

# CPC COOPERATIVE PATENT CLASSIFICATION

## D TEXTILES; PAPER

### TEXTILES OR FLEXIBLE MATERIALS NOT OTHERWISE PROVIDED FOR

#### D01 NATURAL OR MAN-MADE THREADS OR FIBRES; SPINNING

(NOTE omitted)

#### D01D MECHANICAL METHODS OR APPARATUS IN THE MANUFACTURE OF ARTIFICIAL FILAMENTS, THREADS, FIBRES, BRISTLES OR RIBBONS

##### NOTES

1. Attention is drawn to the note following the title of Class [D01](#).
2. Apparatus specially adapted for the manufacture of carbon filaments are classified in group [D01F 9/12](#)

##### WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

- |             |  |        |  |
|-------------|--|--------|--|
| <b>1/00</b> | <b>Treatment of filament-forming or like material</b><br>(working of plastics or substances in a plastic state, in general <a href="#">B29</a> )                                   | 5/0053 | . . . {the material being a low molecular weight compound or an oligomer, and the fibres being formed by self-assembly}  |
| 1/02        | . Preparation of spinning solutions  | 5/0061 | . . {characterised by the electro-spinning apparatus}  |
| 1/04        | . Melting filament-forming substances  | 5/0069 | . . . {characterised by the spinning section, e.g. capillary tube, protrusion or pin}  |
| 1/06        | . Feeding liquid to the spinning head (constructions of pumps <a href="#">F04</a> )  | 5/0076 | . . . {characterised by the collecting device, e.g. drum, wheel, endless belt, plate or grid ( <a href="#">D01D 5/0046</a> takes precedence)}                          |
| 1/065       | . . {Addition and mixing of substances to the spinning solution or to the melt; Homogenising}  | 5/0084 | . . . . {Coating by electro-spinning, i.e. the electro-spun fibres are not removed from the collecting device but remain integral with it, e.g. coating of prostheses} |
| 1/09        | . . Control of pressure, temperature or feeding rate   | 5/0092 | . . . {characterised by the electrical field, e.g. combined with a magnetic fields, using biased or alternating fields}  |
| 1/10        | . Filtering or de-aerating the spinning solution or melt   | 5/02   | . Starting the formation   |
| 1/103       | . . {De-aerating}  | 5/04   | . Dry spinning methods {( <a href="#">D01D 5/0038</a> takes precedence)}   |
| 1/106       | . . {Filtering}  | 5/06   | . Wet spinning methods {( <a href="#">D01D 5/0046</a> takes precedence)}   |
| <b>4/00</b> | <b>Spinnerette packs; Cleaning thereof</b><br>( <a href="#">D01D 5/0069</a> ), <a href="#">D01D 5/24</a> , <a href="#">D01D 5/253</a> , <a href="#">D01D 5/28</a> take precedence) | 5/08   | . Melt spinning methods {( <a href="#">D01D 5/0023</a> takes precedence)}  |
| 4/02        | . Spinnerettes (alloys therefor <a href="#">C22C</a> )   | 5/082  | . . {of mixed yarn}  |
| 4/022       | . . {Processes or materials for the preparation of spinnerettes}   | 5/084  | . . Heating filaments, threads or the like, leaving the spinnerettes   |
| 4/025       | . . {Melt-blowing or solution-blowing dies}  | 5/088  | . . Cooling filaments, threads or the like, leaving the spinnerettes   |
| 4/027       | . . {Spinnerettes containing inserts}  | 5/0885 | . . . {by means of a liquid}   |
| 4/04        | . Cleaning spinnerettes or other parts of the spinnerette packs (cleaning in general <a href="#">B08B</a> )  | 5/092  | . . . in shafts or chimneys  |
| 4/06        | . Distributing spinning solution or melt to spinning nozzles   | 5/096  | . . Humidity control, or oiling, of filaments, threads or the like, leaving the spinnerettes   |
| 4/08        | . Supporting spinnerettes or other parts of spinnerette packs  | 5/098  | . . with simultaneous stretching   |
| <b>5/00</b> | <b>Formation of filaments, threads, or the like</b>  | 5/0985 | . . . {by means of a flowing gas (e.g. melt-blowing)}  |
| 5/0007      | . {Electro-spinning (non-woven fabrics produced by electro-spinning <a href="#">D04H 1/728</a> )}  |        |  |
| 5/0015      | . . {characterised by the initial state of the material}   |        |  |
| 5/0023      | . . . {the material being a polymer melt}  |        |  |
| 5/003       | . . . {the material being a polymer solution or dispersion ( <a href="#">D01D 5/0053</a> takes precedence)}  |        |  |
| 5/0038      | . . . . {the fibre formed by solvent evaporation, i.e. dry electro-spinning}   |        |  |
| 5/0046      | . . . . {the fibre formed by coagulation, i.e. wet electro-spinning}   |        |  |

- 5/10 . . using organic materials
  - WARNING**
  - This group is no longer used for the classification of new documents as from July 2011. The backlog of this group is being continuously reclassified to [D01D 5/08](#) and its subgroups
- 5/11 . Flash-spinning
- 5/12 . Stretch-spinning methods ([D01D 5/098](#) takes precedence) finishing by stretching [D02J 1/22](#))
- 5/14 . . with flowing liquid {or gaseous} stretching media {, e.g. [solution-blowing](#)}
- 5/16 . . using rollers, or like mechanical devices, e.g. snubbing pins
- 5/18 . by means of rotating spinnerets
- 5/20 . with varying denier along their length
- 5/22 . with a crimped or curled structure; with a special structure to simulate wool ([producing crimped or curled effects in filaments or threads after formation D02G 1/00](#))
- 5/23 . . by asymmetrical cooling of filaments, threads, or the like, leaving the spinnerettes
- 5/24 . with a hollow structure; Spinnerette packs therefor ([D01D 5/38](#) takes precedence; [producing tubes of plastic material B29D](#); addition of agents forming hollow filaments [D01F 1/08](#))
- 5/247 . . Discontinuous hollow structure or microporous structure
- 5/253 . with a non-circular cross section; Spinnerette packs therefor ([D01D 5/38](#) takes precedence)
- 5/26 . Formation of staple fibres ([by flash-spinning D01D 5/11](#))
- 5/28 . while mixing different spinning solutions or melts during the spinning operation; Spinnerette packs therefor
- 5/30 . . Conjugate filaments; Spinnerette packs therefor
- 5/32 . . . Side-by-side structure; Spinnerette packs therefor
- 5/34 . . . Core-skin structure; Spinnerette packs therefor
- 5/36 . . . Matrix structure; Spinnerette packs therefor
- 5/38 . Formation of filaments, threads, or the like during polymerisation
- 5/40 . by applying a shearing force to a dispersion or solution of filament formable polymers, e.g. by stirring
- 5/42 . by cutting films into narrow ribbons or filaments or by fibrillation of films {or filaments}
- 5/423 . . {[by fibrillation of films or filaments](#)}
- 5/426 . . {[by cutting films](#)}
- 7/00 Collecting the newly-spun products** ([D01D 5/0076](#) takes precedence; [collecting newly-spun products with the imparting of twist D01H](#))
- 7/02 . in centrifugal spinning pots
- 10/00 Physical treatment of artificial filaments or the like during manufacture, i.e. during a continuous production process before the filaments have been collected** ([finishing D02J](#))
- 10/02 . Heat treatment ([heating for finishing D02J 13/00](#))
- 10/04 . Supporting filaments or the like during their treatment
- 10/0409 . . {on bobbins}
- 10/0418 . . {as cakes or similar coreless thread packages}
- 10/0427 . . {as hanks}
- 10/0436 . . {while in continuous movement ([forwarding filamentary material B65H 51/00](#))}
- 10/0445 . . . {using rollers with mutually inclined axes}
- 10/0454 . . . {using reels}
- 10/0463 . . . {the filaments being maintained parallel}
- 10/0472 . . . {the filaments being supported on endless bands}
- 10/0481 . . . {the filaments passing through a tube}
- 10/049 . . {as staple fibres}
- 10/06 . Washing or drying
- 11/00 Other features of manufacture**
- 11/02 . Opening bundles to space the threads or filaments from one another
- 11/04 . Fixed guides
- 11/06 . Coating with spinning solutions or melts
- 13/00 Complete machines for producing artificial threads**
- 13/02 . Elements of machines in combination