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
1. 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 23/159 covered by B25B 27/06
   - B25B 27/067 covered by B25B 27/06
   - B25B 27/073 covered by B25B 27/062

2. 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)
   1/02 . with sliding jaws
   1/04 . with pivoted jaws
   1/06 . Arrangements for positively actuating jaws
   1/08 . . using cams
   1/10 . . using screws
   1/103 . . . [with one screw perpendicular to the jaw faces, e.g. a differential or telescopic screw]
   1/106 . . . [with mechanical or hydraulic power amplifiers]
   1/12 . . . with provision for disengagement
   1/125 . . . . [with one screw perpendicular to the jaw faces]
   1/14 . . using toggle links
   1/16 . . by pedal, with or without provision for additional manual actuation
   1/18 . . motor driven, e.g. with fluid drive, with or without provision for manual actuation
   1/20 . . Vices for clamping work of special profile, e.g. pipes
   1/205 . . . {Vices of the chain or strip type}
   1/22 . . Arrangements for turning or tilting vices
   1/24 . . Details, e.g. jaws of special shape, slideways
   1/2405 . . . {Construction of the jaws}
   1/241 . . . [characterised by surface features or material]
   1/2415 . . . . [being composed of a plurality of parts adapting to the shape of the workpiece]
   1/2421 . . . . [the parts having a linear movement]
   1/2426 . . . . [the parts having a pivotal movement]
   1/2431 . . . [the whole jaw being pivotable around an axis perpendicular to the actuation direction of the vice]
   1/2436 . . . [around a vertical axis (B25B 1/2447 takes precedence)]
   1/2442 . . . . [around a horizontal axis (B25B 1/2447 takes precedence)]
   1/2447 . . . . [to put one of the jaw faces in a position opposite to the second jaw]
   1/2452 . . . [with supplementary jaws]
   1/2457 . . . [with auxiliary attachments]
   1/2463 . . . [Supports for the workpiece]
   1/2468 . . . [Lateral positioning arms]
   1/2473 . . . [with pull-down action on the workpiece]
   1/2478 . . . [with more than one pair of jaws]
   1/2484 . . . [Supports]
   1/2489 . . . [Slideways]
   1/2494 . . . [Means indicating the distance between jaws or their angular position]

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}
5/068  . . {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’ forces 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, one-piece 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}
11/002  . . 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 pecially 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 . . . . . . [Pivotingally 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 eccentric 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 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 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]
Implement means for fastening, connecting or tensioning of wire or strip

Hand tools, specially adapted for fitting together or separating parts or objects whether or not involving some deformation, not otherwise provided for

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}