

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, for example:

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

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)	1/445	. . . 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)
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})		
1/08	. 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 (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		

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.

5/14	. . by locking a member with respect to a fixed quadrant, rod, or the like	2009/04733	. . . . . {with a joint having a nutating disc, e.g. forced by a spring}
5/16	. . . by friction	9/04737	. . . . . {with six degrees of freedom}
5/18	. . . by positive interengagement, e.g. by a pawl	2009/0474	. . . . . {characterised by means converting mechanical movement into electric signals}
5/20	. . by locking a quadrant, rod, or the like carried by the member	2009/04744	. . . . . {Switches}
5/22	. . . by friction	2009/04748	. . . . . {Position sensor for rotary movement, e.g. potentiometer}
5/24	. . . by positive interengagement, e.g. by a pawl	2009/04751	. . . . . {Position sensor for linear movement}
5/26	. . by other means than a quadrant, rod, or the like	2009/04755	. . . . . {Magnetic sensor, e.g. hall generator, pick-up coil}
5/28	. for preventing unauthorised access to the controlling member or its movement to a command position	2009/04759	. . . . . {Light-sensitive detector, e.g. photoelectric}
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)	2009/04762	. . . . . {Force transducer, e.g. strain gauge}
7/02	. characterised by special provisions for conveying or converting motion, or for acting at a distance	2009/04766	. . . . . {providing feel, e.g. indexing means, means to create counterforce}
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	2009/0477	. . . . . {holding the member in a number of definite positions}
7/06	. . in which repeated movement of the controlling member produces increments of movement of the controlled member (G05G 7/08 takes precedence)	2009/04774	. . . . . {with additional switches or sensors on the handle}
7/08	. . in which repeated movement of the controlling member moves the controlling member through a cycle of distinct positions	2009/04777	. . . . . {with additional push or pull action on the handle}
7/10	. . specially adapted for remote control (G05G 7/04 - G05G 7/08 take precedence)	2009/04781	. . . . . {with additional rotation of the controlling member}
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	NOTE Provisional indexing codes related to scheme of trilateral project T021	
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	9/04785	. . . . . {the controlling member being the operating part of a switch arrangement}
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	9/04788	. . . . . {comprising additional control elements}
9/00	Manually-actuated control mechanisms provided with one single controlling member co-operating with two or more controlled members, e.g. selectively, simultaneously	9/04792	. . . . . {for rotary control around the axis of the controlling member}
9/02	. the controlling member being movable in different independent ways, movement in each individual way actuating one controlled member only	9/04796	. . . . . {for rectilinear control along the axis of the controlling member}
9/04	. . in which movement in two or more ways can occur simultaneously	9/053	. . . . . the controlling member comprising a ball {(graph-reading using a tracing ball or mouse G06F 3/033)}
9/047	. . . the controlling member being movable by hand about orthogonal axes, e.g. joysticks {(for switches H01H 25/04)}	9/06	. the controlled members being actuated successively by repeated movement of the controlling member
2009/04703	. . . . . {Mounting of controlling member}	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)}
2009/04707	. . . . . {with ball joint}	9/085	. . {the controlling member acting on a set of cams or slot cams}
2009/04711	. . . . . {with substantially hemispherical bearing part forced into engagement, e.g. by a spring}	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
2009/04714	. . . . . {with orthogonal axes}	11/00	Manually-actuated control mechanisms provided with two or more controlling members co-operating with one single controlled member
2009/04718	. . . . . {with cardan or gimbal type joint}	13/00	Manually-actuated control mechanisms provided with two or more controlling members and also two or more controlled members (interlocking G05G 5/08)
2009/04722	. . . . . {elastic, e.g. flexible shaft}	13/02	. with separate controlling members for preselection and shifting of controlled members
2009/04725	. . . . . {with coil spring}	15/00	Mechanical devices for initiating a movement automatically due to a specific cause
2009/04729	. . . . . {melastomeric}		

15/002	• {due to an abnormal functioning of the controlled apparatus (if speed is abnormal G05G 15/06)}	2700/22	• Mechanisms linking plurality of controlling or controlled members
15/005	• {due to a dangerous situation for the operator}	2700/24	• • Locking controlled members of selectively controlled mechanisms
15/007	• {due to an exerted pressure}	2700/26	• • with a control member moving selectively or simultaneously the controlled members
15/02	• due to alteration of the sense of movement of a member	2700/28	• • • with a control member that is moved for preselection in another direction than for final actuating
15/04	• due to distance or angle travelled by a member	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
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)	2700/32	• • with plurality of control members, e.g. preselection and actuating members actuating several controlled members
15/08	• due to the load or torque on a member, e.g. if exceeding a predetermined value thereof		
17/00	Mechanical devices for moving a member after being released; Trip or release mechanisms characterised thereby		
19/00	Servo-mechanisms with follow-up action, e.g. occurring in steps		
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)		
23/00	Means for ensuring the correct positioning of parts of control mechanisms, e.g. for taking-up play		
23/02	• self-adjusting		
25/00	Other details or appurtenances of control mechanisms, e.g. supporting intermediate members elastically		
25/02	• Inhibiting the generation or transmission of noise {(suppression of noise or vibrations in selector apparatus for gearings F16H 59/0208)}		
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		