

CPC COOPERATIVE PATENT CLASSIFICATION

B PERFORMING OPERATIONS; TRANSPORTING (NOTES omitted)

SHAPING

B25 HAND TOOLS; PORTABLE POWER-DRIVEN TOOLS; MANIPULATORS (NOTE omitted)

B25B TOOLS OR BENCH DEVICES NOT OTHERWISE PROVIDED FOR, FOR FASTENING, CONNECTING, DISENGAGING OR HOLDING

NOTE

This subclass is to be understood as covering those hand tools for fastening, connecting, disengaging, or holding which are not provided for in another subclass such as [B25C](#) (nailing or stapling tools) or in an application class such as [B65B](#) (packaging) or [B21F](#) (working of wire)

WARNINGS

- The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

| | | |
|-----------------------------|------------|--|
| B25B 23/143 | covered by | B25B 23/1422 |
| B25B 23/144 | covered by | B25B 23/1425 |
| B25B 23/151 | covered by | B25B 23/14 , B25B 23/147 |
| B25B 23/153 | covered by | B25B 23/1415 |
| B25B 23/155 | covered by | B25B 23/141 |
| B25B 23/157 | covered by | B25B 23/14 |
| B25B 23/159 | covered by | B25B 23/14 |
| B25B 27/067 | covered by | B25B 27/06 |
| B25B 27/073 | covered by | B25B 27/062 |
- 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 | Vices (specially adapted for tying flies for angling A01K 97/28; specially adapted for machine tools B23Q 3/00 {; rope or cable splicing vices D07B 7/162}) | 1/241 | . . . {characterised by surface features or material} |
| | | 1/2415 | {being composed of a plurality of parts adapting to the shape of the workpiece} |
| 1/02 | . with sliding jaws | 1/2421 | {the parts having a linear movement} |
| 1/04 | . with pivoted jaws | 1/2426 | {the parts having a pivotal movement} |
| 1/06 | . Arrangements for positively actuating jaws | 1/2431 | . . . {the whole jaw being pivotable around an axis perpendicular to the actioning direction of the vice} |
| 1/08 | . . using cams | | |
| 1/10 | . . using screws | 1/2436 | {around a vertical axis (B25B 1/2447 takes precedence)} |
| 1/103 | . . . {with one screw perpendicular to the jaw faces, e.g. a differential or telescopic screw} | 1/2442 | {around a horizontal axis (B25B 1/2447 takes precedence)} |
| 1/106 | . . . {with mechanical or hydraulic power amplifiers} | 1/2447 | {to put one of the jaw faces in a position opposite to the second jaw} |
| 1/12 | . . . with provision for disengagement | 1/2452 | . . . {with supplementary jaws} |
| 1/125 | {with one screw perpendicular to the jaw faces} | 1/2457 | . . . {with auxiliary attachments} |
| 1/14 | . . using toggle links | 1/2463 | {Supports for the workpiece} |
| 1/16 | . . by pedal, with or without provision for additional manual actuation | 1/2468 | {Lateral positioning arms} |
| 1/18 | . . motor driven, e.g. with fluid drive, with or without provision for manual actuation | 1/2473 | . . . {with pull-down action on the workpiece} |
| 1/20 | . Vices for clamping work of special profile, e.g. pipes | 1/2478 | . . . {with more than one pair of jaws} |
| 1/205 | . . {Vices of the chain or strip type} | 1/2484 | . . {Supports} |
| 1/22 | . Arrangements for turning or tilting vices | 1/2489 | . . {Slideways} |
| 1/24 | . Details, e.g. jaws of special shape, slideways | 1/2494 | . . {Means indicating the distance between jaws or their angular position} |
| 1/2405 | . . {Construction of the jaws} | | |
| | | 3/00 | Hand vices, i.e. vices intended to be held by hand; Pin vices |

- 5/00 Clamps** (for holding or positioning work for welding, soldering, or cutting by applying heat locally [B23K 37/04](#))
- 5/003 . {Combinations of clamps}
 - 5/006 . {Supporting devices for clamps}
 - 5/02 . with sliding jaws
 - 5/04 . with pivoted jaws
 - 5/06 . Arrangements for positively actuating jaws
 - 5/061 . . {with fluid drive ([B25B 5/087](#), [B25B 5/122](#) take precedence)}
 - 5/062 . . . {with clamping means pivoting around an axis parallel to the pressing direction}
 - 5/064 . . . {with clamping means pivoting around an axis perpendicular to the pressing direction ([B25B 5/122](#) takes precedence)}
 - 5/065 . . . {involving the use of flexible pressure bags or diaphragms}
 - 5/067 . . {C-clamps ([B25B 5/061](#), [B25B 5/082](#), [B25B 5/101](#), [B25B 5/125](#) take precedence)}
 - 5/068 . . {with at least one jaw sliding along a bar ([B25B 5/061](#), [B25B 5/085](#), [B25B 5/102](#), [B25B 5/127](#) take precedence)}
 - 5/08 . . using cams
 - 5/082 . . . {C-clamps}
 - 5/085 . . . {with at least one jaw sliding along a bar}
 - 5/087 . . . {actuated by a hydraulic or pneumatic piston}
 - 5/10 . . using screws
 - 5/101 . . . {C-clamps}
 - 5/102 . . . {with at least one jaw sliding along a bar}
 - 5/103 . . . {with a hinge}
 - 5/104 . . . {with one screw and one clamping lever and one fulcrum element}
 - 5/105 {with one end of the lever resting on a table and the screw being positioned between the ends of the lever}
 - 5/106 {with one end of the lever resting on an additional block and the screw being positioned between the ends of the lever}
 - 5/107 {Blocks therefor}
 - 5/108 {the screw contacting one of the ends of the lever}
 - 5/109 . . . {with two screws, e.g. parallel screw clamps}
 - 5/12 . . using toggle links
 - 5/122 . . . {with fluid drive}
 - 5/125 . . . {C-clamps}
 - 5/127 . . . {with at least one jaw sliding along a bar}
 - 5/14 . Clamps for work of special profile ([using chains or strips](#) [B25B 1/205](#))
 - 5/142 . . {for windows and frames}
 - 5/145 . . {for plates}
 - 5/147 . . {for pipes}
 - 5/16 . Details, e.g. jaws, jaw attachments
 - 5/163 . . {Jaws or jaw attachments}
 - 5/166 . . {Slideways; Guiding and/or blocking means for jaws thereon}

- 7/00 Pliers; Other hand-held gripping tools with jaws on pivoted limbs; Details applicable generally to pivoted-limb hand tools** (implements for fastening, connecting, or tensioning wire or strip [B25B 25/00](#); adapted for other fitting or separating purposes [B25B 27/00](#); for marking animals [A01K 11/00](#); dentists' forceps [A61C 3/00](#); bending wire eyes [B21F 1/06](#); hand-held metal-shearing or metal-cutting devices [B23D 29/00](#); hand cutting tools [B26B](#); for punching or perforating [B26F 1/36](#); devices for securing ends of binding material in bundling machines [B65B 13/24](#); specially designed for watch-making or comparable work [G04D 1/00](#))
- 7/02 . Jaws
 - 7/04 . . adjustable
 - 7/06 . Joints
 - 7/08 . . with fixed fulcrum
 - 7/10 . . with adjustable fulcrum
 - 7/12 . involving special transmission means between the handles and the jaws, e.g. toggle levers, gears
 - 7/123 . . {with self-locking toggle levers}
 - 7/126 . . {with fluid drive}
 - 7/14 . Locking means ([B25B 7/123](#) takes precedence)
 - 7/16 . . combined with means for tightening the operating arms of jaws
 - 7/18 . Adjusting means for the operating arms
 - 7/20 . Pliers for sealing
 - 7/22 . Pliers provided with auxiliary tool elements, e.g. cutting edges, nail extractors ([for removing insulation or armouring from electric cables](#) [H02G 1/12](#))
- 9/00 Hand-held gripping tools other than those covered by group [B25B 7/00](#)** (wrenches [B25B 13/00](#); specially adapted for watchmakers' or like use [G04D](#))
- 9/02 . without sliding or pivotal connections, e.g. tweezers, onepiece tongs
 - 9/04 . with sliding jaws
- 11/00 Work holders not covered by any preceding group in the subclass, e.g. magnetic work holders, vacuum work holders** (for holding or positioning work for welding, soldering, or cutting by applying heat locally [B23K 37/04](#); specially adapted to machine tools [B23Q 3/00](#))
- 11/002 . {Magnetic work holders}
 - 11/005 . {Vacuum work holders}
 - 11/007 . . {portable, e.g. handheld}
 - 11/02 . Assembly jigs
- 13/00 Spanners; Wrenches** (hand-driven gear-operated [B25B 17/00](#); impact wrenches [B25B 19/00](#); portable power-driven [B25B 21/00](#) {; spanners or wrenches specially adapted for osteosynthesis [A61B 17/8875](#)}; machines for fitting together or separating metal parts [B23P 19/00](#) {; for mounting or dismounting wheels [B60B 29/003](#)})
- 13/005 . {Cross wrenches}
 - 13/02 . with rigid jaws ([B25B 13/46](#), [B25B 13/48](#) take precedence)
 - 13/04 . . of ring jaw type
 - 13/06 . . of socket type
 - 13/065 . . . {characterised by the cross-section of the socket}
 - 13/08 . . of open jaw type

- 13/10 . . with adjustable jaws ([B25B 13/46](#), [B25B 13/48](#) {[B25B 13/5041](#)} take precedence)
- 13/102 . . {composed of a plurality of sockets slidable in each other}
- 13/105 . . {composed of a plurality of slidable pins}
- 13/107 . . {composed of a main body with exchangeable inserts}
- 13/12 . . the jaws being slidable
- 13/14 . . . by rack and pinion, worm or gear
- 13/16 . . . by screw or nut
- 13/18 . . . by cam, wedge, or lever
- 13/20 . . . Arrangements for locking the jaws
- 13/22 by ratchet action or toothed bars
- 13/24 by cam, wedge, or friction means
- 13/26 by toggle links
- 13/28 . . the jaws being pivotally movable
- 13/30 . . . by screw or nut
- 13/32 . . . by cam, wedge or lever
- 13/34 . . . Arrangements for locking the jaws
- 13/36 by ratchet action
- 13/38 by cam, wedge, or friction means
- 13/40 by toggle links
- 13/42 with self-locking action
- 13/44 . . of the chuck type
- 13/46 . . of the ratchet type, for providing a free return stroke of the handle
- 13/461 . . {with concentric driving and driven member}
- 13/462 . . . {the ratchet parts engaging in a direction radial to the tool operating axis}
- 13/463 {a pawl engaging an externally toothed wheel}
- 13/465 {a pawl engaging an internally toothed ring}
- 13/466 . . . {the ratchet parts engaging in an axial direction}
- 13/467 . . . {which are gear-operated}
- 13/468 . . . {with possibility of locking the ratchet mechanism}
- 13/48 . . for special purposes
- 13/481 . . {for operating in areas having limited access}
- 13/483 . . {for spark plugs}
- 13/485 . . {for theft-proof screws, bolts or nuts}
- 13/486 . . . {using a threaded connection between screw and tool}
- 13/488 . . {for connections where two parts must be turned in opposite directions by one tool}
- 13/50 . . for operating on work of special profile, e.g. pipes
- 13/5008 . . . {for operating on pipes or cylindrical objects ([B25B 13/52](#) takes precedence)}
- 13/5016 {by externally gripping the pipe}
- 13/5025 {using a pipe wrench type tool}
- 13/5033 {with fixed jaws}
- 13/5041 {with movable or adjustable jaws}
- 13/505 {Pivotally moving or adjustable}
- 13/5058 {Linearly moving or adjustable, e.g. with an additional small tilting or rocking movement}
- 13/5066 {using rollers moving along radial cams in a cage structure at least partially surrounding the pipe}
- 13/5075 {using jaws moving along radial cams or by excentric disks in a cage structure at least partially surrounding the pipe}
- 13/5083 {by internally gripping the pipe}
- 13/5091 . . . {for operating on wing nuts, hooks, eye hooks or the like}
- 13/52 . . . Chain or strap wrenches
- 13/54 . . . Internal grip wrenches {([B25B 13/5083](#) takes precedence)}
- 13/56 . . Spanner sets
- 13/58 . . Jaw attachments
- 15/00** **Screwdrivers** (hand-driven gear-operated [B25B 17/00](#); impact screwdrivers [B25B 19/00](#); portable power-driven [B25B 21/00](#) {; screwdrivers specially adapted for osteosynthesis [A61B 17/8875](#)})
- 15/001 . . {characterised by material or shape of the tool bit}
- 15/002 . . {characterised by material used or surface finishing}
- 15/004 . . {characterised by cross-section}
- 15/005 . . . {with cross- or star-shaped cross-section}
- 15/007 . . . {with blade of flat or substantially flat cross-section}
- 15/008 . . . {Allen-type keys}
- 15/02 . . operated by rotating the handle
- 15/04 . . with ratchet action
- 15/06 . . operated by axial movement of the handle
- 17/00** **Hand-driven gear-operated wrenches or screwdrivers** (ratchet-operated [B25B 13/46](#) {[B25B 13/467](#)}, [B25B 15/04](#); {for mounting or dismounting wheels [B60B 29/005](#)})
- 17/02 . . providing for torque amplification
- 19/00** **Impact wrenches or screwdrivers** (portable power-driven [B25B 21/02](#))
- 21/00** **Portable power-driven screw or nut setting or loosening tools;** (details or components, e.g. casings, bodies, of portable power-driven tools not particularly related to the operation performed [B25F 5/00](#); {for mounting or dismounting wheels [B60B 29/006](#)}); **Attachments for drilling apparatus serving the same purpose** (machines [B23P 19/06](#))
- 21/001 . . {Combined nut setting and crimping}
- 21/002 . . {for special purposes}
- 21/004 . . {of the ratchet type}
- 21/005 . . . {driven by a radially acting hydraulic or pneumatic piston}
- 21/007 . . {Attachments for drilling apparatus for screw or nut setting or loosening}
- 21/008 . . {with automatic change-over from high speed-low torque mode to low speed-high torque mode}
- 21/02 . . with means for imparting impact to screwdriver blade or nut socket
- 21/023 . . . {for imparting an axial impact, e.g. for self-tapping screws}
- 21/026 . . {Impact clutches}
- 23/00** **Details of, or accessories for, spanners, wrenches, screwdrivers** (bolt tensioners [B25B 29/02](#))
- 23/0007 . . {Connections or joints between tool parts}
- 23/0014 . . . {Screwdriver- or wrench-heads provided with cardan joints or the like}
- 23/0021 . . . {Prolongations interposed between handle and tool}
- 23/0028 . . . {Angular adjustment means between tool head and handle}
- 23/0035 . . . {Connection means between socket or screwdriver bit and tool}

- 23/0042 . . {Connection means between screwdriver handle and screwdriver shaft}
- 23/005 . {Screw guiding means}
- 23/0057 . {Socket or nut ejector means}
- 23/0064 . {Means for adjusting screwing depth}
- 23/0071 . {Abutment for screws or nuts}
- 23/0078 . {Reaction arms}
- 23/0085 . {Counterholding devices}
- 23/0092 . {Tools for placing nut or screw lock wires}
- 23/02 . Arrangements for handling screws or nuts
- 23/04 . . for feeding screws or nuts
- 23/045 . . . {using disposable strips or discs carrying the screws or nuts}
- 23/06 . . . using built-in magazine ([B25B 23/045 takes precedence](#))
- 23/065 {the magazine being coaxial with the tool axis}
- 23/08 . . for holding or positioning screw or nut prior to or during its rotation
- 23/10 . . . using mechanical gripping means
- 23/101 {for hand-driven screw-drivers ([B25B 23/105 takes precedence](#))}
- 23/103 {for gripping threaded studs}
- 23/105 {the gripping device being an integral part of the driving bit}
- 23/106 {the driving bit being a blade}
- 23/108 {the driving bit being a Philips type bit, an Allen type bit or a socket}
- 23/12 . . . using magnetic means
- 23/14 . Arrangement of torque limiters or torque indicators in wrenches or screwdrivers ([couplings for transmitting rotation or clutches F16D](#); devices for measuring torque [per se G01L](#))
- 23/1405 . . {for impact wrenches or screwdrivers}
- 23/141 . . {Mechanical overload release couplings}
- 23/1415 . . {Break members; Arrangements specially adapted for break-bolts ([break-bolts per se F16B 31/00](#))}
- 23/142 . . specially adapted for hand operated wrenches or screwdrivers
- 23/1422 . . . {torque indicators or adjustable torque limiters}
- 23/1425 {by electrical means}
- 23/1427 {by mechanical means}
- 23/145 . . specially adapted for fluid operated wrenches or screwdrivers
- 23/1453 . . . {for impact wrenches or screwdrivers}
- 23/1456 . . . {having electrical components}
- 23/147 . . specially adapted for electrically operated wrenches or screwdrivers
- 23/1475 . . . {for impact wrenches or screwdrivers}
- 23/15 . . having a mechanism to mark the work when the selected torque is applied to the work
- 23/16 . Handles ([in general B25G](#))
- 23/18 . Devices for illuminating the head of the screw or the nut
- 25/00** **Implements for fastening, connecting or tensioning of wire or strip**
- 25/005 . {for applying wire clasps to hose couplings}
- 27/00** **Hand tools, specially adapted for fitting together or separating parts or objects whether or not involving some deformation, not otherwise provided for ([machines for simply fitting together or separating metal parts or objects B23P 19/00](#))**
- 27/0007 . {Tools for fixing internally screw-threaded tubular fasteners}
- 27/0014 . . {motor-driven}
- 27/0021 . {Tools for bonding or debonding brake linings}
- 27/0028 . {Tools for removing or installing seals ([B25B 27/0092 takes precedence](#))}
- 27/0035 . {for motor-vehicles ([wrenches for mounting or dismounting wheels B60B 29/003](#))}
- 27/0042 . . {Tools for removing or replacing filters or for draining oil; Tools for setting or loosening closure means for radiators, batteries, or the like}
- 27/005 . . {for pulling off battery terminals}
- 27/0057 . . {for screwing or unscrewing tire valve caps}
- 27/0064 . . {for assembling or disassembling clutches}
- 27/0071 . {for bicycles}
- 27/0078 . {Tools for wheel weights}
- 27/0085 . {explosive-powered}
- 27/0092 . {Tools moving along strips, e.g. decorating or sealing strips, to insert them in, or remove them from, grooves or profiles ([machines therefor B23P 19/047](#))}
- 27/02 . for connecting objects by press fit or detaching same ([B25D 1/16 takes precedence](#))}
- 27/023 . . {using screws}
- 27/026 . . {fluid driven}
- 27/04 . . inserting or withdrawing keys
- 27/06 . . inserting or withdrawing sleeves or bearing races
- 27/062 . . . {using screws}
- 27/064 . . . {fluid driven}
- 27/08 . . inserting or withdrawing cotter pins
- 27/10 . . inserting fittings into hoses
- 27/12 . . mounting or demounting piston rings
- 27/14 . for assembling objects other than by press fit or detaching same
- 27/143 . . {for installing wire thread inserts or tubular threaded inserts}
- 27/146 . . {Clip clamping hand tools}
- 27/16 . . abutted flanges
- 27/18 . . withdrawing broken threaded parts or twist drills
- 27/20 . . inserting or withdrawing split pins or circlips
- 27/205 . . . {Pliers or tweezer type tools with tow actuated jaws}
- 27/22 . . positioning sprocket chains, endless tracks, antiskid chains ([tools or implements for repairing chains using metal-working operations B21L 21/00](#))
- 27/24 . . mounting or demounting valves ([for tyre valves B60C 25/18](#))
- 27/26 . . . compressing the springs
- 27/28 . . positioning or withdrawing resilient bushings or the like
- 27/30 . . positioning or withdrawing springs, e.g. coil or leaf springs ([B25B 27/26 takes precedence](#); [watchmakers' or watch-repairers' tools G04D](#))
- 27/302 {coil springs other than torsion coil springs}
- 27/304 {by compressing coil springs}
- 27/306 {by tensioning coil springs}
- 27/308 . . . {leaf springs}
- 28/00** **Portable power-driven joining or separation tools ([B25B 21/00 takes precedence](#))**

B25B

- 29/00** **Accessories** (specially for spanners, wrenches, screwdrivers [B25B 23/00](#); tool boxes, tool positioning stands [B25H](#))
- 29/02 . Bolt tensioners
- 31/00** **Hand tools for applying fasteners** (nailing or stapling tools [B25C](#))
- 31/005 . {for temporarily connecting sheets before or during assembly operations}
- 33/00** **Hand tools not covered by any other group in this subclass**
- 33/005 . {Chuck keys}