

# CPC COOPERATIVE PATENT CLASSIFICATION

## B PERFORMING OPERATIONS; TRANSPORTING

(NOTES omitted)

### SHAPING

**B21 MECHANICAL METAL-WORKING WITHOUT ESSENTIALLY REMOVING MATERIAL; PUNCHING METAL** (casting, powder metallurgy [B22](#); shearing [B23D](#); working of metal by the action of a high concentration of electric current [B23H](#); soldering, welding, flame-cutting [B23K](#); other working of metal [B23P](#); punching sheet material in general [B26F](#); processes for changing of physical properties of metals [C21D](#), [C22F](#); electroforming [C25D 1/00](#))

(NOTES omitted)

**B21H MAKING PARTICULAR METAL OBJECTS BY ROLLING, e.g. SCREWS, WHEELS, RINGS, BARRELS, BALLS** (essentially from sheet metal [B21D](#))

#### NOTE

This subclass covers rolling operations which are specially adapted for use in the manufacture of particular objects and which are not essentially combined with any different metal-working operation unless the latter is a subsidiary operation performed in the same machine.

<b>1/00</b>	<b>Making articles shaped as bodies of revolution</b> (rolling tubes <a href="#">B21B 17/00</a> - <a href="#">B21B 25/00</a> )	3/065	. . . {Planetary thread rolling}
1/02	. discs; disc wheels	3/08	. internal screw-threads
1/04	. . with rim, e.g. railways wheels {or pulleys}	3/10	. twist-drills; screw-taps
1/06	. rings of restricted axial length (extending closed shapes of metal bands by simultaneous rolling at two or more zones <a href="#">B21B 5/00</a> )	3/12	. articles with helicoidal surface (bending strip or the like helically <a href="#">B21D 11/06</a> )
1/08	. . railway wheel rims	<b>5/00</b>	<b>Making gear wheels {, racks, spline shafts or worms}</b>
1/10	. . rims for pneumatic tyres	5/005	. {Worms}
1/12	. . rings for ball or roller bearings	5/02	. with cylindrical outline {, e.g. by means of die rolls (worms <a href="#">B21H 5/005</a> )}
1/14	. balls, rollers, cone rollers, or like bodies	5/022	. . {Finishing gear teeth with cylindrical outline, e.g. burnishing}
1/16	. . for bearings	5/025	. . {Internally geared wheels}
1/18	. cylinders, e.g. rolled transversely {cross-rolling}	5/027	. . {by rolling using reciprocating flat dies, e.g. racks ( <a href="#">B21H 5/022</a> takes precedence)}
1/20	. . rolled longitudinally	5/04	. bevel gears
1/22	. characterised by use of rolls having circumferentially varying profile {; Die-rolling}	5/045	. . {Finishing bevel gear teeth, e.g. burnishing}
<b>3/00</b>	<b>Making helical bodies or bodies having parts of helical shape</b> (helical gears <a href="#">B21H 5/00</a> ; forming tubes or tube walls into helical shape <a href="#">B21D 11/06</a> , <a href="#">B21D 15/04</a> )	<b>7/00</b>	<b>Making articles not provided for in the preceding groups, e.g. agricultural tools, dinner forks, knives, spoons (nails, pins <a href="#">B21G 3/30</a>)</b>
3/02	. external screw-threads {; Making dies for thread rolling}	7/002	. {Fasteners, rivets}
3/022	. . {combined with rolling splines, ribs, grooves or the like, e.g. using compound dies}	7/005	. {railway sleepers or chains}
3/025	. . {Rolling locking screws}	7/007	. {Taper rolling, e.g. leaf springs}
3/027	. . {Rolling of self-tapping screws}	7/02	. spades; shovels
3/04	. . Making by means of profiled-rolls {or die rolls}	7/04	. hoes
3/042	. . . {Thread-rolling heads}	7/06	. ploughshares; axes
3/044	. . . . {working axially}	7/08	. forks; rakes {spoons}
3/046	. . . . {working radially}	7/10	. knives; sickles; scythes
3/048	. . . . {working tangentially}	7/12	. horse-shoes; articles of like shape, e.g. wear-resisting attachments for shoes
3/06	. . Making by means of profiled members other than rolls, e.g. {reciprocating flat dies or} jaws, moved longitudinally or curvilinearly with respect to each other	7/14	. knurled articles
		7/16	. turbine blades; compressor blades; propeller blades
		7/18	. grooved pins; Rolling grooves, e.g. oil grooves, in articles {( <a href="#">B21H 5/00</a> takes precedence)}

## B21H

- 7/182 . . {Rolling annular grooves}
- 7/185 . . . {Filet rolling, e.g. of crankshafts}
- 7/187 . . {Rolling helical or rectilinear grooves}
- 8/00 Rolling metal of indefinite length in repetitive shapes specially designed for the manufacture of particular objects {, e.g. checkered sheets}**
- 8/005 . {Embossing sheets or rolls}
- 8/02 . Rolls of special shape
- 9/00 Feeding arrangements for rolling machines or apparatus manufacturing articles dealt with in this subclass**
- 9/02 . for screw-rolling machines