

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

1/00	Thread cutting; Automatic machines specially designed therefor	1/32	• by milling
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)	1/34	• • with a cutting bit moving in a closed path arranged eccentrically with respect to the axis of the rotating workpieces
1/04	• • Machines with one working-spindle	1/36	• by grinding
1/06	• • • specially adapted for making conical screws, e.g. wood-screws	1/38	• • with grinding discs guided along the workpiece in accordance with the pitch of the required thread
1/08	• • Machines with a plurality of working spindles	1/40	• • with grinding discs guided radially to the workpiece
1/10	• • • specially adapted for making conical screws, e.g. wood-screws	1/42	• Centreless grinding
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	1/44	• Equipment or accessories specially designed for machines or devices for thread cutting
1/14	• • • specially adapted for making conical screws, e.g. wood-screws	1/46	• • for holding the threading tools (B23B 31/083 takes precedence)}
1/16	• in holes of workpieces by taps (B23G 1/26 , B23G 1/32 , B23G 1/36 take precedence)	1/465	• • • {comprising arrangements for reversing the rotation of the tool}
1/18	• • Machines with one working spindle	1/48	• • for guiding the threading tools
1/185	• • • {specially adapted for making nuts}	1/50	• • for cutting thread by successive operations
1/20	• • Machines with a plurality of working spindles	1/52	• • for operating on pipes or tubes
1/205	• • • {specially adapted for making nuts}	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
1/22	• Machines specially designed for operating on pipes or tubes	3/005	• {for enabling presses to be used for thread cutting}
1/225	• • {automatically controlled}	3/02	• for withdrawing or resetting the threading tool
1/24	• • portable	3/04	• • for repeatedly setting the threading tool in a predetermined working position
1/26	• Manually-operated thread-cutting devices (features of the threading tool per se B23G 5/00)	3/06	• for compensating inaccuracies in the pitch of the lead-screw
1/261	• • {Die and tap wrenches (lubricating and cooling devices therefor B23G 5/005 ; B23G 1/265 takes precedence)}	3/08	• for advancing or controlling the threading tool or the work by templates, cams, or the like
1/262	• • • {Tap wrenches having a V slot (B23G 1/264 takes precedence)}	3/10	• • for cutting thread of variable pitch
1/263	• • • {Die wrenches having a cylindrical opening and a clamping screw}	3/12	• • for using several adjacently-arranged threading tools, e.g. using several chasers
1/264	• • • • {comprising tap wrench features with a V slot}	3/14	• • for cutting thread of conical shape
1/265	• • {Die and tap wrenches with a guiding part (lubricating and cooling devices therefor B23G 5/005)}	5/00	Thread-cutting tools; Die-heads
1/266	• • • {Tap wrenches having a V slot (B23G 1/268 takes precedence)}	5/005	• {with lubrication or cooling devices}
1/267	• • • {Die wrenches having a cylindrical opening and a clamping screw}	5/02	• without means for adjustment
1/268	• • • • {comprising tap wrench features with a V slot}	5/04	• • Dies
1/28	• • with means for adjusting the threading tool	5/043	• • • {with guiding means}
1/30	• • without means for adjusting the threading tool, e.g. with die-stock (tap wrenches B25B)	5/046	• • • {for conical thread}
		5/06	• • Taps (chucks therefor B23B 31/00)
		5/062	• • • {with a guiding means part}
		5/064	• • • {with weakened shank portion}
		5/066	• • • {with stops}
		5/068	• • • {with means for removing the broken tap}
		5/08	• with means for adjustment

5/083	. . {Adjustable dies}	2200/144	. . Tools comprising a die
5/086	. . . {with guiding means}	2200/145	. . Tools comprising means for milling features other than the thread
5/10	. . Die-heads	2200/146	. . Tools comprising a tap
5/103	. . . {with guiding means}	2200/147	. . Tools comprising means for reaming
5/106	. . . {Collet-type die-heads}	2200/148	. . Tools having means for countersinking
5/12	. . . self-releasing	2200/16	. Tools with cutting edges spaced unequally around the circumference
5/14	. . Tapping-heads	2200/18	. Tools rotatable in both directions
5/16	. . . self-releasing	2200/20	. Tools having a brush
5/18	. Milling cutters	2200/22	. Tools having an end cap, e.g. for the distribution of cutting fluid
5/182	. . {combined with other tools}	2200/24	. Chip breakers
5/184	. . . {combined with drills (B23G 5/188 takes precedence) }	2200/26	. Coatings of tools
5/186	. . . {combined with chamfering tools}	2200/28	. Threading tools having a conical form
5/188 {and with drills}	2200/30	. Cutting edges that are rounded in the cross-sectional view of the cutting edge
5/20	. combined with other tools, e.g. drills { (B23G 5/182 takes precedence; screws which drill and tap F16B 25/00) }	2200/32	. Tools having a decreasing diameter in the direction of the shank from the tip
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)	2200/34	. Tools having an increasing diameter in the direction of the shank from the tip (B23G 2200/28 takes precedence)
7/02	. Tools for this purpose	2200/36	. Tools having provision to produce threads of more than one type or size
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	2200/38	. Tools with shanks having a working end at each end of the shank
9/001	. {Working screws}	2200/40	. Tools with variable or different helix angles
9/002	. . {Slotting screw heads or shanks}	2200/42	. Hollow tools
9/003	. . {Deburring screws}	2200/44	. Taps with more than one threading section, the threading sections being axially spaced from one another
9/004	. . {Finishing screws (B23G 9/003 takes precedence) }	2200/46	. Tools having a section of polygonal form, e.g. for the transmission of torque
9/005	. {Working nuts}	2200/48	. Spiral grooves, i.e. spiral flutes
9/006	. . {Slotting nuts}	2200/50	. Tools in which the pitch of the teeth is a multiple of the pitch of the thread being produced
9/007	. . {Deburring nuts}	2210/00	Details of threads produced
9/008	. . {Finishing nuts (B23G 9/007 takes precedence) }	2210/04	. Internal threads
9/009	. {Thread cleaning or repairing}	2210/08	. External threads
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)	2210/12	. Threads having a large diameter
2200/00	Details of threading tools	2210/16	. Multiple start threads
2200/02	. Tools in which the shank and the cutting part are made from different materials or from separate components	2210/21	. Threads in nuts
2200/04	. Tools with negative cutting angles	2210/24	. Threads having a variable pitch
2200/06	. Connections between parts of threading tools	2210/28	. Threads having a rounded profile
2200/062	. . Brazed connections	2210/36	. Threads having a square profile
2200/065	. . Glued connections	2210/41	. Threads having a stepped profile
2200/067	. . Welded connections	2210/44	. Threads having a trapezoidal profile
2200/08	. Threading tools with adjustable elements (manually operated thread cutting devices with means for adjusting the threading tool B23G 1/28)	2210/48	. Threads having a special form or profile not otherwise provided for
2200/10	. Threading tools comprising cutting inserts	2225/00	Materials of threading tools, workpieces or other structural elements
2200/12	. Threading tools comprising inserts for thread forming	2225/04	. Cubic boron nitride
2200/14	. Multifunctional threading tools	2225/08	. Cermets
2200/141	. . Tools comprising means for deburring	2225/12	. Chromium
2200/142	. . Tools comprising means for forming threads by deformation	2225/16	. Diamond
2200/143	. . Tools comprising means for drilling	2225/165	. . Polycrystalline diamond
		2225/24	. Elastomers, e.g. rubber
		2225/28	. Hard metal, i.e. cemented carbides
		2225/32	. High speed steel
		2225/36	. Molybdenum disulphide
		2225/40	. Plastics not otherwise provided for

- 2225/44 . Titanium
- 2225/48 . Titanium aluminium nitride (TiAlN)
- 2225/52 . Titanium carbide
- 2225/56 . Titanium carbide nitride (TiCN)
- 2225/60 . Titanium nitride
- 2240/00 Details of equipment for threading other than
threading tools, details of the threading process**
- 2240/04 . Compensation of centrifugal force
- 2240/08 . Evacuation of chips or fines
- 2240/12 . Means for cooling or lubrication
- 2240/16 . Equipment for producing threaded component with
a rotating disc to hold the components
- 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
- 2240/24 . Guides for threading tools having a V-groove for
location on cylindrical workpieces
- 2240/28 . Indication scales
- 2240/32 . Threading devices designed to be mounted in the
tailstock of a lathe
- 2240/36 . Methods of threading not otherwise provided for
- 2240/40 . Threading equipment having an integrally
incorporated driving motor
- 2240/44 . Tap or die wrenches with multiple locations for
holding threading tools, e.g. for holding threading
tools of different sizes
- 2240/48 . Protective sleeves for taps
- 2240/52 . Sensors
- 2240/56 . Producing or refurbishing threads for spark plugs or
glow plugs
- 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