

# CPC COOPERATIVE PATENT CLASSIFICATION

## G PHYSICS (NOTES omitted)

### INSTRUMENTS

#### G05 CONTROLLING; REGULATING (NOTES omitted)

#### G05G CONTROL DEVICES OR SYSTEMS INsofar AS CHARACTERISED BY MECHANICAL FEATURES ONLY ("Bowden" or like mechanisms [F16C 1/10](#); gearings or mechanisms not peculiar to this purpose [F16H](#); speed changing or reversing mechanisms for gearings conveying rotary motion [F16H 59/00](#) - [F16H 63/00](#))

##### NOTES

- This subclass covers:
  - members of general applicability for mechanical control;
  - mechanical systems for moving members to one or more definite settings.
- Systems peculiar to the control of particular machines or apparatus provided for in a single other class are classified in the relevant class for such machines or apparatus.

##### 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.

1/00	<b>Controlling members, e.g. knobs or handles; Assemblies or arrangements thereof; Indicating position of controlling members</b> ( <a href="#">{means for preventing, limiting or returning the movements of parts of a control mechanism G05G 5/00; providing feel, e.g. means to create a counterforce G05G 5/03; specially adapted for programme control G05G 21/00; vibration damping G05G 25/02;} joysticks G05G 9/04; steering wheels for motor vehicles B62D</a> )	1/08	. Controlling members for hand actuation by rotary movement, e.g. hand wheels
		1/082	. . <a href="#">{having safety devices, e.g. means for disengaging the control member from the actuated member}</a>
		1/085	. . <a href="#">{Crank handles (G05G 1/082 takes precedence)}</a>
		1/087	. . <a href="#">{retractable; Flush control knobs}</a>
		1/10	. . Details, e.g. of discs, knobs, wheels or handles <a href="#">{(G05G 1/085 takes precedence)}</a>
		1/105	. . . <a href="#">{comprising arrangements for illumination}</a>
		1/12	. . . Means for securing the members on rotatable spindles or the like
		1/30	. Controlling members actuated by foot
		1/305	. . <a href="#">{Compound pedal co-operating with two or more controlled members}</a>
		1/32	. . with means to prevent injury
		1/323	. . . means disconnecting the connection between pedal and controlled member, e.g. by breaking or bending the connecting rod
		1/327	. . . means disconnecting the pedal from its hinge or support, e.g. by breaking or bending the support
		1/34	. . Double foot controls, e.g. for instruction vehicles
		1/36	. . Mounting units comprising an assembly of two or more pedals, e.g. for facilitating mounting
		1/38	. . comprising means to continuously detect pedal position
		1/40	. . adjustable
		1/405	. . . infinitely adjustable
		1/42	. . non-pivoting, e.g. sliding
		1/44	. . pivoting
		1/445	. . . about a central fulcrum
1/01	. Arrangements of two or more controlling members with respect to one another ( <a href="#">double foot control, e.g. for instruction vehicles G05G 1/34; mounting units comprising an assembly with two or more pedals G05G 1/36</a> )		
1/015	. Arrangements for indicating the position of a controlling member ( <a href="#">means for continuously detecting pedal position G05G 1/38; means for detecting position through tactile feedback G05G 5/03</a> )		
1/02	. Controlling members for hand actuation by linear movement, e.g. push buttons		
1/025	. . <a href="#">{actuated by sliding movement}</a>		
1/04	. Controlling members for hand actuation by pivoting movement, e.g. levers		
1/06	. . Details of their grip parts ( <a href="#">G05G 1/10 takes precedence</a> )		

- 1/46 . . Means, e.g. links, for connecting the pedal to the controlled unit
- 1/48 . . Non-slip pedal treads; Pedal extensions or attachments characterised by mechanical features only
- 1/483 . . . Non-slip treads; Pedal extensions or attachments characterised by mechanical features only
- 1/487 . . . Pedal extensions
- 1/50 . . Manufacturing of pedals; Pedals characterised by the material used
- 1/503 . . . {Controlling members for hand-actuation}
- 1/506 . . . {Controlling members for foot-actuation}
- 1/52 . . Controlling members specially adapted for actuation by other parts of the human body than hand or foot
- 1/54 . . Controlling members specially adapted for actuation by auxiliary operating members or extensions; Operating members or extensions therefor (pedal extensions)
- 1/56 . . Controlling members specially adapted for actuation by keys, screwdrivers or like tools
- 1/58 . . Rests or guides for relevant parts of the operator's body
- 1/60 . . Foot rests or foot guides
- 1/62 . . Arm rests
- 3/00** **Controlled members; Assemblies or arrangements thereof (interlocking of controlled members G05G 5/08)**
- 5/00** **Means for preventing, limiting or returning the movements of parts of a control mechanism, e.g. locking controlling member (G05G 17/00 takes precedence)**
- 5/005 . . {for preventing unintentional use of a control mechanism (G05G 5/28 takes precedence)}
- 5/02 . . Means preventing undesired movements of a controlling member which can be moved in two or more separate steps or ways, e.g. restricting to a stepwise movement or to a particular sequence of movements (G05G 5/28 takes precedence)
- 5/03 . . Means for enhancing the operator's awareness of arrival of the controlling member at a command or datum position; Providing feel, e.g. means for creating a counterforce (arrangements for indicating the position of the controlling member G05G 1/015)
- 5/04 . . Stops for limiting movement of members, e.g. adjustable stop (G05G 5/03, G05G 5/05, G05G 5/28 take precedence)
- 5/05 . . Means for returning or tending to return controlling members to an inoperative or neutral position, e.g. by providing return springs or resilient end-stops (G05G 5/28 takes precedence)
- 5/06 . . for holding members in one or a limited number of definite positions only ({G05G 5/005}, G05G 5/03, G05G 5/05, G05G 5/28 take precedence)
- 5/065 . . {using a spring-loaded ball}
- 5/08 . . Interlocking of members, e.g. locking member in a particular position before or during the movement of another member
- 5/12 . . for holding members in an indefinite number of positions, e.g. by a toothed quadrant (G05G 5/28 takes precedence)
- 5/14 . . by locking a member with respect to a fixed quadrant, rod, or the like
- 5/16 . . . by friction
- 5/18 . . . by positive interengagement, e.g. by a pawl
- 5/20 . . by locking a quadrant, rod, or the like carried by the member
- 5/22 . . . by friction
- 5/24 . . . by positive interengagement, e.g. by a pawl
- 5/26 . . by other means than a quadrant, rod, or the like
- 5/28 . . for preventing unauthorised access to the controlling member or its movement to a command position
- 7/00** **Manually-actuated control mechanisms provided with one single controlling member co-operating with one single controlled member; Details thereof (controlling members G05G 1/00)**
- 7/02 . . characterised by special provisions for conveying or converting motion, or for acting at a distance
- 7/04 . . altering the ratio of motion or force between controlling member and controlled member as a function of the position of the controlling member
- 7/06 . . in which repeated movement of the controlling member produces increments of movement of the controlled member (G05G 7/08 takes precedence)
- 7/08 . . in which repeated movement of the controlling member moves the controlling member through a cycle of distinct positions
- 7/10 . . specially adapted for remote control (G05G 7/04 - G05G 7/08 take precedence)
- 7/12 . . specially adapted for actuating a member on a system in motion with respect to the controlling member, e.g. on a rotating shaft
- 7/14 . . characterised by means for delaying initiation of, or making more gradual throughout, the movement of the controlled member in response to a given input from the controlling member, e.g. by providing lost motion in the command train
- 7/16 . . Special provisions for reducing the effect of slight relative movement between supports of the mechanism, e.g. resulting from resilient mounting of a controlled mechanism
- 9/00** **Manually-actuated control mechanisms provided with one single controlling member co-operating with two or more controlled members, e.g. selectively, simultaneously**
- 9/02 . . the controlling member being movable in different independent ways, movement in each individual way actuating one controlled member only
- 9/04 . . in which movement in two or more ways can occur simultaneously
- 9/047 . . . the controlling member being movable by hand about orthogonal axes, e.g. joysticks {(for switches H01H 25/04)}
- 2009/04703 . . . . {Mounting of controlling member}
- 2009/04707 . . . . {with ball joint}
- 2009/04711 . . . . {with substantially hemispherical bearing part forced into engagement, e.g. by a spring}
- 2009/04714 . . . . {with orthogonal axes}
- 2009/04718 . . . . {with cardan or gimbal type joint}
- 2009/04722 . . . . {elastic, e.g. flexible shaft}
- 2009/04725 . . . . {with coil spring}
- 2009/04729 . . . . {melastomeric}
- 2009/04733 . . . . {with a joint having a nutating disc, e.g. forced by a spring}
- 9/04737 . . . . {with six degrees of freedom}

2009/0474	. . . . {characterised by means converting mechanical movement into electric signals}	15/02	. due to alteration of the sense of movement of a member
2009/04744	. . . . . {Switches}	15/04	. due to distance or angle travelled by a member
2009/04748	. . . . . {Position sensor for rotary movement, e.g. potentiometer}	15/06	. due to the speed of rotation or of bodily movement of a member, e.g. passing an upper or lower limit thereof ( <a href="#">speedometers G01P</a> )
2009/04751	. . . . . {Position sensor for linear movement}		
2009/04755	. . . . . {Magnetic sensor, e.g. hall generator, pick-up coil}	15/08	. due to the load or torque on a member, e.g. if exceeding a predetermined value thereof
2009/04759	. . . . . {Light-sensitive detector, e.g. photoelectric}	<b>17/00</b>	<b>Mechanical devices for moving a member after being released; Trip or release mechanisms characterised thereby</b>
2009/04762	. . . . . {Force transducer, e.g. strain gauge}		
2009/04766	. . . . . {providing feel, e.g. indexing means, means to create counterforce}	<b>19/00</b>	<b>Servo-mechanisms with follow-up action, e.g. occurring in steps</b>
2009/0477	. . . . . {holding the member in a number of definite positions}		
2009/04774	. . . . . {with additional switches or sensors on the handle}	<b>21/00</b>	<b>Mechanical apparatus for control of a series of operations, i.e. programme control, e.g. involving a set of cams (<a href="#">G05G 5/02</a> takes precedence)</b>
2009/04777	. . . . . {with additional push or pull action on the handle}	<b>23/00</b>	<b>Means for ensuring the correct positioning of parts of control mechanisms, e.g. for taking-up play</b>
2009/04781	. . . . . {with additional rotation of the controlling member}	23/02	. self-adjusting
	<b>NOTE</b>	<b>25/00</b>	<b>Other details or appurtenances of control mechanisms, e.g. supporting intermediate members elastically</b>
	Provisional indexing codes related to scheme of trilateral project T021	25/02	. Inhibiting the generation or transmission of noise {(suppression of noise or vibrations in selector apparatus for gears <a href="#">F16H 59/0208</a> )}
9/04785	. . . . . {the controlling member being the operating part of a switch arrangement}	25/04	. Sealing against entry of dust, weather or the like {(in selector apparatus for gears, <a href="#">F16H 59/0213</a> )}
9/04788	. . . . . {comprising additional control elements}		
9/04792	. . . . . {for rotary control around the axis of the controlling member}		
9/04796	. . . . . {for rectilinear control along the axis of the controlling member}	<b>2505/00</b>	<b>Means for preventing, limiting or returning the movements of parts of a control mechanism, e.g. locking controlling member</b>
9/053	. . . . . the controlling member comprising a ball {(graph-reading using a tracing ball or mouse <a href="#">G06F 3/033</a> )}		
9/06	. the controlled members being actuated successively by repeated movement of the controlling member	<b>2700/00</b>	<b>Control mechanisms or elements therefor applying a mechanical movement</b>
9/08	. the controlled members being actuated successively by progressive movement of the controlling member {(single lever throttle and clutch control for marine engines <a href="#">B63H 21/213</a> )}	2700/02	. Means for regulating or adjusting control mechanisms, e.g. devices for automatic adjustment
9/085	. . {the controlling member acting on a set of cams or slot cams}	2700/04	. Control mechanisms limiting amplitude or adjusting datum position
9/10	. with preselection and subsequent movement of each controlled member by movement of the controlling member in two different ways, e.g. guided by a shift gate	2700/06	. . Control mechanisms for holding members in a number of positions comprising a device to limit the control range
<b>11/00</b>	<b>Manually-actuated control mechanisms provided with two or more controlling members co-operating with one single controlled member</b>	2700/08	. . Control mechanisms for locking members in one or more positions
<b>13/00</b>	<b>Manually-actuated control mechanisms provided with two or more controlling members and also two or more controlled members (<a href="#">interlocking G05G 5/08</a>)</b>	2700/10	. . Control mechanisms for locking or at least for blocking a member in one position out of a number of several positions
13/02	. with separate controlling members for preselection and shifting of controlled members	2700/12	. Control mechanisms with one controlling member and one controlled member
<b>15/00</b>	<b>Mechanical devices for initiating a movement automatically due to a specific cause</b>	2700/14	. . with one elastic element as essential part, e.g. elastic components as a part of an actuating mechanism
15/002	. {due to an abnormal functioning of the controlled apparatus (if speed is abnormal <a href="#">G05G 15/06</a> )}	2700/16	. . Mechanisms for conveying motion or signals for or in relation with control mechanisms
15/005	. {due to a dangerous situation for the operator}	2700/18	. . Systems wherein the control element may be placed in two or more positions
15/007	. {due to an exerted pressure}	2700/20	. Control mechanisms not otherwise provided for
		2700/22	. Mechanisms linking plurality of controlling or controlled members
		2700/24	. . Locking controlled members of selectively controlled mechanisms

## G05G

- 2700/26 . . with a control member moving selectively or simultaneously the controlled members
- 2700/28 . . . with a control member that is moved for preselection in another direction than for final actuating
- 2700/30 . . . without preselection or differentiation between selection and actuating, e.g. control members with a fix control sequence, after a determined advance cycle, in which the control device comprises cams actuating separately the controlled members
- 2700/32 . . with plurality of control members, e.g. preselection and actuating members actuating several controlled members