

# 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

1. This subclass covers:
  - members of general applicability for mechanical control;
  - mechanical systems for moving members to one or more definite settings.
2. 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> ({means for preventing, limiting or returning the movements of parts of a control mechanism <a href="#">G05G 5/00</a> ; providing feel, e.g. means to create a counterforce <a href="#">G05G 5/03</a> ; specially adapted for programme control <a href="#">G05G 21/00</a> ; vibration damping <a href="#">G05G 25/02</a> ;} joysticks <a href="#">G05G 9/04</a> ; steering wheels for motor vehicles <a href="#">B62D</a> )	1/08	• Controlling members for hand actuation by rotary movement, e.g. hand wheels
		1/082	• • {having safety devices, e.g. means for disengaging the control member from the actuated member}
		1/085	• • {Crank handles ( <a href="#">G05G 1/082</a> takes precedence)}
		1/087	• • {retractable; Flush control knobs}
		1/10	• • Details, e.g. of discs, knobs, wheels or handles {( <a href="#">G05G 1/085</a> takes precedence)}
		1/105	• • • {comprising arrangements for illumination}
		1/12	• • • Means for securing the members on rotatable spindles or the like
		1/30	• Controlling members actuated by foot
		1/305	• • {Compound pedal co-operating with two or more controlled members}
		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 (double foot control, e.g. for instruction vehicles <a href="#">G05G 1/34</a> ; mounting units comprising an assembly with two or more pedals <a href="#">G05G 1/36</a> )		
1/015	• Arrangements for indicating the position of a controlling member (means for continuously detecting pedal position <a href="#">G05G 1/38</a> ; means for detecting position through tactile feedback <a href="#">G05G 5/03</a> )		
1/02	• Controlling members for hand actuation by linear movement, e.g. push buttons		
1/025	• • {actuated by sliding movement}		
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</a> takes precedence)}		

1/46	• • Means, e.g. links, for connecting the pedal to the controlled unit	5/16	• • • by friction
1/48	• • Non-slip pedal treads; Pedal extensions or attachments characterised by mechanical features only	5/18	• • • by positive interengagement, e.g. by a pawl
1/483	• • • Non-slip treads; Pedal extensions or attachments characterised by mechanical features only	5/20	• • by locking a quadrant, rod, or the like carried by the member
1/487	• • • Pedal extensions	5/22	• • • by friction
1/50	• • Manufacturing of pedals; Pedals characterised by the material used	5/24	• • • by positive interengagement, e.g. by a pawl
1/503	• • • {Controlling members for hand-actuation}	5/26	• • by other means than a quadrant, rod, or the like
1/506	• • • {Controlling members for foot-actuation}	5/28	• for preventing unauthorised access to the controlling member or its movement to a command position
1/52	• Controlling members specially adapted for actuation by other parts of the human body than hand or foot	<b>7/00</b>	<b>Manually-actuated control mechanisms provided with one single controlling member co-operating with one single controlled member; Details thereof (controlling members G05G 1/00)</b>
1/54	• Controlling members specially adapted for actuation by auxiliary operating members or extensions; Operating members or extensions therefor (pedal extensions)	7/02	• characterised by special provisions for conveying or converting motion, or for acting at a distance
1/56	• • Controlling members specially adapted for actuation by keys, screwdrivers or like tools	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
1/58	• Rests or guides for relevant parts of the operator's body	7/06	• • in which repeated movement of the controlling member produces increments of movement of the controlled member (G05G 7/08 takes precedence)
1/60	• • Foot rests or foot guides	7/08	• • in which repeated movement of the controlling member moves the controlling member through a cycle of distinct positions
1/62	• • Arm rests	7/10	• • specially adapted for remote control (G05G 7/04 - G05G 7/08 take precedence)
<b>3/00</b>	<b>Controlled members; Assemblies or arrangements thereof (interlocking of controlled members G05G 5/08)</b>	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
<b>5/00</b>	<b>Means for preventing, limiting or returning the movements of parts of a control mechanism, e.g. locking controlling member (G05G 17/00 takes precedence)</b>	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
5/005	• {for preventing unintentional use of a control mechanism (G05G 5/28 takes precedence)}	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
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)	<b>9/00</b>	<b>Manually-actuated control mechanisms provided with one single controlling member co-operating with two or more controlled members, e.g. selectively, simultaneously</b>
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)	9/02	• the controlling member being movable in different independent ways, movement in each individual way actuating one controlled member only
5/04	• Stops for limiting movement of members, e.g. adjustable stop (G05G 5/03, G05G 5/05, G05G 5/28 take precedence)	9/04	• • in which movement in two or more ways can occur simultaneously
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)	9/047	• • • the controlling member being movable by hand about orthogonal axes, e.g. joysticks {(for switches H01H 25/04)}
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)	2009/04703	• • • • {Mounting of controlling member}
5/065	• • {using a spring-loaded ball}	2009/04707	• • • • {with ball joint}
5/08	• • Interlocking of members, e.g. locking member in a particular position before or during the movement of another member	2009/04711	• • • • {with substantially hemispherical bearing part forced into engagement, e.g. by a spring}
5/12	• for holding members in an indefinite number of positions, e.g. by a toothed quadrant (G05G 5/28 takes precedence)	2009/04714	• • • • {with orthogonal axes}
5/14	• • by locking a member with respect to a fixed quadrant, rod, or the like	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}	15/08	. due to the load or torque on a member, e.g. if exceeding a predetermined value thereof
2009/04755	. . . . . {Magnetic sensor, e.g. hall generator, pick-up coil}	17/00	<b>Mechanical devices for moving a member after being released; Trip or release mechanisms characterised thereby</b>
2009/04759	. . . . . {Light-sensitive detector, e.g. photoelectric}	19/00	<b>Servo-mechanisms with follow-up action, e.g. occurring in steps</b>
2009/04762	. . . . . {Force transducer, e.g. strain gauge}	21/00	<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>
2009/04766	. . . . . {providing feel, e.g. indexing means, means to create counterforce}	23/00	<b>Means for ensuring the correct positioning of parts of control mechanisms, e.g. for taking-up play</b>
2009/0477	. . . . . {holding the member in a number of definite positions}	23/02	. self-adjusting
2009/04774	. . . . . {with additional switches or sensors on the handle}	25/00	<b>Other details or appurtenances of control mechanisms, e.g. supporting intermediate members elastically</b>
2009/04777	. . . . . {with additional push or pull action on the handle}	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> )}
2009/04781	. . . . . {with additional rotation of the controlling member}	25/04	. Sealing against entry of dust, weather or the like {(in selector apparatus for gears, <a href="#">F16H 59/0213</a> )}
<b>NOTE</b> Provisional indexing codes related to scheme of trilateral project T021		2505/00	<b>Means for preventing, limiting or returning the movements of parts of a control mechanism, e.g. locking controlling member</b>
9/04785	. . . . {the controlling member being the operating part of a switch arrangement}	2700/00	<b>Control mechanisms or elements therefor applying a mechanical movement</b>
9/04788	. . . . . {comprising additional control elements}	2700/02	. Means for regulating or adjusting control mechanisms, e.g. devices for automatic adjustment
9/04792	. . . . . {for rotary control around the axis of the controlling member}	2700/04	. Control mechanisms limiting amplitude or adjusting datum position
9/04796	. . . . . {for rectilinear control along the axis of the controlling member}	2700/06	. . Control mechanisms for holding members in a number of positions comprising a device to limit the control range
9/053	. . . . the controlling member comprising a ball {(graph-reading using a tracing ball or mouse <a href="#">G06F 3/033</a> )}	2700/08	. . Control mechanisms for locking members in one or more positions
9/06	. the controlled members being actuated successively by repeated movement of the controlling member	2700/10	. . Control mechanisms for locking or at least for blocking a member in one position out of a number of several positions
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> )}	2700/12	. Control mechanisms with one controlling member and one controlled member
9/085	. . {the controlling member acting on a set of cams or slot cams}	2700/14	. . with one elastic element as essential part, e.g. elastic components as a part of an actuating mechanism
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	2700/16	. . Mechanisms for conveying motion or signals for or in relation with control mechanisms
11/00	<b>Manually-actuated control mechanisms provided with two or more controlling members co-operating with one single controlled member</b>	2700/18	. . Systems wherein the control element may be placed in two or more positions
13/00	<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>	2700/20	. Control mechanisms not otherwise provided for
13/02	. with separate controlling members for preselection and shifting of controlled members	2700/22	. Mechanisms linking plurality of controlling or controlled members
15/00	<b>Mechanical devices for initiating a movement automatically due to a specific cause</b>	2700/24	. . Locking controlled members of selectively controlled mechanisms
15/002	. {due to an abnormal functioning of the controlled apparatus (if speed is abnormal <a href="#">G05G 15/06</a> )}		
15/005	. {due to a dangerous situation for the operator}		
15/007	. {due to an exerted pressure}		

## 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