COOPERATIVE PATENT CLASSIFICATION

TEXTILES; PAPER

TEXTILES OR FLEXIBLE MATERIALS NOT OTHERWISE PROVIDED FOR

D01 NATURAL OR MAN-MADE THREADS OR FIBRES; SPINNING

(D01F CHEMICAL FEATURES IN THE MANUFACTURE OF ARTIFICIAL FILAMENTS, THREADS, FIBRES, BRISTLES OR RIBBONS; APPARATUS SPECIALLY ADAPTED FOR THE MANUFACTURE OF CARBON FILAMENTS

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.

1/00 General methods for the manufacture of artificial filaments or the like

1/02 . Addition of substances to the spinning solution or to the melt (addition of substances to viscose D01F 2/08 - D01F 2/20)

1/04 . . Pigments

1/06 . . Dyes

1/07 . . for making fire- or flame-proof filaments

1/08 . . for forming hollow filaments

1/09 . . for making electroconductive or anti-static filaments

1/10 . . Other agents for modifying properties

1/103 . . . [Agents inhibiting growth of microorganisms]

1/106 . . . [Radiation shielding agents, e.g. absorbing, reflecting agents]

2/00 Monocomponent artificial filaments or the like of cellulose or cellulose derivatives; Manufacture thereof

2/02 . . . from solutions of cellulose in acids, bases or salts

2/04 . . . from cuprammonium solutions

2/06 . . . from viscose (preparation of alkalil cellulose C08B)

2/08 . . . Composition of the spinning solution or the bath (preparing or dissolving cellulose xanthate C08B)

2/10 . . . Addition to the spinning solution or spinning bath of substances which exert their effect equally well in either

2/12 . . . Addition of delustering agents to the spinning solution

2/14 . . . . Addition of pigments

2/16 . . . . Addition of dyes to the spinning solution

2/18 . . . . Addition to the spinning solution of substances to influence ripening

2/20 . . . . for the manufacture of hollow threads

2/22 . . . . by the dry spinning process

2/24 . . . from cellulose derivatives

2/26 . . . from nitrocellulose

2/28 . . . from organic cellulose esters or ethers, e.g. cellulose acetate

2/30 . . . by the dry spinning process

4/00 Monocomponent artificial filaments or the like of proteins; Manufacture thereof

4/02 . . . from fibroin

4/04 . . . from casein

4/06 . . . from globulins, e.g. groundnut protein

6/00 Monocomponent artificial filaments or the like of synthetic polymers; Manufacture thereof

6/02 . . . from homopolymers obtained by reactions only involving carbon-to-carbon unsaturated bonds

6/04 . . . from polyolefins

6/06 . . . from polypropylene

6/08 . . . from polymers of halogenated hydrocarbons

6/10 . . . from polyvinyl chloride or polyvinylidene chloride

6/12 . . . from polymers of fluorinated hydrocarbons

6/14 . . . from polymers of unsaturated alcohols, e.g. polyvinyl alcohol, or of their acetals or ketals

6/16 . . . from polymers of unsaturated carboxylic acids or unsaturated organic esters, e.g. polyacrylic esters, polyvinyl acetate

6/18 . . . from polymers of unsaturated nitriles, e.g. polyacrylonitrile, polyvinylidene cyanide

6/20 . . . from polymers of cyclic compounds with one carbon-to-carbon double bond in the side chain

6/22 . . . from poly styrene

6/24 . . . from polymers of aliphatic compounds with more than one carbon-to-carbon double bond

6/26 . . . from other polymers

6/28 . . . from copolymers obtained by reactions only involving carbon-to-carbon unsaturated bonds

NOTE

For the purposes of groups D01F 6/30 - D01F 6/96, the percentage for determining the major constituent is expressed in mole percent.

6/30 . . . comprising olefins as the major constituent

6/32 . . . comprising halogenated hydrocarbons as the major constituent

6/34 . . . comprising unsaturated alcohols, acetals or ketals as the major constituent

6/36 . . . comprising unsaturated carboxylic acids or unsaturated organic esters as the major constituent
Conjugated, i.e. bi- or multicomponent, artificial filaments or the like; Manufacture thereof

8/00 Conjugated, i.e. bi- or multicomponent, artificial filaments or the like; Manufacture thereof

8/02 . . . from cellulose, cellulose derivatives, or proteins
8/04 . . . from synthetic polymers
8/06 . . . with at least one polyolefin as constituent
8/08 . . . with at least one polyacrylonitrile as constituent
8/10 . . . with at least one macromolecular compound obtained by reactions only involving carbon-to-carbon unsaturated bonds as constituent
8/12 . . . with at least one polyamide as constituent
8/14 . . . with at least one polyester as constituent

8/16 . . . with at least one other macromolecular compound obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds as constituent
8/18 . . . from other substances

9/00 Artificial filaments or the like of other substances; Manufacture thereof; Apparatus specially adapted for the manufacture of carbon filaments

9/02 . . . of reaction products of rubber with acids or acid anhydrides, e.g. sulfur dioxide
9/04 . . . of alginates
9/08 . . . of inorganic material (from softened glass, minerals or slags C03B 37/00; {obtaining ceramic fibres C04B 35/6222; incandescent bodies F21H, H01K 1/02, H01K 3/02})

9/10 . . . by decomposition of organic substances (D01F 9/12 takes precedence)
9/12 . . . Carbon filaments; Apparatus specially adapted for the manufacture thereof ( {with fullerene structure, e.g. carbon nanotubes C01B 32/15})
9/127 . . . by thermal decomposition of hydrocarbon gases or vapours {or other carbon-containing compounds in the form of gas or vapour, e.g. carbon monoxide, alcohols}

9/1271 . . . {Alkanes or cycloalkanes}
9/1272 . . . {Methane}
9/1273 . . . {Alkenes, alkenes}
9/1274 . . . {Butadiene}
9/1275 . . . {Acetylene}
9/1276 . . . {Aromatics, e.g. toluene}
9/1277 . . . {Other organic compounds}
9/1278 . . . {Carbon monoxide}
9/133 . . . Apparatus therefor
9/14 . . . by decomposition of organic filaments
9/145 . . . from pitch or distillation residues
9/15 . . . from coal pitch
9/155 . . . from petroleum pitch
9/16 . . . from products of vegetable origin or derivatives thereof, e.g. from cellulose acetate ( D01F 9/18 takes precedence)
9/17 . . . from lignin
9/18 . . . from proteins, e.g. from wool
9/20 . . . from polyaddition, polycondensation or polymerisation products (D01F 9/145, D01F 9/16, D01F 9/18 take precedence)
9/21 . . . from macromolecular compounds obtained by reactions only involving carbon-to-carbon unsaturated bonds
9/22 . . . from polycrylonitriles
9/225 . . . . . . {from stabilised polycrylonitriles}
9/24 . . . from macromolecular compounds obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds
9/245 . . . . . . {from polyurethanes}
9/26 . . . . . . from polyesters
9/28 . . . . . . from polyamides
9/30 . . . . . . from aromatic polyamides
9/32 . . . . . . Apparatus therefor
9/322 . . . . . . {for manufacturing filaments from pitch}
9/324 . . . . . . {for manufacturing filaments from products of vegetable origin}
9/326 . . . . . . {for manufacturing filaments from proteins}
Chemical after-treatment of artificial filaments or the like during manufacture (of artificial filaments from softened glass, minerals or slags C03C; from ceramics C04B; finishing D06M)

- of cellulose, cellulose derivatives, or proteins
- of synthetic polymers
- of macromolecular compounds obtained by reactions only involving carbon-to-carbon unsaturated bonds
- of macromolecular compounds obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds
- of carbon
- with inorganic substances
  - Halogen, halogenic acids or their salts
  - Oxygen, oxygen-generating compounds (anode oxidising D01F 11/16)
  - Oxides
  - Boron, borides, boron nitrides
  - Carbon
  - Carbides (boron-comprising compounds D01F 11/124; nitrogen carbide D01F 11/128)
  - Metals (metal depositing by electrolysis D01F 11/16; metal alloys with reinforcing carbon fibres C22C 49/14)
  - Nitrides, nitrogen carbides (nitrogen borides D01F 11/124)
- with organic compounds, e.g. macromolecular compounds
- by physicochemical methods

Recovery of starting material, waste material or solvents during the manufacture of artificial filaments or the like

- of cellulose, cellulose derivatives or proteins
  - recovery of sodium sulfate from coagulation baths C01D 5/006
- of synthetic polymers