

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
 - . . 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

B23G 3/00 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

- 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
 - . . for cutting thread of variable pitch
 - . . for using several adjacently-arranged threading tools, e.g. using several chasers
 - . . for cutting thread of conical shape

B23G 5/00 Thread-cutting tools; Die-heads

- B23G 5/005 . {with lubrication or cooling devices}
- B23G 5/02 . without means for adjustment
- B23G 5/04 . . Dies
 - . . . {with guiding means}
 - . . . {for conical thread}
- B23G 5/06 . . Taps ([chucks therefor B23B 31/00](#))
 - . . . {with a guiding means part}
 - . . . {with weakened shank portion}
 - . . . {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)}
B23G 7/00	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)
B23G 7/02	. Tools for this purpose
B23G 9/00	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
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}
B23G 11/00	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)
B23G 2200/00	Details of threading tools
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 (manually operated thread cutting devices with means for adjusting the threading tool B23G 1/28)
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 (B23G 2200/28 takes precedence)
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
B23G 2210/00	Details of threads produced
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