

**CPC****COOPERATIVE PATENT CLASSIFICATION****B23G**

**THREAD CUTTING; WORKING OF SCREWS, BOLT HEADS, OR NUTS, IN CONJUNCTION THEREWITH** (making helical grooves by turning [B23B 5/48](#), by milling [B23C 3/32](#), by forging, pressing, or hammering [B21K 1/56](#), by grinding [B24B 19/02](#); arrangements for copying or controlling [B23Q](#); thread-forming by corrugating tubes [B21D 15/04](#), by rolling [B21H 3/02](#))

**NOTE**

The term "thread cutting" is to be understood as including the use of tools similar both in form and in manner of use to thread-cutting tools, but without removing any material

**B23G 1/00**

**Thread cutting; Automatic machines specially designed therefor**

**B23G 1/02**

.. on an external or internal cylindrical or conical surface, e.g. on recesses ([B23G 1/16](#), [B23G 1/22](#), [B23G 1/32](#), [B23G 1/36](#) take precedence)

**B23G 1/04**

... Machines with one working-spindle

**B23G 1/06**

... specially adapted for making conical screws, e.g. wood-screws

**B23G 1/08**

.. Machines with a plurality of working spindles

**B23G 1/10**

... specially adapted for making conical screws, e.g. wood-screws

**B23G 1/12**

.. Machines with a toothed cutter in the shape of a spur-gear of the like which is rotated to generate the thread profile as the work rotates

**B23G 1/14**

... specially adapted for making conical screws, e.g. wood-screws

**B23G 1/16**

.. in holes of workpieces by taps ([B23G 1/26](#), [B23G 1/32](#), [B23G 1/36](#) take precedence)

**B23G 1/18**

.. Machines with one working spindle

**B23G 1/185**

... {specially adapted for making nuts}

**B23G 1/20**

.. Machines with a plurality of working spindles

**B23G 1/205**

... {specially adapted for making nuts}

**B23G 1/22**

.. Machines specially designed for operating on pipes or tubes

**B23G 1/225**

.. {automatically controlled}

**B23G 1/24**

.. portable

**B23G 1/26**

.. Manually-operated thread-cutting devices (features of the threading tool per se [B23G 5/00](#))

**B23G 1/261**

.. {Die and tap wrenches (lubricating and cooling devices therefor [B23G 5/005](#); [B23G 1/265](#) takes precedence)}

**B23G 1/262**

... {Tap wrenches having a V slot ([B23G 1/264](#) takes precedence)}

**B23G 1/263**

... {Die wrenches having a cylindrical opening and a clamping screw}

**B23G 1/264**

.... {comprising tap wrench features with a V slot}

**B23G 1/265**

.. {Die and tap wrenches with a guiding part (lubricating and cooling devices therefor [B23G 5/005](#))}

**B23G 1/266**

... {Tap wrenches having a V slot ([B23G 1/268](#) takes precedence)}

**B23G 1/267**

... {Die wrenches having a cylindrical opening and a clamping screw}

B23G 1/268	. . . . {comprising tap wrench features with a V slot}
B23G 1/28	. . with means for adjusting the threading tool
B23G 1/30	. . without means for adjusting the threading tool, e.g. with die-stock (tap wrenches B25B)
B23G 1/32	. by milling
B23G 1/34	. . with a cutting bit moving in a closed path arranged eccentrically with respect to the axis of the rotating workpieces
B23G 1/36	. by grinding
B23G 1/38	. . with grinding discs guided along the workpiece in accordance with the pitch of the required thread
B23G 1/40	. . with grinding discs guided radially to the workpiece
B23G 1/42	. Centreless grinding
B23G 1/44	. Equipment or accessories specially designed for machines or devices for thread cutting
B23G 1/46	. . for holding the threading tools (B23B 31/083 takes precedence)
B23G 1/465	. . . { comprising arrangements for reversing the rotation of the tool}
B23G 1/48	. . for guiding the threading tools
B23G 1/50	. . for cutting thread by successive operations
B23G 1/52	. . for operating on pipes or tubes
<b>B23G 3/00</b>	<b>Arrangements or accessories for enabling machine tools not specially designed only for thread cutting to be used for this purpose, e.g. arrangements for reversing the working spindle</b>
B23G 3/005	. {for enabling presses to be used for thread cutting}
B23G 3/02	. for withdrawing or resetting the threading tool
B23G 3/04	. . for repeatedly setting the threading tool in a predetermined working position
B23G 3/06	. for compensating inaccuracies in the pitch of the lead-screw
B23G 3/08	. for advancing or controlling the threading tool or the work by templates, cams, or the like
B23G 3/10	. . for cutting thread of variable pitch
B23G 3/12	. . for using several adjacently-arranged threading tools, e.g. using several chasers
B23G 3/14	. . for cutting thread of conical shape
<b>B23G 5/00</b>	<b>Thread-cutting tools; Die-heads</b>
B23G 5/005	. {with lubrication or cooling devices}
B23G 5/02	. without means for adjustment
B23G 5/04	. . Dies
B23G 5/043	. . . {with guiding means}
B23G 5/046	. . . {for conical thread}
B23G 5/06	. . Taps (chucks therefor B23B 31/00)
B23G 5/062	. . . {with a guiding means part}
B23G 5/064	. . . {with weakened shank portion}
B23G 5/066	. . . {with stops}

B23G 5/068	... {with means for removing the broken tap}
B23G 5/08	. with means for adjustment
B23G 5/083	.. {Adjustable dies}
B23G 5/086	... {with guiding means}
B23G 5/10	.. Die-heads
B23G 5/103	... {with guiding means}
B23G 5/106	... {Collet-type die-heads}
B23G 5/12	... self-releasing
B23G 5/14	.. Tapping-heads
B23G 5/16	... self-releasing
B23G 5/18	. Milling cutters
B23G 5/182	.. {combined with other tools}
B23G 5/184	... {combined with drills (B23G 5/188 takes precedence)}
B23G 5/186	... {combined with chamfering tools}
B23G 5/188	.... {and with drills}
B23G 5/20	. combined with other tools, e.g. drills {(B23G 5/182 takes precedence; screws which drill and tap F16B 25/00)}
<b>B23G 7/00</b>	<b>Forming thread by means of tools similar both in form and in manner of use to thread-cutting tools, but without removing any material (features of machines or devices not specially adapted to the particular mode of forming the thread B23G 1/00)</b>
B23G 7/02	. Tools for this purpose
<b>B23G 9/00</b>	<b>Working screws, bolt heads, or nuts in conjunction with thread cutting, e.g. slotting screw heads or shanks, removing burrs from screw heads or shanks; Finishing, e.g. polishing, any screw-thread</b>
B23G 9/001	. {Working screws}
B23G 9/002	.. {Slotting screw heads or shanks}
B23G 9/003	.. {Deburring screws}
B23G 9/004	.. {Finishing screws (B23G 9/003 takes precedence)}
B23G 9/005	. {Working nuts}
B23G 9/006	.. {Slotting nuts}
B23G 9/007	.. {Deburring nuts}
B23G 9/008	.. {Finishing nuts (B23G 9/007 takes precedence)}
B23G 9/009	. {Thread cleaning or repairing}
<b>B23G 11/00</b>	<b>Feeding or discharging mechanisms combined with, or arranged in, or specially adapted for use in connection with, thread-cutting machines (for machines tools in general B23Q)</b>
<b>B23G 2200/00</b>	<b>Details of threading tools</b>
B23G 2200/02	. Tools in which the shank and the cutting part are made from different materials or from separate components
B23G 2200/04	. Tools with negative cutting angles

B23G 2200/06	. Connections between parts of threading tools
B23G 2200/062	. . Brazed connections
B23G 2200/065	. . Glued connections
B23G 2200/067	. . Welded connections
B23G 2200/08	. Threading tools with adjustable elements ( <a href="#">manually operated thread cutting devices with means for adjusting the threading tool B23G 1/28</a> )
B23G 2200/10	. Threading tools comprising cutting inserts
B23G 2200/12	. Threading tools comprising inserts for thread forming
B23G 2200/14	. Multifunctional threading tools
B23G 2200/141	. . Tools comprising means for deburring
B23G 2200/142	. . Tools comprising means for forming threads by deformation
B23G 2200/143	. . Tools comprising means for drilling
B23G 2200/144	. . Tools comprising a die
B23G 2200/145	. . Tools comprising means for milling features other than the thread
B23G 2200/146	. . Tools comprising a tap
B23G 2200/147	. . Tools comprising means for reaming
B23G 2200/148	. . Tools having means for countersinking
B23G 2200/16	. Tools with cutting edges spaced unequally around the circumference
B23G 2200/18	. Tools rotatable in both directions
B23G 2200/20	. Tools having a brush
B23G 2200/22	. Tools having an end cap, e.g. for the distribution of cutting fluid
B23G 2200/24	. Chip breakers
B23G 2200/26	. Coatings of tools
B23G 2200/28	. Threading tools having a conical form
B23G 2200/30	. Cutting edges that are rounded in the cross-sectional view of the cutting edge
B23G 2200/32	. Tools having a decreasing diameter in the direction of the shank from the tip
B23G 2200/34	. Tools having an increasing diameter in the direction of the shank from the tip ( <a href="#">B23G 2200/28 takes precedence</a> )
B23G 2200/36	. Tools having provision to produce threads of more than one type or size
B23G 2200/38	. Tools with shanks having a working end at each end of the shank
B23G 2200/40	. Tools with variable or different helix angles
B23G 2200/42	. Hollow tools
B23G 2200/44	. Taps with more than one threading section, the threading sections being axially spaced from one another
B23G 2200/46	. Tools having a section of polygonal form, e.g. for the transmission of torque
B23G 2200/48	. Spiral grooves, i.e. spiral flutes
B23G 2200/50	. Tools in which the pitch of the teeth is a multiple of the pitch of the thread being produced
<b>B23G 2210/00</b>	<b>Details of threads produced</b>
B23G 2210/04	. Internal threads

- B23G 2210/08 . External threads
- B23G 2210/12 . Threads having a large diameter
- B23G 2210/16 . Multiple start threads
- B23G 2210/21 . Threads in nuts
- B23G 2210/24 . Threads having a variable pitch
- B23G 2210/28 . Threads having a rounded profile
- B23G 2210/36 . Threads having a square profile
- B23G 2210/41 . Threads having a stepped profile
- B23G 2210/44 . Threads having a trapezoidal profile
- B23G 2210/48 . Threads having a special form or profile not otherwise provided for

**B23G 2225/00      Materials of threading tools, workpieces or other structural elements**

- B23G 2225/04 . Cubic boron nitride
- B23G 2225/08 . Cermets
- B23G 2225/12 . Chromium
- B23G 2225/16 . Diamond
- B23G 2225/165 . . Polycrystalline diamond
- B23G 2225/24 . Elastomers, e.g. rubber
- B23G 2225/28 . Hard metal, i.e. cemented carbides
- B23G 2225/32 . High speed steel
- B23G 2225/36 . Molybdenum disulphide
- B23G 2225/40 . Plastics not otherwise provided for
- B23G 2225/44 . Titanium
- B23G 2225/48 . Titanium aluminium nitride (TiAlN)
- B23G 2225/52 . Titanium carbide
- B23G 2225/56 . Titanium carbide nitride (TiCN)
- B23G 2225/60 . Titanium nitride

**B23G 2240/00      Details of equipment for threading other than threading tools, details of the threading process**

- B23G 2240/04 . Compensation of centrifugal force
- B23G 2240/08 . Evacuation of chips or fines
- B23G 2240/12 . Means for cooling or lubrication
- B23G 2240/16 . Equipment for producing threaded component with a rotating disc to hold the components
- B23G 2240/20 . Guiding devices with a pin affixable in a drilling chuck and with free rotation of the threading tool holder with respect to the pin
- B23G 2240/24 . Guides for threading tools having a V-groove for location on cylindrical workpieces
- B23G 2240/28 . Indication scales
- B23G 2240/32 . Threading devices designed to be mounted in the tailstock of a lathe
- B23G 2240/36 . Methods of threading not otherwise provided for
- B23G 2240/40 . Threading equipment having an integrally incorporated driving motor

- B23G 2240/44
  - . Tap or die wrenches with multiple locations for holding threading tools, e.g. for holding threading tools of different sizes
- B23G 2240/48
  - . Protective sleeves for taps
- B23G 2240/52
  - . Sensors
- B23G 2240/56
  - . Producing or refurbishing threads for spark plugs or glow plugs
- B23G 2240/60
  - . Thread whirling, i.e. production of a thread by means of an annular tool rotating about an axis not coincident with the axis of the thread being produced