EUROPEAN PATENT OFFICE
U.S. PATENT AND TRADEMARK OFFICE

CPC NOTICE OF CHANGES 639

DATE: JANUARY 1, 2019

PROJECT RP0542

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

Action	**Subclass**	**Group(s)**
SCHEME:		
Notes Modified:	B61	Class
	F	Section
Guidance Headings Modified:	F16C	17/00
	F16C	29/00

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(s)
   - ☒ C. New, Modified or Deleted Note(s)
   - ☒ D. New, Modified or Deleted Guidance Heading(s)
2. DEFINITIONS
   - ☐ A. New or Modified Definitions (Full definition template)
   - ☐ B. Modified or Deleted Definitions (Definitions Quick Fix)
3. ☐ REVISION CONCORDANCE LIST (RCL)
4. ☐ CHANGES TO THE CPC-TO-IPC CONCORDANCE LIST (CICL)
5. ☐ CHANGES TO THE CROSS-REFERENCE LIST (CRL)

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1. CLASSIFICATION SCHEME CHANGES

C. New, Modified or Deleted Note(s)

CLASS B61 – RAILWAYS

Type*	**Location**	**Old Note**	**New/Modified Note**
M	B61	In this class, the following expression is used with the meaning indicated: - "railway systems" covers: a. systems in which trains or individual passenger vehicles or load carriers run on or are guided by ground or elevated tracks defined by rails, ropes, cables, or other guiding elements for wheels, rollers, or sliding anti-friction devices (load carriers permanently attached to a continuous traction element B65G17/00); b. systems in which carriers or impellers for persons or loads are attached to, e.g. suspended from, a guided traction rope or cable which determines their path of movement (chain conveyors, scraper conveyors B65G17/00, B65G19/00); c. power and free systems of either of the above types in which vehicles, load carriers or loads may be selectively	In this class, the following expression is used with the meaning indicated: • "railway systems" covers: a. systems in which trains or individual passenger vehicles or load carriers run on, or are guided by, ground or elevated tracks defined by rails, ropes, cables, or other guiding elements for wheels, rollers, or sliding anti-friction devices; b. systems in which carriers or impellers for persons or loads are attached to, e.g. suspended from, a guided traction rope or cable which determines their path of movement; c. power-and-free systems of either of the above types in which vehicles, load-carriers , or loads may be selectively coupled to, or uncoupled from, continuous traction members, e.g. cables, chains; • "railway systems" does not cover:

Type*	Location	Old Note	New/Modified Note
		coupled to, or uncoupled from, continuous traction members, e.g. cables, chains	a. conveyors with load-carriers permanently attached to a continuous traction element, e.g. chain conveyors, which are covered by group B65G 17/00; b. conveyors moving articles or materials over a supporting surface or underlying material, e.g. scraper conveyors, which are covered by group B65G 19/00.

Section F – MECHANICAL ENGINEERING; LIGHTING; HEATING; WEAPONS; BLASTING

Type*	Location	Old Note	New/Modified Note
M	F	Guide to the use of this subsection (classes F01-F04) The following notes are meant to assist in the use of this part of the classification scheme. 1. In this subsection, subclasses or groups designating "engines" or "pumps" cover methods of operating the same, unless otherwise specifically provided for. 2.In this subsection, the following terms or expressions are used with the meanings indicated: • "engine" means a device for continuously converting fluid energy into mechanical power. Thus this term includes, for example, steam piston engines or steam turbines, PER SE, or	Guide to the use of this subsection, i.e. classes F01-F04 The following notes are meant to assist in the use of this part of the classification scheme. 1. In this subsection, subclasses or groups designating "engines" or "pumps" cover methods of operating the same, unless otherwise specifically provided for. 2. In this subsection, the following terms or expressions are used with the meanings indicated: • "engine" means a device for continuously converting fluid energy into mechanical power. Thus, this term includes, for example, steam piston engines or steam turbines, per se, or internal-

Type*	Location	Old Note	New/Modified Note
		internal-combustion piston engines, but it excludes single- stroke devices. "Engine" also includes the fluid-motive portion of a meter unless such portion is particularly adapted for use in a meter; • "pump" means a device for continuously raising, forcing, compressing, or exhausting fluid by mechanical or other means; thus this term includes fans or blowers; • "machine" means a device which could equally be an engine and a pump, and not a device which is restricted to an engine or one which is restricted to a pump; • "positive displacement" means the way the energy of a working fluid is transformed into mechanical energy, in which variations of volume created by the working fluid in a working chamber produce equivalent displacements of the mechanical member transmitting the energy, the dynamic effect of the fluid being of minor importance; and VICE VERSA; • "non-positive displacement" means the way the energy of a working fluid is transformed into mechanical energy, by transformation of the energy of the working fluid into	combustion piston engines, but it excludes single-stroke devices. "Engine" also includes the fluid-motive portion of a meter unless such portion is particularly adapted for use in a meter; • "pump" means a device for continuously raising, forcing, compressing, or exhausting fluid by mechanical or other means. Thus, this term includes fans or blowers; • "machine" means a device which could equally be an engine and a pump, and not a device which is restricted to an engine or one which is restricted to a pump; • "positive displacement" means the way the energy of a working fluid is transformed into mechanical energy, in which variations of volume created by the working fluid in a working chamber produce equivalent displacements of the mechanical member transmitting the energy, the dynamic effect of the fluid being of minor importance, and vice versa; • "non-positive displacement" means the way the energy of a working fluid is transformed into mechanical energy, by transformation of the energy of the working fluid into kinetic energy, and vice versa;

Type*	Location	Old Note	New/Modified Note
		kinetic energy; and VICE VERSA; • "oscillating-piston machine" means a positive-displacement machine in which a fluid-engaging work-transmitting member oscillates. This definition applies also to engines and pumps; • "rotary-piston machine" means a positive-displacement machine in which a fluid-engaging work-transmitting member rotates about a fixed axis or about an axis moving along a circular or similar orbit. This definition applies also to engines and pumps; • "rotary piston" means the work-transmitting member of a rotary-piston machine and may be of any suitable form, e.g. like a toothed gear; • "co-operating members" means the "oscillating piston" or "rotary piston" and another member, e.g. the working-chamber wall, which assists in the driving or pumping action; • "movement of the co-operating members" is to be interpreted as relative, so that one of the "co-operating members" may be stationary, even though reference may be made to its rotational axis, or both may move;	• "oscillating-piston machine" means a positive-displacement machine in which a fluid-engaging work-transmitting member oscillates. This definition applies also to engines and pumps; • "rotary-piston machine" means a positive-displacement machine in which a fluid-engaging work-transmitting member rotates about a fixed axis or about an axis moving along a circular or similar orbit. This definition applies also to engines and pumps; • "rotary piston" means the work-transmitting member of a rotary-piston machine and may be of any suitable form, e.g., like a toothed gear; • "cooperating members" means the "oscillating piston" or "rotary piston" and another member, e.g., the working-chamber wall, which assists in the driving or pumping action; • "movement of the co-operating members" is to be interpreted as relative, so that one of the "co-operating members" may be stationary, even though reference may be made to its rotational axis, or both may move; • "teeth or tooth equivalents" include lobes, projections or abutments; • "internal-axis type" means that the rotational axes of the

Type*	Location	Old Note	New/Modified Note
		• "teeth or tooth-equivalents", include lobes, projections or abutments; • "internal-axis type" means that the rotational axes of the inner and outer co-operating members remain at all times within the outer member, e.g. in a similar manner to that of a pinion meshing with the internal teeth of a ring gear; • "free-piston" means a piston of which the length of stroke is not defined by any member driven thereby; • "cylinders" means positive-displacement working chambers in general and thus this term is not restricted to cylinders of circular cross-section; • "main shaft" means the shaft which converts reciprocating piston motion into rotary motion or VICE VERSA; • "plant" means an engine together with such additional apparatus as is necessary to run the engine. For example, a steam engine plant includes a steam engine and means for generating the steam; • "working fluid" means the driven fluid in a pump and the driving fluid in an engine. The working fluid may be in a gaseous state, i.e. compressible, or liquid. In the former case	inner and outer co-operating members remain at all times within the outer member, e.g., in a similar manner to that of a pinion meshing with the internal teeth of a ring gear; • "free piston" means a piston of which the length of stroke is not defined by any member driven thereby; • "cylinders" means positive-displacement working chambers in general. Thus, this term is not restricted to cylinders of circular cross-section; • "main shaft" means the shaft which converts reciprocating piston motion into rotary motion or <u>vice versa</u>; • "plant" means an engine together with such additional apparatus as is necessary to run the engine. For example, a steam engine plant includes a steam engine and means for generating the steam; • "working fluid" means the driven fluid in a pump or the driving fluid in an engine. The working fluid can be in a compressible, gaseous state, called elastic fluid, e.g. steam; in a liquid state; or in a state where there is coexistence of an elastic fluid and liquid phase. • "steam" includes condensable vapours in general, and "special vapour"

Type*	Location	Old Note	New/Modified Note
		coexistence of two states is possible; • "steam" includes condensable vapours in general, and "special vapour" is used when steam is excluded; • "reaction type" as applied to non-positive-displacement machines or engines means machines or engines in which pressure/velocity transformation takes place wholly or partly in the rotor; machines or engines with no, or only slight, pressure/velocity transformation in the rotor are called "impulse type". 3.In this subsection: • cyclically operating valves, lubricating, gas-flow silencers or exhaust apparatus, or cooling should be classified in subclasses F01L, F01M, F01N, F01P irrespective of their stated application, unless their classifying features are peculiar to their application, in which case they should be classified only in the relevant subclass of classes F01 - F04; • lubricating, gas-flow silencers or exhaust apparatus, or cooling of machines or engines should be classified in subclasses F01M, F01N, F01P except for those peculiar to steam	is used when steam is excluded; • "reaction type" as applied to non-positive-displacement machines or engines means machines or engines in which pressure/velocity transformation takes place wholly or partly in the rotor. Machines or engines with no, or only slight, pressure/velocity transformation in the rotor are called "impulse type". 3. In this subsection: • cyclically operating valves, lubricating, gas-flow silencers or exhaust apparatus, or cooling are classified in subclasses F01L, F01M, F01N, F01P irrespective of their stated application, unless their classifying features are peculiar to their application, in which case they are classified only in the relevant subclass of classes F01-F04; • lubricating, gas-flow silencers or exhaust apparatus, or cooling of machines or engines are classified in subclasses F01M, F01N, F01P except for those peculiar to steam engines which are classified in subclass F01B. 4. For use of this subsection with a good understanding, it is essential to remember, so far as subclasses F01B,

Type*	Location	Old Note	New/Modified Note
		engines which should be classified in subclass F01B. 4.For use of this subsection with a good understanding, it is essential to remember, so far as subclasses F01B, F01C, F01D, F03B, F04B, F04C and F04D, which form its skeleton, are concerned: • the principle which resides in their elaboration • the classifying characteristics which they call for, and • their complementarityi. Principle This concerns essentially the subclasses listed above. Other subclasses, notably those of class F02, which cover better-defined matter, are not considered here. Each subclass covers fundamentally a genus of apparatus (engine or pump) and by extension covers equally "machines" of the same kind. Two different subjects, one having a more general character than the other, are thus covered by in the same subclass Subclasses F01B, F03B, F04B, beyond the two subjects which they cover, have further a character of generality in relation to other subclasses concerning the different species of apparatus in the genus concerned.	F01C, F01D, F03B, and F04B, F04C, F04D, which form its skeleton, are concerned: • the principle which resides in their elaboration, • the classifying characteristics which they call for, and • their complementarity. i. Principle This concerns essentially the subclasses listed above. Other subclasses, notably those of class F02, which cover better-defined matter, are not considered here. Each subclass covers fundamentally a genus of apparatus (engine or pump) and by extension covers equally "machines" of the same kind. Two different subjects, one having a more general character than the other, are thus covered by the same subclass. Subclasses F01B, F03B, F04B, beyond the two subjects which they cover, have further a character of generality in relation to other subclasses concerning the different species of apparatus in the genus concerned. This generality applies as well for the two subjects dealt with, without these always being in relation to the same subclasses. Thus, subclass F03B, in its part dealing with "machines", should be

Type*	Location	Old Note	New/Modified Note
		This generality applies as well for the two subjects dealt with, without these always being in relation to the same subclasses. Thus, subclass F03B, in its part dealing with "machines" should be considered as being the general class relating to subclasses F04B, F04C and in its part dealing with "engines" as being general in relation to subclass F03C. ii. Characteristics a. The principal classifying characteristic of the subclass is that of genera of apparatus, of which there are three possible: Machines; engines; pumps. b.A s stated above, "machines" are always associated with one of the other two genera. These main genera are subdivided according to the general principles of operation of the apparatus: Positive displacement; non-positive displacement. c. The positive displacement apparatus are further subdivided according to the ways of putting into effect the principle of operation, that is, to the kind of apparatus: Simple reciprocating piston; rotary or oscillating piston; other kind. d. Another classifying characteristic is that of the	considered as being the general class relating to subclasses F04B, F04C, and in its part dealing with "engines" as being general in relation to subclass F03C. ii. Characteristics a. The principal classifying characteristic of the subclass is that of genera of apparatus, of which there are three possible: Machines; engines; pumps. b. As stated above, "machines" are always associated with one of the other two genera. These main genera are subdivided according to the general principles of operation of the apparatus: Positive displacement; non-positive displacement. c. The positive displacement apparatus are further subdivided according to the ways of putting into effect the principle of operation, that is, to the kind of apparatus: Simple reciprocating piston; rotary or oscillating piston; other kind. d. Another classifying characteristic is that of the working fluid, in respect of which three kinds of apparatus are possible, namely: Liquid and elastic fluid; elastic fluid; liquid. iii. Complementarity This resides in association of pairs of the subclasses listed

Type*	Location	Old Note	New/Modified Note
		working fluid, in respect of which three kinds of apparatus are possible, namely: Liquid and elastic fluid; elastic fluid; liquid. iii. Complementarity This resides in association of pairs of the subclasses listed above, according to the characteristics under consideration in respect of kind of apparatus or working fluid. The subclasses concerned with the various principles, characteristics and complementarity are shown in the following table: […]	above, according to the characteristics under consideration in respect of kind of apparatus or working fluid. The subclasses concerned with the various principles, characteristics and complementarity are shown in the following table : […]

*N = new note, M = modified note, D = deleted note

NOTE: The "Location" column only requires the symbol PRIOR to the location of the note. No further directions such as "before" or "after" are required.

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

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

Type*	Location	Old Guidance Heading	New/Modified Guidance Heading
M	F16C 17/00	Bearings for rotary parts (F16C9/00, F16C13/02 take precedence; allowing for linear movement also F16C31/00)	Bearings for rotary parts
M	F16C 29/00	Other bearings {(for bridges E01D19/04)}	{Other bearings}

*N = new guidance heading, M =modified guidance heading, D = deleted guidance heading

NOTES:

- The "Location" column requires the symbol AFTER the guidance heading location. No further directions such as "before" or "after" are required.
- In cases where there may be confusion as to whether a new group falls within the scope of a guidance heading, indicate the guidance heading and whether the group does or does not go with the guidance heading. This can be included in the "Location" column. For example, the guidance heading "Compounds containing carbon together with sulfur, selenium or tellurium with or without hydrogen, halogens, oxygen or nitrogen" encompasses groups C07C 301/00-395/00 only. If a new group C07C 398/00 is proposed and is included in the guidance heading scope, indicate this in the "Location" column as follows: 398/00 to be included under the guidance heading: "Compounds containing carbon together with sulfur, selenium or tellurium with or without hydrogen, halogens, oxygen or nitrogen."