

# 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><br>(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</b> (nails, pins <a href="#">B21G 3/30</a> ) |
| 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