EUROPEAN PATENT OFFICE
U.S. PATENT AND TRADEMARK OFFICE

CPC NOTICE OF CHANGES 451

DATE: JANUARY 1. 2018

PROJECT MP0270

The following classification changes will be effected by this Notice of Changes:

Action	Subclass	Group(s)
Title wording change:	F16C	2202/34
	F17C	2270/0527
	G01N	2223/608
	G01R	27/00, 33/1238
	G11B	5/3159
	G11C	11/44, 19/32
	H01J	37/1416
	H01L	21/32058, 21/76891
	H01Q	1/364
	H02H	7/001, 9/023
	H03B	15/00
	H04Q	2213/304
Modified Definitions:	F17C	2270/0527, 2270/0536
	G01R	27/00, 33/1246
	G11C	11/44
	H03B	15/00

No other subclasses/groups are impacted by this Notice of Changes.

This Notice of Changes includes the following *[Check the ones included]:*

1. CLASSIFICATION SCHEME CHANGES
    ☒ A. New, Modified or Deleted Group(s)

    ☐ B. New, Modified or Deleted Warning Notice(s)

    ☐ C. New, Modified or Deleted Note(s)

    ☐ D. New, Modified or Deleted Guidance Heading(s)

2. DEFINITIONS (New or Modified)
    ☒ A. DEFINITIONS (Full definition template)

    ☒ B. DEFINITIONS (Definitions Quick Fix)

3. ☐ REVISION CONCORDANCE LIST (RCL)

4. ☐ CHANGES TO THE CPC-TO-IPC CONCORDANCE LIST (CICL)

5. ☐ CROSS-REFERENCE LIST (CRL)

CPC Form – v.4

1. CLASSIFICATION SCHEME CHANGES

   A. New, Modified or Deleted Group(s)

SUBCLASS F16C - SHAFTS; FLEXIBLE SHAFTS; ELEMENTS OR CRANKSHAFT MECHANISMS; ROTARY BODIES OTHER THAN GEARING ELEMENTS; BEARINGS

Type*	Symbol	Indent Level Number of dots (e.g. 0, 1, 2)	Title (new or modified) "CPC only" text should normally be enclosed in {curly brackets}**	Transferred to#
M	F16C2202/34	3	Superconductivity	

SUBCLASS F17C - VESSELS FOR CONTAINING OR STORING COMPRESSED, LIQUEFIED OR SOLIDIFIED GASES; FIXED-CAPACITY GAS-HOLDERS; FILLING VESSELS WITH, OR DISCHARGING FROM VESSELS, COMPRESSED, LIQUEFIED, OR SOLIDIFIED GASES (storing fluids in natural or artificial cavities or chambers in the earth B65G 5/00; construction or assembling of bulk storage containers employing civil-engineering techniques E04H 7/00; variable-capacity gas-holders F17B; liquefaction or refrigeration machines, plants, or systems F25)

Type*	Symbol	Indent Level Number of dots (e.g. 0, 1, 2)	Title (new or modified) "CPC only" text should normally be enclosed in {curly brackets}**	Transferred to#
M	F17C2270/0527	2	Superconductors	

SUBCLASS G01N - INVESTIGATING OR ANALYSING MATERIALS BY DETERMINING THEIR CHEMICAL OR PHYSICAL PROPERTIES (separating components of materials in general B01D, B01J, B03, B07; apparatus fully provided for in a single other subclass, see the relevant subclass, e.g. B01L; measuring or testing processes other than immunoassay, involving enzymes or micro-organisms C12M, C12Q; investigation of foundation soil in situ E02D 1/00; sensing humidity changes for compensating measurements of other variables or for compensating readings of instruments for variations in humidity, see G01D or the relevant subclass for the variable measured; testing or determining the properties of structures G01M; measuring or investigating electric or magnetic properties of materials G01R; systems or methods in general, using reception or emission of radiowaves or other waves and based on propagation effects, e.g. Doppler effect, propagation time, direction of propagation, G01S; determining sensivity, graininess, or density of photographic materials G03C 5/02; testing component parts of nuclear reactors G21C 17/00; {controlling or regulating non-electric variables G05D; measuring degree of ionisation of ionised gases, i.e. plasma H05H 1/0006; testing electrographic developer properties G03G 15/0848})

Type*	Symbol	Indent Level Number of dots (e.g. 0, 1, 2)	Title (new or modified) "CPC only" text should normally be enclosed in {curly brackets}**	Transferred to#
M	G01N2223/608	2	superconductors	

SUBCLASS G01R - MEASURING ELECTRIC VARIABLES; MEASURING MAGNETIC VARIABLES (measuring physical variables of any kind by conversion into electric variables, see Note (4) following the title of class G01; measuring diffusion of ions in an electric field, e.g. electrophoresis, electro-osmosis G01N; investigating non-electric or non-magnetic properties of materials by using electric or magnetic methods G01N; indicating correct tuning of resonant circuits H03J 3/12; monitoring electronic pulse counters H03K 21/40; monitoring operation of communication systems H04)

Type*	Symbol	Indent Level Number of dots (e.g. 0, 1, 2)	Title (new or modified) "CPC only" text should normally be enclosed in {curly brackets}**	Transferred to#
M	G01R27/00	0	Arrangements for measuring resistance, reactance, impedance, or electric characteristics derived therefrom {(measuring superconductive properties G01R 33/1238)}	
M	G01R33/1238	2	{Measuring superconductive properties}	

SUBCLASS G11B - INFORMATION STORAGE BASED ON RELATIVE MOVEMENT BETWEEN RECORD CARRIER AND TRANSDUCER ({producing carriers of sound records for needle playback B29C 39/00 } ; recording measured values in a way that does not require playback through a transducer G01D; photosensitive materials or processes for photographic purposes G03C; electrography, electrophotography, magnetography G03G; recording or playback apparatus using mechanically marked tape, e.g. punched paper tape, or using unit records, e.g. punched or magnetically marked cards, G06K; transferring data from one type of record carrier to another G06K 1/18; printing of data from record carriers G06K 3/00; arrangements for producing a permanent visual presentation of the output data G06K 15/00; arrangements or circuits for control of indicating devices using static means to present variable information G09G; coding, decoding or code conversion, in general H03M; circuits for coupling output of reproducer to radio receiver H04B 1/20; circuits {or arrangements } specially adapted for {pictorial or } television signal recording {H04N 1/21 } , H04N 5/76, H04N 9/79; loudspeakers, microphones, gramophone pick-ups or like acoustic electromechanical transducers or circuits therefor H04R)

Type*	Symbol	Indent Level Number of dots (e.g. 0, 1, 2)	Title (new or modified) "CPC only" text should normally be enclosed in {curly brackets}**	Transferred to[#]
M	G11B5/3159	6	{superconductive layers}	

SUBCLASS 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)

Type*	Symbol	Indent Level Number of dots (e.g. 0, 1, 2)	Title (new or modified) "CPC only" text should normally be enclosed in {curly brackets}**	Transferred to[#]
M	G11C11/44	2	using superconductive elements, e.g. cryotron	
M	G11C19/32	1	using superconductive elements	

SUBCLASS H01J - ELECTRIC DISCHARGE TUBES OR DISCHARGE LAMPS (spark-gaps H01T; arc lamps with consumable electrodes H05B; particle accelerators H05H)

Type*	Symbol	Indent Level Number of dots (e.g. 0, 1, 2)	Title (new or modified) "CPC only" text should normally be enclosed in {curly brackets}**	Transferred to[#]
M	H01J37/1416	6	{with superconducting coils}	

CPC Form – v.4

SUBCLASS H01L - SEMICONDUCTOR DEVICES; ELECTRIC SOLID STATE DEVICES NOT OTHERWISE PROVIDED FOR (use of semiconductor devices for measuring G01; resistors in general H01C; magnets, inductors {in general} , transformers H01F; capacitors in general H01G; electrolytic devices H01G 9/00; batteries, accumulators H01M; waveguides, resonators or lines of the waveguide type H01P; line connectors, current collectors H01R; stimulated emission devices H01S; electromechanical resonators H03H; loudspeakers, microphones, gramophone pick-ups or like acoustic electromechanical transducers H04R; electric light sources in general H05B; printed circuits, hybrid circuits, casings or constructional details of electric apparatus, manufacture of assemblages of electrical components H05K; use of semiconductor devices in circuits having a particular application, see the subclass for the application)

Type*	Symbol	Indent Level Number of dots (e.g. 0, 1, 2)	Title (new or modified) "CPC only" text should normally be enclosed in {curly brackets}**	Transferred to#
M	H01L21/32058	7	{Deposition of superconductive layers}	
M	H01L21/76891	6	{by using superconducting materials}	

SUBCLASS H01Q - AERIALS (microwave radiators for near-field therepeutic treatment A61N 5/04; apparatus for testing aerials or for measuring aerial characteristics G01R; waveguides H01P; radiators or aerials for microwave heating H05B 6/72)

Type*	Symbol	Indent Level Number of dots (e.g. 0, 1, 2)	Title (new or modified) "CPC only" text should normally be enclosed in {curly brackets}**	Transferred to#
M	H01Q1/364	2	{using a particular conducting material, e.g. superconductor}	

SUBCLASS H02H - EMERGENCY PROTECTIVE CIRCUIT ARRANGEMENTS (indicating or signalling undesired working conditions G01R, e.g. G01R 31/00, G08B; locating faults along lines G01R 31/08; emergency protective devices H01H)

Type*	Symbol	Indent Level Number of dots (e.g. 0, 1, 2)	Title (new or modified) "CPC only" text should normally be enclosed in {curly brackets}**	Transferred to#
M	H02H7/001	1	{for superconducting apparatus, e.g. coils, lines, machines}	
M	H02H9/023	2	{Current limitation using superconducting elements}	

SUBCLASS H03B - GENERATION OF OSCILLATIONS, DIRECTLY OR BY FREQUENCY-CHANGING, BY CIRCUITS EMPLOYING ACTIVE ELEMENTS WHICH OPERATE IN A NON-SWITCHING MANNER; GENERATION OF NOISE BY SUCH CIRCUITS (measuring, testing G01R; generators adapted for electrophonic musical instruments G10H; Speech synthesis G10L; masers, lasers H01S; dynamo-electric machines H02K; power inverter circuits H02M; by using pulse techniques H03K; automatic control of generators H03L; starting, synchronisation or stabilisation of generators where the type of generator is irrelevant or unspecified H03L; generation of oscillations in plasma H05H)

Type*	Symbol	Indent Level Number of dots (e.g. 0, 1, 2)	Title (new or modified) "CPC only" text should normally be enclosed in {curly brackets}**	Transferred to#
M	H03B15/00	0	Generation of oscillations using galvano-magnetic devices, e.g. Hall-effect devices, or using superconductivity effects	

SUBCLASS H04Q - SELECTING (switches, relays, selectors H01H; electronic switches H03K 17/00)

Type*	Symbol	Indent Level Number of dots (e.g. 0, 1, 2)	Title (new or modified) "CPC only" text should normally be enclosed in {curly brackets}**	Transferred to#
M	H04Q2213/304	1	Superconductors; thermistors; varistors	

*N = new entries where reclassification into entries is involved; C = entries with modified file scope where reclassification of documents from the entries is involved; Q = new entries which are firstly populated with documents via administrative transfers from deleted (D) entries. Afterwards, the transferred documents into the Q entry will either stay or be moved to more appropriate entries, as determined by intellectual reclassification; E= existing entries with enlarged file scope, which receive documents from C or D entries, e.g. when a limiting reference is removed from the entry title; M = entries with no change to the file scope (no reclassification); D = deleted entries; F = frozen entries will be deleted once reclassification of documents from the entries is completed; U = entries that are unchanged.

NOTES:
- **No {curly brackets} are used for titles in CPC only subclasses, e.g. C12Y, A23Y; 2000 series symbol titles of groups found at the end of schemes (orthogonal codes); or the Y section titles. The {curly brackets} are used for 2000 series symbol titles found interspersed throughout the main trunk schemes (breakdown codes).
- For U groups, the minimum requirement is to include the U group located immediately prior to the N group or N group array, in order to show the N group hierarchy and improve the readability and understanding of the scheme. Always include the symbol, indent level and title of the U group in the table above.
- All entry types should be included in the scheme changes table above for better understanding of the overall scheme change picture. Symbol, indent level, and title are required for all types except "D" which requires only a symbol.

CPC Form – v.4

- #"Transferred to" column <u>must</u> be completed for all C, D, F, and Q type entries. F groups will be deleted once reclassification is completed.
- When multiple symbols are included in the "Transferred to" column, avoid using ranges of symbols in order to be as precise as possible.
- For administrative transfer of documents, the following text should be used: "< administrative transfer to XX>" or "<administrative transfer to XX and YY simultaneously>" when administrative transfer of the same documents is to more than one place.
- Administrative transfer to main trunk groups is assumed to be "invention information", unless otherwise indicated, and to 2000 series groups is assumed to be "additional information".

2. A. DEFINITIONS (modified)

G01R 27/00

Relationships with other classification places

Delete: The existing **Relationships with other …** paragraph.

The use of such measurements is classified in the appropriate classes for the application.

Replace with: The following new paragraph:

The use of such measurements is classified in the appropriate application places.

References

Limiting references

Insert: The following new row in the **Limiting** references:

This place does not cover:

Measuring superconductive properties	G01R 33/1238

Delete: All of the previously existing rows in the **Limiting references** table.

Insert: The following <u>new</u> **Application-oriented** references section.

Application-oriented references

Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Measuring contours by electric means	G01B 7/28
Flow measurements	G01F 1/00
Temperature measurements	G01K 7/00
Pressure/ Force measurements	G01L 7/00
Analysing materials by investigating resistance	G01N 27/04
Analysing materials by investigating capacitance	G01N 27/22
Acceleration measurements	G01P 15/00

Insert: The following <u>new</u> **Informative** references section.

Informative references

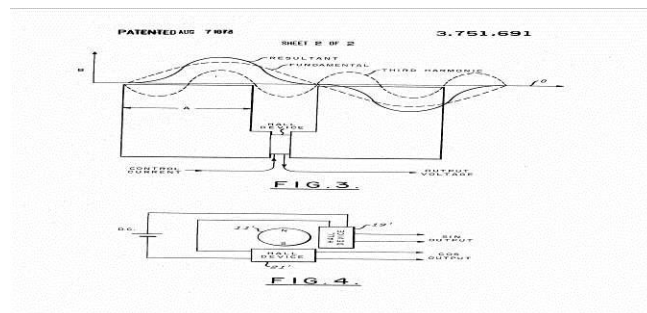*Attention is drawn to the following places, which may be of interest for search:*

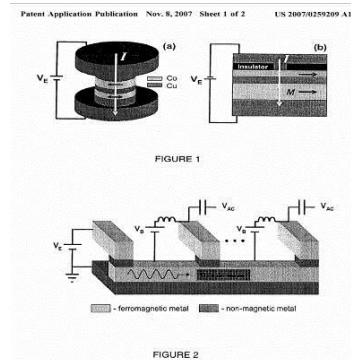|	
Sensors using a resistive element	G01R 5/16
Sensors using an inductive element	G01R 5/20
Sensors using a capacitive element	G01D 5/24

H03B 15/00

Definition statement

Delete: The <u>existing</u> images, text and the following paragraphs from the **Definition statement**.

Examples:

US3751691, R. Ellis
H03B15/01: Oscillator using Hall effect devices.

US2007259209, A. Slavin
H03B15/02: Oscillator using spin-polarizing effect based on giant magneto resistance

References

Limiting references

Delete: The <u>entire</u> **Limiting references** section.

Informative references

Insert: The following new rows in the **Informative references** table:

Measuring magnetic variables	G01R 33/00
Magnetic memory devices	G11C 11/00
Thin magnetic films without application as an oscillator	H01F 10/00

2. B. DEFINITIONS QUICK FIX

Symbol	Location of change	Existing reference symbol or text	Action; New symbol; New text
F17C 2270/0527	Definition statement	Storage or transport or transfer in the supra-conductor industry.	Replace with: Storage or transport or transfer in the superconductor industry.
F17C 2270/0536	Definition statement	Storage or transport or transfer in the supra-conductor industry related to MRI (Magnetic Resonance Imaging).	Replace with: Storage or transport or transfer in the superconductor industry related to MRI (Magnetic Resonance Imaging).
G01R 33/1246	Definition statement	Investigation of magnetic properties and critical current of super-conductors is classified.	Replace with: Investigation of magnetic properties and critical current of superconductors is classified.
G11C 11/44	Definition statement	Memories using super-conductive elements like squids.	Replace with: Memories using superconductive elements like squids.

NOTES:
- The table above is used for corrections or modifications to existing definitions, e.g. delete an entire definition or part thereof; propose new wording or modify wording of a section, change the symbol the definition is associated with, change or delete a reference symbol, etc.
- Do not delete (F) symbol definitions.