

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

- 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
- 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

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

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](#))}

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