

# 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> (joysticks <a href="#">G05G 9/04</a> ; steering wheels for motor vehicles <a href="#">B62D</a> )	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
1/01	. 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> )	1/327	. . . means disconnecting the pedal from its hinge or support, e.g. by breaking or bending the support
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> )	1/34	. . 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
1/02	. Controlling members for hand actuation by linear movement, e.g. push buttons	1/40	. . adjustable
1/025	. . {actuated by sliding movement}	1/405	. . . infinitely adjustable
1/04	. Controlling members for hand actuation by pivoting movement, e.g. levers	1/42	. . non-pivoting, e.g. sliding
		1/44	. . pivoting
1/06	. . Details of their grip parts { <a href="#">G05G 1/10</a> takes precedence}	1/445	. . . about a central fulcrum
		1/46	. . Means, e.g. links, for connecting the pedal to the controlled unit
1/08	. Controlling members for hand actuation by rotary movement, e.g. hand wheels	1/48	. . Non-slip pedal treads; Pedal extensions or attachments characterised by mechanical features only
1/082	. . {having safety devices, e.g. means for disengaging the control member from the actuated member}	1/483	. . . Non-slip treads; Pedal extensions or attachments characterised by mechanical features only
1/085	. . {Crank handles <a href="#">G05G 1/082</a> takes precedence}		
1/087	. . {retractable; Flush control knobs}		

- 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}
  - 2009/04744 . . . . {Switches}
  - 2009/04748 . . . . {Position sensor for rotary movement, e.g. potentiometer}
  - 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}	17/00		<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}	19/00		<b>Servo-mechanisms with follow-up action, e.g. occurring in steps</b>
2009/04766	. . . . .	{providing feel, e.g. indexing means, means to create counterforce}	21/00		<b>Mechanical apparatus for control of a series of operations, i.e. program control, e.g. involving a set of cams (<a href="#">G05G 5/02</a> takes precedence)</b>
2009/04777	. . . . .	{holding the member in a number of definite positions}	23/00		<b>Means for ensuring the correct positioning of parts of control mechanisms, e.g. for taking-up play</b>
2009/04774	. . . . .	{with additional switches or sensors on the handle}	23/02		. self-adjusting
2009/04777	. . . . .	{with additional push or pull action on the handle}	25/00		<b>Other details or appurtenances of control mechanisms, e.g. supporting intermediate members elastically</b>
2009/04781	. . . . .	{with additional rotation of the controlling member}	25/02		. Inhibiting the generation or transmission of noise {(suppression of noise or vibrations in selector apparatus for gearings <a href="#">F16H 59/0208</a> )}
<b>NOTE</b>			25/04		. Sealing against entry of dust, weather or the like {(in selector apparatus for gearings, <a href="#">F16H 59/0213</a> )}
{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> )}	2700/26		. . with a control member moving selectively or simultaneously the controlled members
15/005	. . . . .	{due to a dangerous situation for the operator}	2700/28		. . . with a control member that is moved for preselection in another direction than for final actuating
15/007	. . . . .	{due to an exerted pressure}			
15/02	. . . . .	due to alteration of the sense of movement of a member			
15/04	. . . . .	due to distance or angle travelled by a member			
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> )			

## G05G

- 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