

SECTION G — PHYSICS

G05 CONTROLLING; REGULATING

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)

Note(s) [6, 7]

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 3/01.....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.

Subclass index

MANUALLY-ACTUATED CONTROL MECHANISMS, ONE OR MORE CONTROLLING MEMBERS
 ACTUATING ONE OR MORE CONTROLLED MEMBERS.....7/00, 9/00, 11/00, 13/00
 AUTOMATIC MOVEMENT-INITIATING DEVICES; TRIP MECHANISMS.....15/00, 17/00
 SERVO-MECHANISMS.....19/00
 PROGRAMME-CONTROL DEVICES.....21/00
 LOCKING MEANS, LIMITING MEANS; POSITIONING MEANS.....5/00, 23/00
 COMPONENT PARTS.....1/00, 3/00, 25/00

**1/00 Controlling members, e.g. knobs or handles;
 Assemblies or arrangements thereof; Indicating
 position of controlling members** (joysticks G05G 9/04;
 steering wheels for motor vehicles
 B62D) [1, 2006.01, 2008.04]

Note(s) [2008.04]

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) **[2008.04]**
- 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) **[2008.04]**
- 1/02 • Controlling members for hand-actuation by linear movement, e.g. push buttons **[1, 7, 2006.01]**
- 1/04 • Controlling members for hand-actuation by pivoting movement, e.g. levers **[1, 7, 2006.01]**
- 1/06 • • Details of their grip parts **[1, 7, 2006.01]**
- 1/08 • Controlling members for hand-actuation by rotary movement, e.g. hand wheels **[1, 7, 2006.01]**
- 1/10 • • Details, e.g. of discs, knobs, wheels or handles **[1, 2006.01]**
- 1/12 • • • Means for securing the members on rotatable spindles or the like **[1, 2006.01]**
- 1/30 • Controlling members actuated by foot **[2008.04]**
- 1/32 • • with means to prevent injury **[2008.04]**
- 1/323 • • • means disconnecting the connection between pedal and controlled member, e.g. by breaking or bending the connecting rod **[2008.04]**
- 1/327 • • • means disconnecting the pedal from its hinge or support, e.g. by breaking or bending the support **[2008.04]**
- 1/34 • • Double foot controls, e.g. for instruction vehicles **[2008.04]**
- 1/36 • • Mounting units comprising an assembly of two or more pedals, e.g. for facilitating mounting **[2008.04]**
- 1/38 • • comprising means to continuously detect pedal position **[2008.04]**
- 1/40 • • adjustable **[2008.04]**
- 1/405 • • • infinitely adjustable **[2008.04]**
- 1/42 • • non-pivoting, e.g. sliding **[2008.04]**
- 1/44 • • pivoting **[2008.04]**
- 1/445 • • • about a central fulcrum **[2008.04]**
- 1/46 • • Means, e.g. links, for connecting the pedal to the controlled unit **[2008.04]**
- 1/48 • • Non-slip pedal treads; Pedal extensions or attachments characterised by mechanical features only **[2008.04]**
- 1/483 • • • Non-slip treads **[2008.04]**
- 1/487 • • • Pedal extensions **[2008.04]**
- 1/50 • • Manufacturing of pedals; Pedals characterised by the material used **[2008.04]**
- 1/52 • Controlling members specially adapted for actuation by other parts of the human body than hand or foot **[2008.04]**
- 1/54 • Controlling members specially adapted for actuation by auxiliary operating members or extensions; Operating members or extensions therefor (pedal extensions G05G 1/487) **[2008.04]**
- 1/56 • • Controlling members specially adapted for actuation by keys, screwdrivers or like tools **[2008.04]**
- 1/58 • Rests or guides for relevant parts of the operator's body **[2008.04]**
- 1/60 • • Foot rests or foot guides **[2008.04]**
- 1/62 • • Arm rests **[2008.04]**
- 3/00 **Controlled members** (gear shifter yokes F16H 63/32); **Assemblies or arrangements thereof** (interlocking of controlled members G05G 5/08) **[1, 7, 2006.01]**
- 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) **[1, 5, 2006.01]**
- 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) **[1, 2006.01]**
- 5/03 • Means for enhancing the operator's awareness of the 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, 2006.01, 2008.04]**
- 5/04 • Stops for limiting movement of members, e.g. adjustable stop (G05G 5/03, G05G 5/05, G05G 5/28 take precedence) **[1, 5, 2006.01]**
- 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, 2006.01]**
- 5/06 • for holding members in one or a limited number of definite positions only (G05G 5/03, G05G 5/05, G05G 5/28 take precedence) **[1, 5, 2006.01]**
- 5/08 • • Interlocking of members, e.g. locking a member in a particular position before or during the movement of another member **[1, 2006.01]**
- 5/12 • for holding members in an indefinite number of positions, e.g. by a toothed quadrant (G05G 5/28 takes precedence) **[1, 5, 2006.01]**
- 5/14 • • by locking a member with respect to a fixed quadrant, rod, or the like **[1, 2006.01]**
- 5/16 • • • by friction **[1, 2006.01]**
- 5/18 • • • by positive interengagement, e.g. by a pawl **[1, 2006.01]**
- 5/20 • • by locking a quadrant, rod, or the like carried by the member **[1, 2006.01]**
- 5/22 • • • by friction **[1, 2006.01]**
- 5/24 • • • by positive interengagement, e.g. by a pawl **[1, 2006.01]**
- 5/26 • • by other means than a quadrant, rod, or the like **[1, 2006.01]**
- 5/28 • for preventing unauthorised access to the controlling member or its movement to a command position **[5, 2006.01]**
- 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) **[1, 2006.01]**
- 7/02 • characterised by special provisions for conveying or converting motion, or for acting at a distance **[1, 2006.01]**
- 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, 2006.01]**
- 7/06 • • in which repeated movement of the controlling member produces increments of movement of the controlled member (G05G 7/08 takes precedence) **[1, 2006.01]**

- 7/08 • • in which repeated movement of the controlling member moves the controlled member through a cycle of distinct positions [1, 2006.01]
- 7/10 • • specially adapted for remote control (G05G 7/04-G05G 7/08 take precedence) [1, 2006.01]
- 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 [1, 2006.01]
- 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 [1, 2006.01]
- 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 [1, 2006.01]
- 9/00 Manually-actuated control mechanisms provided with one single controlling member co-operating with two or more controlled members, e.g. selectively, simultaneously [1, 2006.01]**
- 9/02 • the controlling member being movable in different independent ways, movement in each individual way actuating one controlled member only [1, 2006.01]
- 9/04 • • in which movement in two or more ways can occur simultaneously [1, 2006.01]
- 9/047 • • • the controlling member being movable by hand about orthogonal axes, e.g. joysticks [5, 2006.01]
- 9/053 • • • • the controlling member comprising a ball [5, 2006.01]
- 9/06 • the controlled members being actuated successively by repeated movement of the controlling member [1, 2006.01]
- 9/08 • the controlled members being actuated successively by progressive movement of the controlling member [1, 2006.01]
- 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 [1, 2006.01]
- 11/00 Manually-actuated control mechanisms provided with two or more controlling members co-operating with one single controlled member [1, 2006.01]**
- 13/00 Manually-actuated control mechanisms provided with two or more controlling members and also two or more controlled members (interlocking G05G 5/08) [1, 2006.01]**
- 13/02 • with separate controlling members for preselection and shifting of controlled members [1, 2006.01]
- 15/00 Mechanical devices for initiating a movement automatically due to a specific cause [1, 2006.01]**
- 15/02 • due to alteration of the sense of movement of a member [1, 2006.01]
- 15/04 • due to distance or angle travelled by a member [1, 2006.01]
- 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) [1, 2006.01]
- 15/08 • due to the load or torque on a member, e.g. if exceeding a predetermined value thereof [1, 2006.01]
- 17/00 Mechanical devices for moving a member after being released; Trip or release mechanisms characterised thereby [1, 2006.01]**
- 19/00 Servo-mechanisms with follow-up action, e.g. occurring in steps [1, 2006.01]**
- 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) [1, 2006.01]**
- 23/00 Means for ensuring the correct positioning of parts of control mechanisms, e.g. for taking-up play [1, 2006.01]**
- 23/02 • self-adjusting [1, 2006.01]
- 25/00 Other details, features or accessories of control mechanisms, e.g. supporting intermediate members elastically [1, 2006.01]**
- 25/02 • Inhibiting the generation or transmission of noise [5, 2006.01]
- 25/04 • Sealing against entry of dust, weather or the like [5, 2006.01]