

CPC COOPERATIVE PATENT CLASSIFICATION

G PHYSICS

(NOTES omitted)

INSTRUMENTS

G04 HOROLOGY

G04D APPARATUS OR TOOLS SPECIALLY DESIGNED FOR MAKING OR MAINTAINING CLOCKS OR WATCHES

- 1/00 Gripping, holding, or supporting devices** *{(stands in general [F16M](#); for instruments [G01D 11/30](#), [B01L](#))}*
- 1/0007 . {for assembly entirely by hand}
- 1/0014 . . {Workbenches, supports; Workbenches provided with suction devices; for dust; Illumination}
- 1/0021 . . {Supporting means facilitating assembly and mechanisation, e.g. magazines for components (machines for assembly [G04D 1/0071](#); supports in general [G04D 1/06](#))}
- 1/0028 . . {Screwdrivers (screwdrivers in general [B25B 15/00](#))}
- 1/0035 . . . {with power source for driving the screwdriver}
- 1/0042 . . {tools for setting, riveting or pressing, e.g. nippers for this purpose (machines therefor [G04D 3/042](#), [G04D 3/045](#), [G04D 3/047](#))}
- 1/005 . {for non-automatic assembly, with automatic transport between workbenches}
- 1/0057 . . {Conveyor belts or chains (in general [B65G](#))}
- 1/0064 . . {Turntables or plates (carousels) (in general [B65G 47/00](#))}
- 1/0071 . {for totally automated assembly}
- 1/0078 . {Automated gripping means (hand-operated gripping means [G04D 1/02](#))}
- 1/0085 . . {with pneumatic holding means (hand tools with pneumatic means [G04D 1/02](#))}
- 1/0092 . {Devices for positioning and sorting of the components (sorting and positioning in general [B23Q](#))}
- 1/02 . Tweezers; Vice clamps or other special hand tools for watchmakers *{(G04D 1/04, G04D 1/08, G04D 1/10 take precedence; vices [B25B](#); devices for setting bearing jewels and parts thereof [G04D 3/04](#); devices for setting watch glasses [G04D 3/06](#))}*
- 1/021 . . {Tweezers (tweezers for medical purposes [A61B](#); setting tools [B41B 1/00](#))}
- 1/022 . . {Universal nippers (nippers for setting watch glasses [G04D 3/067](#))}
- 1/023 . . {Revolving-head nippers (jaw plates for latches [G04D 3/0218](#))}
- 1/025 . . {Hand screws}
- 1/026 . . {Clamps for holding bearing jewels (machines for setting bearing jewels [G04D 3/0002](#))}
- 1/027 . . {Hand tools for gripping or holding by magnetic means}
- 1/028 . . {Hand tools for gripping or holding by pneumatic means}
- 1/04 . Tools for setting springs
- 1/041 . . {for springs of driving mechanisms (machines therefor [G04D 3/0007](#))}
- 1/042 . . {for coil springs in regulating mechanisms (machines therefor [G04D 3/0041](#))}
- 1/044 . . . {for working the ends (machines therefor [G04D 3/0041](#))}
- 1/045 . . . {for fastening the ends (machines therefor [G04D 3/0007](#), [G04D 3/0041](#))}
- 1/047 {on the coil roll}
- 1/048 {on the coil bobbin}
- 1/06 . Supporting devices for clockworks or parts of time-pieces *{(for automatic assembly [G04D 1/0021](#))}*
- 1/063 . . {provided with a pick-up means, e.g. microphone (measuring and control means for comparison with a standard frequency [G04D 7/12](#))}
- 1/066 . . {Packaging and boxes for transport (packaging for small items, packaging for special items [B65D](#))}
- 1/08 . Tools for setting or removing hands *{(machines therefor [G04D 3/0046](#))}*
- 1/10 . Devices for opening or closing watch bottoms or covers *{(machines therefor [G04D 3/00](#))}*
- 3/00 Watchmakers' or watch-repairers' machines or tools for working materials** *{(metal working in general class [B23](#))}*
- 3/0002 . {for mechanical working other than with a lathe (lathes for watchmakers [G04D 3/02](#))}
- 3/0005 . . {for parts of driving means}
- 3/0007 . . . {for springs (springs in general [B21F](#); mainspring construction [G04B 1/14](#); springs for the regulating mechanism see [G04D 3/0041](#))}
- 3/001 . . . {for spring barrels (construction of spring barrels [G04B 1/16](#), [G04B 1/18](#))}
- 3/0012 . . {for parts of the winding-up mechanism, e.g. for winding axles, crowns (construction thereof [G04B 3/00](#), [G04B 5/00](#))}
- 3/0015 . . {for components of the pawl construction, stop clicks, clutches (construction thereof [G04B 11/00](#))}
- 3/0017 . . {for components of gearworks (construction thereof [G04B 13/00](#))}
- 3/002 . . . {for gear wheels or gears}
- 3/0023 . . . {for axles, sleeves}

- 3/0025 . . . {for axletaps, e.g. for grinding or polishing thereof ([on a lathe G04D 3/02](#))}
- 3/0028 . . {for components of the escape mechanism ([construction thereof G04B 15/00](#))}
- 3/003 . . . {for levers}
- 3/0033 . . . {for lever wheels}
- 3/0035 . . {for components of the regulating mechanism}
- 3/0038 . . . {for balances ([construction therefor G04B 17/063](#))}
- 3/0041 . . . {for coil-springs ([coil-springs in general B21F](#); [springs for the driving mechanism G04D 3/0007](#))}
- 3/0043 . . {for components of the time-indicating mechanisms ([construction thereof G04B 19/00](#))}
- 3/0046 . . . {for hands ([construction thereof G04B 19/00](#))}
- 3/0048 . . . {for dials ([construction thereof G04B 19/10, G04B 19/12](#))}
- 3/0051 . . . {for time markers}
- 3/0053 . . {for framework components ([construction thereof G04B 29/00](#))}
- 3/0056 . . {for bearing components ([construction thereof G04B 31/00](#))}
- 3/0058 . . . {for bearing jewels ([machines for boring through stones B28D](#); [for diamonds B24B](#); [diamond polishing B24B 9/16](#); [manufacture of drawing stones B23P 5/00](#); [setting of industrial stones B23P 15/24](#))}
- 3/0061 . . {for components for protecting the mechanism against external influences ([construction thereof G04B 37/00, G04B 43/00](#))}
- 3/0064 . . . {for cases}
- 3/0066 . . . {for the fastening means of the case or bracelet ([construction thereof G04B 37/1486](#))}
- 3/0069 . {for working with non-mechanical means, e.g. chemical, electrochemical, metallising, vapourising; with electron beams, laser beams}
- 3/0071 . . {for bearing components}
- 3/0074 . {for treatment of the material, e.g. surface treatment}
- 3/0076 . . {for components of driving mechanisms, e.g. mainspring}
- 3/0079 . . {for gearwork components}
- 3/0082 . . . {for gear wheels or gears}
- 3/0084 . . . {for axles, sleeves}
- 3/0087 . . {for components of the escapement mechanism, e.g. lever escapement, escape wheel}
- 3/0089 . . {for components of the regulating mechanism, e.g. coil springs}
- 3/0092 . . {for components of the time-indicating mechanism, e.g. dials}
- 3/0094 . . {for bearing components}
- 3/0097 . . {for components of the means protecting the mechanism against external influences, e.g. cases}
- 3/02 . . Lathes, with one or more supports; Burnishing machines, with one or more supports ([metal lathes B23B](#); [automatic lathes B23B](#); [grinding and polishing in general class B24](#))}
- 3/0209 . . {Components}
- 3/0218 . . . {Jaw-plates, revolving-head nippers}
- 3/0227 . . {for the manufacture of special components for clockworks}
- 3/0236 . . . {for gearwork components}
- 3/0245 {for gear wheels or gears}
- 3/0254 {for axles, sleeves}
- 3/0263 {for axle taps}
- 3/0272 . . . {for components of the time-indicating mechanism, e.g. dials}
- 3/0281 . . . {for bearing components}
- 3/029 . . . {for components of the means protecting the mechanism from external influences, e.g. cases}
- 3/04 . . Devices for placing bearing jewels, bearing sleeves, or the like in position ([fixing jewels A44C 17/04](#); [tools for assembling and taking apart gear wheels and bearing components B25B](#); [machines for the manufacture of bearing jewels and components G04D 3/0002](#))}
- 3/042 . . {for bearing jewels ([pressing nippers and hand tools G04D 1/0042](#))}
- 3/045 . . {for lever, Impulse-pin ([adjustment of the escapement G04D 7/06](#))}
- 3/047 . . {for the coil rolls or bobbins}
- 3/06 . . Devices for shaping or setting watch glasses ([cutting watch glasses C03B 33/04](#); [grinding or working of spectacle lenses and lenses B24B](#); [working plastic materials in general B29](#))}
- 3/062 . . {Shaping without chipping away, e.g. by hot pressing or by punching out the whole piece from a plate}
- 3/065 . . {Shaping by removing material, e.g. cutting out from a plate, milling the edges}
- 3/067 . . {Setting or taking apart, whereby a temporary deformation of the glass may take place}
- 3/08 . . Machines or apparatus for cleaning
- 3/083 . . {whereby the components to be cleaned are placed in a container}
- 3/086 . . . {whereby the container rotates in a cleaning fluid}
- 5/00 Oiling devices; Special lubricant containers for watchmakers** ([bearings constructed with regard to oiling of the clockwork G04B 31/08](#); [oilcans for lubricating in general F16N 3/04](#))}
- 5/005 . {Oilcans and other hand tools for lubricating special parts of the clockwork mechanism}
- 7/00 Measuring, counting, calibrating, testing or regulating apparatus** ([measuring devices and calibers in general G01B](#); [counters in general H03K](#))}
- 7/001 . {Purely mechanical measuring and testing apparatus}
- 7/002 . {Electrical measuring and testing apparatus}
- 7/003 . . {for electric or electronic clocks}
- 7/004 . {Optical measuring and testing apparatus}
- 7/005 . {Counters for small components, e.g. bearing jewels}
- 7/006 . {Testing apparatus for complete clockworks with regard to external influences or general good working}
- 7/007 . . {with regard to the sealing of the case}
- 7/008 . . {with regard to the reaction to shocks}
- 7/009 . . {with regard to the functioning of the automatic winding-up device}
- 7/02 . for mainsprings
- 7/04 . for gearwork, ([e.g. optical control of gear wheels; optical control in general G01B, G01B 9/08](#))}
- 7/06 . for escapements
- 7/08 . for balance wheels

G04D

- 7/081 . . {for adjusting the fellow or the shafts ([adjustment of the gear wheels G04D 7/04](#))}
- 7/082 . . {for balancing}
- 7/084 . . . {by setting adjustable elements, e.g. balance wheel screws}
- 7/085 . . . {by removing material from the balance wheel itself}
- 7/087 {Automatic devices therefor (balancing and loading or removing carried out automatically)}
- 7/088 . . . {by loading the balance wheel itself with material}
- 7/10 . for hairsprings {of balances}
- 7/12 . Timing devices for clocks or watches for comparing the rate of the oscillating member with a standard {([supporting devices for clocks with built-in recording apparatus G04D 1/063](#); [measuring short time intervals G04F 10/00](#); [frequency measuring in general H04B, G01R](#))}
- 7/1207 . . {only for measuring}
- 7/1214 . . . {for complete clockworks}
- 7/1221 {with recording, e.g. vibrograph}
- 7/1228 {Devices for facilitating the reading or the interpretation of the recording}
- 7/1235 . . . {for the control mechanism only (found from outside the clockwork)}
- 7/1242 {for measuring amplitude}
- 7/125 {for measuring frequency}
- 7/1257 . . {wherein further adjustment devices are present}
- 7/1264 . . . {for complete clockworks}
- 7/1271 . . . {for the control mechanism only (from outside the clockwork)}
- 7/1278 {whereby the adjustment device works on the compass}
- 7/1285 {whereby the adjustment device works on the mainspring}
- 7/1292 {whereby the adjustment device works on the balance wheel}

9/00 Demagnetising devices

99/00 Subject matter not provided for in other groups of this subclass