

ECLA**EUROPEAN CLASSIFICATION****G04D**

APPARATUS OR TOOLS SPECIALLY DESIGNED FOR MAKING OR MAINTAINING CLOCKS OR WATCHES (machine tools in general [B23](#), [B24](#); hand tools in general [B25](#))

G04D1/00

Gripping, holding, or supporting devices [N: stands in general [F16M](#); for instruments [G01D11/30](#), [B01L](#)]

G04D1/00B

- [N: for assembly entirely by hand]

G04D1/00B2

- • [N: Workbenches, supports; Workbenches provided with suction devices; for dust; illumination]

G04D1/00B3

- • [N: Supporting means facilitating assembly and mechanisation, e.g. magazines for components (machines for assembly [G04D1/00D](#); supports in general [G04D1/06](#))]

G04D1/00B5

- • [N: Screwdrivers (screwdrivers in general [B25B15/00](#))]

G04D1/00B5B

- • • [N: with power source for driving the screwdriver]

G04D1/00B6

- • [N: tools for setting, riveting or pressing, e.g. nippers for this purpose (machines therefor [G04D3/04B](#), [G04D3/04C](#), [G04D3/04D](#))]

G04D1/00C

- [N: for non-automatic assembly, with automatic transport between workbenches]

G04D1/00C2

- • [N: Conveyor belts or - chains (in general [B65G](#))]

G04D1/00C3

- • [N: Turntables or -plates (carousels) (in general [B65G47/00](#))]

G04D1/00D

- [N: for totally automated assembly]

G04D1/00G

- [N: Automated gripping means (hand-operated gripping means [G04D1/02](#))]

G04D1/00G2

- • [N: with pneumatic holding means (hand tools with pneumatic means [G04D1/02](#))]

G04D1/00H

- [N: Devices for positioning and sorting of the components (sorting and positioning in general [B23Q](#))]

G04D1/02

- Tweezers; Vice clamps or other special hand tools for watchmakers [N: [G04D1/04](#), [G04D1/08](#), [G04D1/10](#) take precedence; vices [B25B](#); devices for setting bearing jewels and parts thereof [G04D3/04](#); devices for setting watch glasses [G04D3/06](#)]

G04D1/02B

- • [N: Tweezers (tweezers for medical purposes [A61B](#); setting tools [B41B1/00](#))]

G04D1/02C

- • [N: Universal nippers (nippers for setting watch glasses [G04D3/06D](#))]

G04D1/02D

- • [N: Revolving-head nippers (jaw plates for latches [G04D3/02B2](#))]

G04D1/02F

- • [N: Hand screws]

G04D1/02G

- • [N: Clamps for holding bearing jewels (machines for setting bearing jewels [G04D3/00B](#))]

G04D1/02H

- • [N: Hand tools for gripping or holding by magnetic means]

G04D1/02K

- • [N: Hand tools for gripping or holding by pneumatic means]

G04D1/04

- Tools for setting springs]

G04D1/04B

- • [N: for springs of driving mechanisms (machines therefor [G04D3/00B2B](#))]

G04D1/04C

- • [N: for coil springs in regulating mechanisms (machines therefor [G04D3/00B12C](#))]

G04D1/04C2	. . . [N: for working the ends (machines therefor G04D3/00B12C)]
G04D1/04C3	. . . [N: for fastening the ends (machines therefor G04D3/00B2K , G04D3/00B12C)]
G04D1/04C3B	. . . . [N: on the coil roll]
G04D1/04C3C	. . . . [N: on the coil bobbin]
G04D1/06	. Supporting devices for clockworks or parts of time-pieces [N: for automatic assembly G04D1/00B3]
G04D1/06B	. . [N: provided with a pick-up means, e.g. microphone (measuring and control means for comparison with a standard frequency G04D7/12)]
G04D1/06G	. . [N: Packaging and boxes for transport (packaging for small items, packaging for special items B65D)]
G04D1/08	. Tools for setting or removing hands [N: machines therefor G04D3/00B14B1]
G04D1/10	. Devices for opening or closing watch bottoms or covers [N: machines therefor G04D3/00]
G04D3/00	Watchmakers` or watch-repairers` machines or tools for working materials [N: metal working in general class B23]
G04D3/00B	. [N: for mechanical working other than with a lathe (lathes for watchmakers G04D3/02)]
G04D3/00B2	. . [N: for parts of driving means]
G04D3/00B2B	. . . [N: for springs (springs in general B21F ; mainspring construction G04B1/14 ; springs for the regulating mechanism see G04D3/00B12C)]
G04D3/00B2C	. . . [N: for spring barrels (construction of spring barrels G04B1/16 , G04B1/18)]
G04D3/00B4	. . [N: for parts of the winding-up mechanism, e.g. for winding axles, crowns (construction thereof G04B3/00 , G04B5/00)]
G04D3/00B6	. . [N: for components of the pawl construction, stop clicks, clutches (construction thereof G04B11/00)]
G04D3/00B8	. . [N: for components of gearworks (construction thereof G04B13/00)]
G04D3/00B8B	. . . [N: for gear wheels or gears]
G04D3/00B8C	. . . [N: for axles, sleeves]
G04D3/00B8D	. . . [N: for axletaps, e.g. for grinding or polishing thereof (on a lathe G04D3/02)]
G04D3/00B10	. . [N: for components of the escape mechanism (construction thereof G04B15/00)]
G04D3/00B10B	. . . [N: for levers]
G04D3/00B10C	. . . [N: for lever wheels]
G04D3/00B12	. . [N: for components of the regulating mechanism]
G04D3/00B12B	. . . [N: for balances (construction thereof G04B17/06B)]
G04D3/00B12C	. . . [N: for coil-springs (coil-springs in general B21F ; springs for the driving mechanism G04D3/00B2B)]
G04D3/00B14	. . [N: for components of the time-indicating mechanisms (construction thereof G04B19/00)]
G04D3/00B14B	. . . [N: for hands (construction thereof G04B19/00)]
G04D3/00B14C	. . . [N: for dials (construction thereof G04B19/10 , G04B19/12)]
G04D3/00B14D	. . . [N: for time markers]
G04D3/00B16	. . [N: for framework components (construction thereof G04B29/00)]

- G04D3/00B18 . . [N: for bearing components (construction thereof [G04B31/00](#))]
- G04D3/00B18B . . . [N: for bearing jewels (machines for boring through stones [B28D](#); for diamonds [B24B](#); diamond polishing [B24B9/16](#); manufacture of drawing stones [B23P5/00](#); setting of industrial stones [B23P15/24](#))]
- G04D3/00B20 . . [N: for components for protecting the mechanism against external influences (construction thereof [G04B37/00](#), [G04B43/00](#))]
- G04D3/00B20B . . . [N: for cases]
- G04D3/00B20C . . . [N: for the fastening means of the case or bracelet (construction thereof [G04B37/14F](#))]
- G04D3/00C . [N: for working with non-mechanical means, e.g. chemical, electrochemical, metallising, vapourising; with electron beams, laser beams]
- G04D3/00C1 . . [N: for bearing components]
- G04D3/00D . [N: for treatment of the material, e.g. surface treatment]
- G04D3/00D2 . . [N: for components of driving mechanisms, e.g. mainspring]
- G04D3/00D8 . . [N: for gearwork components]
- G04D3/00D8B . . . [N: for gear wheels or gears]
- G04D3/00D8C . . . [N: for axles, sleeves]
- G04D3/00D10 . . [N: for components of the escapement mechanism, e.g. lever escapement, escape wheel]
- G04D3/00D12 . . [N: for components of the regulating mechanism, e.g. coil springs]
- G04D3/00D14 . . [N: for components of the time-indicating mechanism, e.g. dials]
- G04D3/00D18 . . [N: for bearing components]
- G04D3/00D20 . . [N: for components of the means protecting the mechanism against external influences, e.g. cases]
- G04D3/02 . Lathes, with one or more supports; Burnishing machines, with one or more supports [N: metal lathes [B23B](#); automatic lathes [B23B](#); grinding and polishing in general class [B24](#)]
- G04D3/02B . . [N: Components]
- G04D3/02B2 . . . [N: Jaw-plates, revolving-head nippers]
- G04D3/02C . . [N: for the manufacture of special components for clockworks]
- G04D3/02C8 . . . [N: for gearwork components]
- G04D3/02C8B [N: for gear wheels or gears]
- G04D3/02C8C [N: for axles, sleeves]
- G04D3/02C8D [N: for axle taps]
- G04D3/02C14 . . . [N: for components of the time-indicating mechanism, e.g. dials]
- G04D3/02C18 . . . [N: for bearing components]
- G04D3/02C20 . . . [N: for components of the means protecting the mechanism from external influences, e.g. cases]
- G04D3/04 . Devices for placing bearing jewels, bearing sleeves, or the like in position [N: fixing jewels [A44C17/04](#); tools for assembling and taking apart gear wheels and bearing components [B25B](#); machines for the manufacture of bearing jewels and components [G04D3/00B](#)]
- G04D3/04B . . [N: for bearing jewels (pressing nippers and hand tools [G04D1/00B6](#))]
- G04D3/04C . . [N: for lever, Impulse-pin (adjustment of the escapement [G04D7/06](#))]

- G04D3/04D
 - . . [N: for the coil rolls or bobbins]
- G04D3/06
 - . Devices for shaping or setting watch glasses [N: (cutting watch glasses [C03B33/04](#); fixing spectacle lenses [42HS2A1](#); grinding or working of spectacle lenses and lenses [B24B](#); working plastic materials in general [B29](#))]
- G04D3/06B
 - . . [N: Shaping without chipping away, e.g. by hot pressing or by punching out the whole piece from a plate]
- G04D3/06C
 - . . [N: Shaping by removing material, e.g. cutting out from a plate, milling the edges]
- G04D3/06D
 - . . [N: Setting or taking apart, whereby a temporary deformation of the glass may take place]
- G04D3/08
 - . Machines or apparatus for cleaning
- G04D3/08B
 - . . [N: whereby the components to be cleaned are placed in a container]
- G04D3/08B2
 - . . . [N: whereby the container rotates in a cleaning fluid]
- G04D5/00**
Oiling devices; Special lubricant containers for watchmakers [N: bearings constructed with regard to oiling of the clockwork [G04B31/00T](#); oilcans for lubricating in general [F16N3/04](#)]
- G04D5/00B
 - . [N: Oilcans and other hand tools for lubricating special parts of the clockwork mechanism]
- G04D7/00**
Measuring, counting, calibrating, testing or regulating apparatus [N: measuring devices and calibers in general [G01B](#); counters in general [H03K](#)]
- G04D7/00B
 - . [N: Purely mechanical measuring and testing apparatus]
- G04D7/00C
 - . [N: Electrical measuring and testing apparatus]
- G04D7/00C2
 - . . [N: for electric or electronic clocks]
- G04D7/00D
 - . [N: Optical measuring and testing apparatus]
- G04D7/00G
 - . [N: Counters for small components, e.g. bearing jewels]
- G04D7/00K
 - . [N: Testing apparatus for complete clockworks with regard to external influences or general good working]
- G04D7/00K2
 - . . [N: with regard to the sealing of the case]
- G04D7/00K3
 - . . [N: with regard to the reaction to shocks]
- G04D7/00K4
 - . . [N: with regard to the functioning of the automatic winding-up device]
- G04D7/02
 - . for mainsprings
- G04D7/04
 - . for gearwork, [N: e.g. optical control of gear wheels; optical control in general [G01B](#), [G01B9/08](#)]
- G04D7/06
 - . for escapements
- G04D7/08
 - . for balance wheels
- G04D7/08B
 - . . [N: for adjusting the felloe or the shafts (adjustment of the gear wheels [G04D7/04](#))]

G04D7/08C	. . [N:for balancing]
G04D7/08C2	. . . [N: by setting adjustable elements, e.g. balance wheel screws]
G04D7/08C3	. . . [N: by removing material from the balance wheel itself]
G04D7/08C3B	. . . . [N: Automatic devices therefor (balancing and loading or removing carried out automatically)]
G04D7/08C4	. . . [N: by loading the balance wheel itself with material]
G04D7/10	. for hairsprings [N: of balances]
G04D7/12	. Timing devices for clocks or watches for comparing the rate of the oscillating member with a standard [N: supporting devices for clocks with built-in recording apparatus G04D1/06B ; measuring short time intervals G04F10/00 ; frequency measuring in general H04B , G01R]
G04D7/12B	. . [N: only for measuring]
G04D7/12B2	. . . [N: for complete clockworks]
G04D7/12B2B	. . . . [N: with recording, e.g. vibrograph]
G04D7/12B2B2	. . . . . [N: Devices for facilitating the reading or the interpretation of the recording]
G04D7/12B3	. . . [N: for the control mechanism only (found from outside the clockwork)]
G04D7/12B3B	. . . . [N: for measuring amplitude]
G04D7/12B3C	. . . . [N: for measuring frequency]
G04D7/12C	. . [N: wherein further adjustment devices are present]
G04D7/12C2	. . . [N: for complete clockworks]
G04D7/12C3	. . . [N: for the control mechanism only (from outside the clockwork)]
G04D7/12C3B	. . . . [N: whereby the adjustment device works on the compass]
G04D7/12C3C	. . . . [N: whereby the adjustment device works on the mainspring]
G04D7/12C3D	. . . . [N: whereby the adjustment device works on the balance wheel]
G04D9/00	Demagnetising devices (demagnetising in general H01F13/00)
G04D99/00	Subject matter not provided for in other groups of this subclass [N0704]