

# CPC COOPERATIVE PATENT CLASSIFICATION

## 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, for example:

<a href="#">A61G 13/02</a>	Controls for adjusting operating tables
<a href="#">A61G 15/02</a>	Controls for adjusting operating chairs
<a href="#">A63F 13/20</a> , <a href="#">A63F 13/98</a>	Accessories for games using an electronically generated display
<a href="#">B25J</a>	Manipulators, e.g. controls therefor
<a href="#">B60K 26/00</a>	Arrangement or mounting of propulsion-unit control devices in vehicles
<a href="#">B60T 7/00</a>	Vehicle brake-action initiating means
<a href="#">B62D 33/073</a>	Adaptations of control devices for movable vehicle cabs
<a href="#">B62K 21/00</a>	Cycle-steering devices
<a href="#">B62K 23/00</a>	Rider-operated controls specially adapted for cycles
<a href="#">B62L 3/00</a>	Brake-actuating mechanisms specially adapted for cycles
<a href="#">B63H 25/02</a>	Marine steering initiating means
<a href="#">B66B 1/00</a>	Controls for elevators
<a href="#">B66C 13/18</a>	Control systems or devices for cranes
<a href="#">B66C 13/56</a>	Arrangements of handles or pedals for crane operation
<a href="#">E02F 9/20</a>	Control devices for dredging or soil shifting machines
<a href="#">F16C 3/28</a>	Adjustable cranks or eccentrics
<a href="#">F16D 43/00</a>	Automatic clutches
<a href="#">F16K 31/00</a> , <a href="#">F16K 33/00</a>	Controls for valves
<a href="#">F16P 3/00</a>	Safety devices acting in conjunction with the control or operation of a machine
<a href="#">F16P 7/02</a>	Stopping machines on occurrence of dangerous conditions therein
<a href="#">G02B 21/32</a>	Micromanipulators structurally combined with microscopes
<a href="#">G04B 1/00</a> - <a href="#">G04B 18/00</a>	Driving mechanisms in clocks or watches
<a href="#">G06C</a>	Digital computers in which all the computation is effected mechanically
<a href="#">G06F 3/02</a>	Manual computer input arrangements
<a href="#">G06K 11/00</a>	Converting a pattern of mechanical parameters into electric signals
<a href="#">G21C 7/08</a>	Displacement of solid control elements in nuclear reactors
<a href="#">H01H</a>	Mechanisms for operating switch contacts
<a href="#">H03J 1/00</a>	Mechanical control of resonant circuits.

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> )	1/01	• Arrangements of two or more controlling members with respect to one another ( <a href="#">double foot control</a> , 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 ( <a href="#">means for continuously detecting pedal position</a> <a href="#">G05G 1/38</a> ; <a href="#">means for detecting position through tactile feedback</a> <a href="#">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> )}
		1/08	• Controlling members for hand actuation by rotary movement, e.g. hand wheels
	<b>NOTE</b>		
	Within this main group the first place priority rule is applied, i.e. at each hierarchical level classification is made in the first appropriate place		

- 1/082 . . {having safety devices, e.g. means for disengaging the control member from the actuated member}
- 1/085 . . {Crank handles (G05G 1/082 takes precedence)}
- 1/087 . . {retractable; Flush control knobs}
- 1/10 . . Details, e.g. of discs, knobs, wheels or handles {G05G 1/085 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
- 1/46 . . 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	9/04792	. . . . . {for rotary control around the axis of the controlling member}
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	9/04796	. . . . . {for rectilinear control along the axis of the controlling member}
<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>	9/053	. . . . the controlling member comprising a ball {graph-reading using a tracing ball or mouse <a href="#">G06F 3/033</a> }
9/02	the controlling member being movable in different independent ways, movement in each individual way actuating one controlled member only	9/06	the controlled members being actuated successively by repeated movement of the controlling member
9/04	. . in which movement in two or more ways can occur simultaneously	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> )}
9/047	. . . the controlling member being movable by hand about orthogonal axes, e.g. joysticks {(for switches <a href="#">H01H 25/04</a> )}	9/085	. . {the controlling member acting on a set of cams or slot cams}
2009/04703	. . . . {Mounting of controlling member}	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
2009/04707	. . . . {with ball joint}	<b>11/00</b>	<b>Manually-actuated control mechanisms provided with two or more controlling members co-operating with one single controlled member</b>
2009/04711	. . . . {with substantially hemispherical bearing part forced into engagement, e.g. by a spring}	<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>
2009/04714	. . . . {with orthogonal axes}	13/02	with separate controlling members for preselection and shifting of controlled members
2009/04718	. . . . {with cardan or gimbal type joint}	<b>15/00</b>	<b>Mechanical devices for initiating a movement automatically due to a specific cause</b>
2009/04722	. . . . {elastic, e.g. flexible shaft}	15/002	. {due to an abnormal functioning of the controlled apparatus (if speed is abnormal <a href="#">G05G 15/06</a> )}
2009/04725	. . . . {with coil spring}	15/005	. {due to a dangerous situation for the operator}
2009/04729	. . . . {melastomeric}	15/007	. {due to an exerted pressure}
2009/04733	. . . . {with a joint having a nutating disc, e.g. forced by a spring}	15/02	due to alteration of the sense of movement of a member
9/04737	. . . . {with six degrees of freedom}	15/04	due to distance or angle travelled by a member
2009/0474	. . . . {characterised by means converting mechanical movement into electric signals}	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> )
2009/04744	. . . . {Switches}	15/08	due to the load or torque on a member, e.g. if exceeding a predetermined value thereof
2009/04748	. . . . {Position sensor for rotary movement, e.g. potentiometer}	<b>17/00</b>	<b>Mechanical devices for moving a member after being released; Trip or release mechanisms characterised thereby</b>
2009/04751	. . . . {Position sensor for linear movement}	<b>19/00</b>	<b>Servo-mechanisms with follow-up action, e.g. occurring in steps</b>
2009/04755	. . . . {Magnetic sensor, e.g. hall generator, pick-up coil}	<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>
2009/04759	. . . . {Light-sensitive detector, e.g. photoelectric}	<b>23/00</b>	<b>Means for ensuring the correct positioning of parts of control mechanisms, e.g. for taking-up play</b>
2009/04762	. . . . {Force transducer, e.g. strain gauge}	23/02	self-adjusting
2009/04766	. . . . {providing feel, e.g. indexing means, means to create counterforce}	<b>25/00</b>	<b>Other details or appurtenances of control mechanisms, e.g. supporting intermediate members elastically</b>
2009/0477	. . . . {holding the member in a number of definite positions}	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> )}
2009/04774	. . . . {with additional switches or sensors on the handle}		
2009/04777	. . . . {with additional push or pull action on the handle}		
2009/04781	. . . . {with additional rotation of the controlling member}		
<b>NOTE</b>			
Provisional indexing codes related to scheme of trilateral project T021			
9/04785	. . . . {the controlling member being the operating part of a switch arrangement}		
9/04788	. . . . {comprising additional control elements}		

- 25/04 . Sealing against entry of dust, weather or the like {[\(in selector apparatus for gearings, F16H 59/0213\)](#)}
- 2505/00 Means for preventing, limiting or returning the movements of parts of a control mechanism, e.g. locking controlling member**
- 2700/00 Control mechanisms or elements therefor applying a mechanical movement**
- 2700/02 . Means for regulating or adjusting control mechanisms, e.g. devices for automatic adjustment
- 2700/04 . Control mechanisms limiting amplitude or adjusting datum position
- 2700/06 . . Control mechanisms for holding members in a number of positions comprising a device to limit the control range
- 2700/08 . . Control mechanisms for locking members in one or more positions
- 2700/10 . . Control mechanisms for locking or at least for blocking a member in one position out of a number of several positions
- 2700/12 . Control mechanisms with one controlling member and one controlled member
- 2700/14 . . with one elastic element as essential part, e.g. elastic components as a part of an actuating mechanism
- 2700/16 . . Mechanisms for conveying motion or signals for or in relation with control mechanisms
- 2700/18 . . Systems wherein the control element may be placed in two or more positions
- 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
- 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