

CPC COOPERATIVE PATENT CLASSIFICATION

G PHYSICS (NOTES omitted)

INSTRUMENTS

G05 **CONTROLLING; REGULATING** (specially adapted to a particular field of use, [see the relevant place for that field, e.g. A62C 37/00, B03B 13/00, B23Q](#))
(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	Controlling members, e.g. knobs or handles; Assemblies or arrangements thereof; Indicating position of controlling members ({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)	1/08 1/082 1/085 1/087 1/10 1/105 1/12 1/30 1/305 1/32 1/323 1/327 1/34 1/36 1/38 1/40 1/405 1/42 1/44 1/445	<ul style="list-style-type: none"> • Controlling members for hand actuation by rotary movement, e.g. hand wheels • • {having safety devices, e.g. means for disengaging the control member from the actuated member} • • {Crank handles (G05G 1/082 takes precedence)} • • {retractable; Flush control knobs} • • Details, e.g. of discs, knobs, wheels or handles {(G05G 1/085 takes precedence)} • • • {comprising arrangements for illumination} • • • Means for securing the members on rotatable spindles or the like • Controlling members actuated by foot • • {Compound pedal co-operating with two or more controlled members} • • with means to prevent injury • • • means disconnecting the connection between pedal and controlled member, e.g. by breaking or bending the connecting rod • • • means disconnecting the pedal from its hinge or support, e.g. by breaking or bending the support • • Double foot controls, e.g. for instruction vehicles • • Mounting units comprising an assembly of two or more pedals, e.g. for facilitating mounting • • comprising means to continuously detect pedal position • • adjustable • • • infinitely adjustable • • non-pivoting, e.g. sliding • • pivoting • • • about a central fulcrum
	NOTE In this group, the first place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, classification is made in the first appropriate place.		
1/01	• Arrangements of two or more controlling members with respect to one another (double foot control, e.g. for instruction vehicles G05G 1/34 ; mounting units comprising an assembly with two or more pedals G05G 1/36)		
1/015	• Arrangements for indicating the position of a controlling member (means for continuously detecting pedal position G05G 1/38 ; means for detecting position through tactile feedback G05G 5/03)		
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 {(G05G 1/10 takes precedence)}		

- 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 (speedometers G01P)
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	Mechanical devices for moving a member after being released; Trip or release mechanisms characterised thereby
2009/04762	. . . . . {Force transducer, e.g. strain gauge}		
2009/04766	. . . . . {providing feel, e.g. indexing means, means to create counterforce}	19/00	Servo-mechanisms with follow-up action, e.g. occurring in steps
2009/0477	. . . . . {holding the member in a number of definite positions}		
2009/04774	. . . . . {with additional switches or sensors on the handle}	21/00	Mechanical apparatus for control of a series of operations, i.e. programme control, e.g. involving a set of cams (G05G 5/02 takes precedence)
2009/04777	. . . . . {with additional push or pull action on the handle}	23/00	Means for ensuring the correct positioning of parts of control mechanisms, e.g. for taking-up play
2009/04781	. . . . . {with additional rotation of the controlling member}	23/02	. self-adjusting
	NOTE	25/00	Other details or appurtenances of control mechanisms, e.g. supporting intermediate members elastically
	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 F16H 59/0208)}
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, F16H 59/0213)}
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}	2505/00	Means for preventing, limiting or returning the movements of parts of a control mechanism, e.g. locking controlling member
9/053	. . . . . the controlling member comprising a ball {(graph-reading using a tracing ball or mouse G06F 3/033)}		
9/06	. the controlled members being actuated successively by repeated movement of the controlling member	2700/00	Control mechanisms or elements therefor applying a mechanical movement
9/08	. the controlled members being actuated successively by progressive movement of the controlling member {(single lever throttle and clutch control for marine engines B63H 21/213)}	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
11/00	Manually-actuated control mechanisms provided with two or more controlling members co-operating with one single controlled member	2700/08	. . Control mechanisms for locking members in one or more positions
13/00	Manually-actuated control mechanisms provided with two or more controlling members and also two or more controlled members (interlocking G05G 5/08)	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
15/00	Mechanical devices for initiating a movement automatically due to a specific cause	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 G05G 15/06)}	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