices of a thyratron or thyristor type requiring extinguishing means ~~(H02M 7/77 takes precedence)~~
M	H02M 7/79	· · · ·using devices of a triode or transistor type requiring continuous application of a control signal ~~(H02M 7/81 takes precedence)~~
U	H02M 7/86	· ·by dynamic converters
U	H02M 7/90	· · ·using mechanical contact-making and -breaking parts to interrupt a single potential
M	H02M 7/95	· · · ·with electromagnetically-operated vibrating contacts, e.g. chopper ~~(self-interrupters in general H01H 51/34)~~