SECTION D — TEXTILES; PAPER

D01 NATURAL OR MAN-MADE THREADS OR FIBRES; SPINNING

Note(s) [2014.01]

In this class, the following terms are used with the meanings indicated:

- "fibre" means a relatively-short, elongated member of natural or man-made material;
- "filament" means an endless or quasi-endless, elongated member of natural or man-made material;
- "yarn" means a unitary assembly of fibres, usually produced by spinning;
- "thread" means an assembly of yarns or filaments, usually produced by twisting;
- "synthetic" fibres or filaments means fibres or filaments or the like manufactured from synthesising polymers or small molecules. Examples are polyamide, acrylic, polyester or carbon fibres;
- "artificial" fibres or filaments means fibres or filaments or the like manufactured by man from natural polymers or their derivatives. Examples are regenerated cellulosic fibres or semi-synthetic fibres;
- "man-made" fibres or filaments means fibres or filaments which are manufactured by man including "synthetic" or "artificial" fibres.

D01B MECHANICAL TREATMENT OF NATURAL FIBROUS OR FILAMENTARY MATERIAL TO OBTAIN FIBRES OR FILAMENTS, e.g. FOR SPINNING (crude extraction of asbestos fibres from ores B03B; apparatus for retting D01C)

Note(s)

Attention is drawn to the Note following the title of class D01.

the fibre bundle [1, 2006.01]

Subclass index

TREATMENT OF PLANT MATERIAL	
Separation of fibres from plant material	1/00
Hackling or heckling machines	5/00
TREATMENT OF ANIMAL FIBRES	
De-burring, washing, scouring	3/00
Obtaining silk fibres	
OTHER TREATMENTS	9/00

JIHER .	REAIMENIS		
1/00	Mechanical separation of fibres from plant material, e.g. seeds, leaves, stalks [1, 2006.01]	1/28	• • • with beaters rotating about an axis perpendicular to the fibre bundle [1, 2006.01]
1/02	 Separating vegetable fibres from seeds, e.g. 	1/30	• • • Details of machines [1, 2006.01]
	cotton [1, 2006.01]	1/32	• • • • Feeding arrangements [1, 2006.01]
1/04	• • Ginning [1, 2006.01]	1/34	• • • Devices holding fibres or fibre-bearing
1/06	• • • Roller gins, e.g. Macarthy type [1, 2006.01]		materials during treatment [1, 2006.01]
1/08	• • • Saw gins [1, 2006.01]	1/36	• • • • Conveying devices, e.g. moving bands or
1/10	 Separating vegetable fibres from stalks or 		ropes [1, 2006.01]
	leaves [1, 2006.01]	1/38	• • • Delivery or discharge
1/12	• • Rippling [1, 2006.01]		arrangements [1, 2006.01]
1/14	 Breaking or scutching, e.g. of flax; Decorticating [1, 2006.01] 	1/40	 Arrangements for disposing of non-fibrous materials [1, 2006.01]
1/16	 • with devices dependent on a bending action to 	1/42	• • • • employing liquids [1, 2006.01]
	break or loosen fibre-bearing materials (crushing rollers D01B 1/22) [1, 2006.01]	1/44	• • • Framework; Casings; Coverings; Grids [1, 2006.01]
1/18	• • • with stamping devices [1, 2006.01]	1/46	• • • • Driving arrangements [1, 2006.01]
1/20	• • • with scraping devices [1, 2006.01]	1/48	 Drying retted fibres [1, 2006.01]
1/22	• • with crushing or breaking rollers or plates [1, 2006.01]	1/50	 Obtaining fibres from other specified vegetable matter, e.g. peat, Spanish moss [1, 2006.01]
1/24	• • with toothed or other pointed devices [1, 2006.01]	3/00	Mechanical removal of impurities from animal fibres
1/26	• • with beaters rotating about an axis parallel to the fibre bundle 11, 2006.01		(carbonising rags to recover animal fibres D01C 5/00) [1, 2, 2006.01]

3/02 3/04 3/06	 De-burring machines or apparatus (de-burring arrangements forming part of, or intimately associated with, carding or drafting machines, e.g. burr-crushing rollers, D01G) [1, 2006.01] Machines or apparatus for washing or scouring loose wool fibres [1, 2006.01] with circular movement of either wool or liquid [1, 2006.01] 	5/08 5/10 5/12 5/14 5/16	 Arrangements for removing, or disposing of, tow or waste [1, 2006.01] Touch pins or other ending devices [1, 2006.01] Framework; Casings; Coverings [1, 2006.01] Driving arrangements [1, 2006.01] Arrangements for confining or removing dust or the like [1, 2006.01]
3/08	 with longitudinal movement of either wool or liquid [1, 2006.01] Details of machines or apparatus [1, 2006.01] 	7/00 7/02 7/04	 Obtaining silk fibres or filaments [1, 2006.01] Cleaning or classifying silk cocoons [1, 2006.01] Reeling silk [1, 2006.01]
5/00 5/02	Hackling or heckling machines (hand heckling tools D01G 33/00) [1, 2006.01] Details [1, 2006.01]	7/06	 Obtaining silk from cocoons or portions thereof not suitable for reeling (de-gumming silk D01C 3/02) [1, 2006.01]
5/04 5/06	 Apparatus for feeding, holding, or conveying materials to or in machines [1, 2006.01] Construction, mounting, or operating features of heckling devices [1, 2006.01] 	9/00	Other mechanical treatment of natural fibrous or filamentary material to obtain fibres or filaments [1, 2006.01]

D01C CHEMICAL OR BIOLOGICAL TREATMENT OF NATURAL FILAMENTARY OR FIBROUS MATERIAL TO OBTAIN FILAMENTS OR FIBRES FOR SPINNING; CARBONISING RAGS TO RECOVER ANIMAL FIBRES

Note(s)

Attention is drawn to the Note following the title of class D01.

1/00 1/02 1/04	 Treatment of vegetable material [1, 2006.01] by chemical methods to obtain bast fibres [1, 2006.01] Bacteriological retting [1, 2006.01] 	3/00 3/02	Treatment of animal material, e.g. chemical scouring of wool (recovery of lanolin or wool wax C11B 11/00) [1, 2006.01] • De-gumming silk [1, 2006.01]
		5/00	Carbonising rags to recover animal fibres (chemical removal of vegetable impurities from threads or fabrics of animal fibres D06M) [1, 2006.01]

MECHANICAL METHODS OR APPARATUS IN THE MANUFACTURE OF MAN-MADE FILAMENTS, THREADS, D01D FIBRES, BRISTLES OR RIBBONS (working or processing of metal wire B21F; fibres or filaments of softened glass, minerals or slag C03B 37/00)

Note(s) [5]

- 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.

Subclass index

MECHANICAL TREATMENT OF FILAMENT-FORMING MATERIALPRODUCTION OF ARTIFICIAL FIBRES	1/00
Methods	5/00
Spinnerette packs; formation of filaments; collecting the newly-spun products	4/00, 5/00, 7/00
Physical treatment during manufacture	10/00
Other operations	11/00
COMPLETE MACHINES; DETAILS	

- 1/00 Treatment of filament-forming or like material (working of plastics or substances in a plastic state, in general B29) [1, 2006.01]
- 1/02 • Preparation of spinning solutions [1, 2006.01]
- 1/04 • Melting filament-forming substances [1, 2006.01]
- 1/06 · Feeding liquid to the spinning head (constructions of pumps F04) [1, 2006.01]
- 1/09 • • Pressure, temperature or feeding rate regulation [3, 2006.01]
- 1/10• Filtering or de-aerating the spinning solution or melt [1, 2006.01]
- $\textbf{Spinnerette packs; Cleaning thereof} \ (D01D\ 5/24,$ 4/00 D01D 5/253, D01D 5/28 take precedence) [3, 2006.01]

4/02 • Spinnerettes (alloys therefor C22C) [3, 2006.01]

2

4/04	 Cleaning spinnerettes or other parts of the spinnerette packs (cleaning in general B08B) [3, 2006.01] 	5/26	• Formation of staple fibres (by flash-spinning D01D 5/11) [1, 2006.01]
4/06	 Distributing spinning solution or melt to spinning nozzles [3, 2006.01] 	5/28	 while mixing different spinning solutions or melts during the spinning operation; Spinnerette packs
4/08	 Supporting spinnerettes or other parts of spinnerette packs [3, 2006.01] 	5/30	 therefor [1, 2006.01] Conjugate filaments; Spinnerette packs therefor [3, 2006.01]
5/00	Formation of filaments, threads, or the like [1, 2006.01]	5/32	Side-by-side structure; Spinnerette packs therefor [3, 2006.01]
5/02	• Starting the formation [1, 2006.01]	5/34	Core-skin structure; Spinnerette packs
5/04	 Dry spinning methods [1, 2006.01] 		therefor [3, 2006.01]
5/06	 Wet spinning methods [1, 2006.01] 	5/36	• • • Matrix structure; Spinnerette packs
5/08	 Melt-spinning methods [1, 2006.01] 		therefor [3, 2006.01]
5/084	 Heating filaments, threads or the like, leaving the spinnerettes [3, 2006.01] 	5/38	 Formation of filaments, threads, or the like during polymerisation [3, 2006.01]
5/088	 Cooling filaments, threads or the like, leaving the spinnerettes [3, 2006.01] 	5/40	• by applying a shearing force to a dispersion or solution of filament formable polymers, e.g. by
5/092	• • • in shafts or chimneys [3, 2006.01]	E / 40	stirring [3, 2006.01]
5/096	 Humidity control, or oiling, of filaments, threads or the like, leaving the spinnerettes [3, 2006.01] 	5/42	 by cutting films into narrow ribbons or filaments or by fibrillation of films [3, 2006.01]
5/098	 with simultaneous stretching [4, 2006.01] 	7/00	Collecting the newly-spun products (collecting newly-
5/10	 using organic materials [1, 2006.01] 	7700	spun products with the imparting of twist
5/11	• Flash-spinning [3, 2006.01]		D01H) [1, 2006.01]
5/12	 Stretch-spinning methods (finishing by stretching D02J 1/22) [1, 2006.01] 	7/02	• in centrifugal spinning pots [3, 2006.01]
5/14	 with flowing liquid stretching media [1, 2006.01] 	10/00	Physical treatment of man-made filaments or the like
5/16	 using rollers, or like mechanical devices, e.g. snubbing pins [1, 2006.01] 		during manufacture, i.e. during a continuous production process before the filaments have been
5/18	 by means of rotating spinnerets [1, 2006.01] 	40/00	collected (finishing D02J) [4, 2006.01]
5/20 5/22	 with varying denier along their length [1, 2006.01] with a crimped or curled structure; with a special	10/02	 Heat treatment (heating for finishing D02J 13/00) [4, 2006.01]
	structure to simulate wool (producing crimped or curled effects in filaments or threads after formation	10/04	 Supporting filaments or the like during their treatment [4, 2006.01]
	D02G 1/00) [1, 2006.01]	10/06	 Washing or drying [4, 2006.01]
5/23	 by asymmetrical cooling of filaments, threads, or the like, leaving the spinnerettes [3, 2006.01] 	11/00	Other features of manufacture [1, 2006.01]
5/24	• with a hollow structure; Spinnerette packs therefor (D01D 5/38 takes precedence; producing tubes of	11/02	 Opening bundles to space the threads or filaments from one another [1, 2006.01]
	plastic material B29D; addition of agents forming	11/04	 Fixed guides [1, 2006.01]
	hollow filaments D01F 1/08) [1, 3, 2006.01]	11/06	 Coating with spinning solutions or melts [1, 2006.01]
5/247	·	13/00	Complete machines for producing man-made
5/253	with a non-circular cross section; Spinnerette packs		threads [1, 2006.01]
_	therefor (D01D 5/38 takes precedence) [3, 2006.01]	13/02	• Elements of machines in combination [1, 2006.01]

D01F CHEMICAL FEATURES IN THE MANUFACTURE OF MAN-MADE FILAMENTS, THREADS, FIBRES, BRISTLES OR RIBBONS; APPARATUS SPECIALLY ADAPTED FOR THE MANUFACTURE OF CARBON FILAMENTS [2]

Note(s)

Attention is drawn to the Note following the title of class D01.

Subclass index

GENERAL PROCESSES	1/00
FILAMENTS AND MANUFACTURE THEREOF	
From cellulose or derivatives; from proteins	2/00, 4/00
From synthetic resins	6/00
From other materials	9/00
Multicomponent filaments	8/00
AFTER-TREATMENT; RECOVERY OF STARTING MATERIAL	

1/00 General methods for the manufacture of man-made filaments or the like [1, 2006.01]

1/02 • Addition of substances to the spinning solution or to

	the melt (addition of substances to viscose	6/16	• • from polymers of unsaturated carboxylic acids or
	D01F 2/08) [1, 2006.01]	0/10	unsaturated organic esters, e.g. polyacrylic esters,
1 /04			polyvinyl acetate [2, 2006.01]
1/04	• • Pigments [1, 2006.01]	C/10	
1/06	• • Dyes [1, 2006.01]	6/18	from polymers of unsaturated nitriles, e.g. polygogylopitaile, polyginylidens
1/07	 for making fire- or flame-proof 		polyacrylonitrile, polyvinylidene
	filaments [4, 2006.01]	6 (20	cyanide [2, 2006.01]
1/08	• • for forming hollow filaments [1, 2006.01]	6/20	from polymers of cyclic compounds with one - cycle and cyclic hand in the side.
1/09	 for making electroconductive or anti-static 		carbon-to-carbon double bond in the side
	filaments [4, 2006.01]	0.400	chain [2, 2006.01]
1/10	• • Other agents for modifying properties [2, 2006.01]	6/22	• • • from polystyrene [2, 2006.01]
		6/24	 from polymers of aliphatic compounds with more
2/00	Monocomponent artificial filaments or the like of		than one carbon-to-carbon double
	cellulose or cellulose derivatives; Manufacture		bond [2, 2006.01]
	thereof [2, 2006.01]	6/26	 from other polymers [2, 2006.01]
2/02	 from solutions of cellulose in acids, bases, or 	6/28	 from copolymers obtained by reactions only
	salts [2, 2006.01]		involving carbon-to-carbon unsaturated
2/04	• • from cuprammonium solutions [2, 2006.01]		bonds [2, 2006.01]
2/06	 from viscose (preparation of alkali cellulose 	6/30	 comprising olefins as the major
	C08B) [2, 2006.01]		constituent [2, 2006.01]
2/08	 Composition of the spinning solution or the bath 	6/32	 comprising halogenated hydrocarbons as the major
	(preparing or dissolving cellulose xanthate		constituent [2, 2006.01]
	C08B) [2, 2006.01]	6/34	 comprising unsaturated alcohols, acetals, or ketals
2/10	 Addition to the spinning solution or spinning 		as the major constituent [2, 2006.01]
	bath of substances which exert their effect	6/36	 comprising unsaturated carboxylic acids or
	equally well in either [2, 2006.01]		unsaturated organic esters as the major
2/12	 Addition of delustring agents to the spinning 		constituent [2, 2006.01]
	solution [2, 2006.01]	6/38	 comprising unsaturated nitriles as the major
2/14	• • • • Addition of pigments [2, 2006.01]		constituent [2, 2006.01]
2/16	• • • Addition of dyes to the spinning	6/40	 Modacrylic fibres, i.e. containing 35 to 85%
2/10	solution [2, 2006.01]		acrylonitrile [2, 2006.01]
2/18	Addition to the spinning solution of substances	6/42	 comprising cyclic compounds containing one
2/10	to influence ripening [2, 2006.01]	o, . <u>-</u>	carbon-to-carbon double bond in the side chain as
2/20	• • • for the manufacture of hollow		major constituent [2, 2006.01]
2/20	threads [2, 2006.01]	6/44	 from mixtures of polymers obtained by reactions only
2/22	 by the dry spinning process [2, 2006.01] 	-,	involving carbon-to-carbon unsaturated bonds as
			major constituent with other polymers or low-
2/24	• from cellulose derivatives [2, 2006.01]		molecular-weight compounds [2, 2006.01]
2/26	• • from nitrocellulose [2, 2006.01]	6/46	• • of polyolefins [2, 2006.01]
2/28	• • from organic cellulose esters or ethers, e.g.	6/48	of polymers of halogenated
0.100	cellulose acetate [2, 2006.01]		hydrocarbons [2, 2006.01]
2/30	• • • by the dry spinning process [2, 2006.01]	6/50	 of polyalcohols, polyacetals or
4/00	Monocomponent artificial filaments or the like of		polyketals [2, 2006.01]
4/00	proteins; Manufacture thereof [2, 2006.01]	6/52	 of polymers of unsaturated carboxylic acids or
4/02	• from fibroin [2, 2006.01]		unsaturated esters [2, 2006.01]
4/04	• from casein [2, 2006.01]	6/54	 of polymers of unsaturated nitriles [2, 2006.01]
	• from globulins, e.g. groundnut protein [2, 2006.01]	6/56	 of polymers of cyclic compounds with one carbon-
4/06	• from grounds, e.g. groundaut protein [2, 2006.01]		to-carbon double bond in the side
6/00	Monocomponent man-made filaments or the like of		chain [2, 2006.01]
0,00	synthetic polymers; Manufacture thereof [2, 2006.01]	6/58	• from homopolycondensation products [2, 2006.01]
	ognition polymers, manufacture thereof [2, 200001]	6/60	from polyamides (from polyamino acids or
	Note(s) [2006.01]	0, 00	polypeptides D01F 6/68) [2, 2006.01]
	In this group, the percentage for determining the major	6/62	• • from polyesters [2, 2006.01]
	constituent is expressed in mole percent.	6/64	• • • from polycarbonates [2, 2006.01]
6/02	 from homopolymers obtained by reactions only 	6/66	• • from polyethers [2, 2006.01]
	involving carbon-to-carbon unsaturated		* *
	bonds [2, 2006.01]	6/68	• • from polyaminoacids or polypeptides [2, 2006.01]
6/04	• • from polyolefins [2, 2006.01]	6/70	• • from polyurethanes [2, 2006.01]
6/06	• • • from polypropylene [2, 2006.01]	6/72	• • from polyureas [2, 2006.01]
6/08	• • from polymers of halogenated	6/74	• • from polycondensates of cyclic compounds, e.g.
57 OU	hydrocarbons [2, 2006.01]		polyimides, polybenzimidazoles [2, 2006.01]
6/10	• • from polyvinyl chloride or polyvinylidene	6/76	• • from other polycondensation products [2, 2006.01]
0/10	chloride [2, 2006.01]	6/78	• from copolycondensation products [2, 2006.01]
6/12	• • • from polymers of fluorinated	6/80	 from copolyamides [2, 2006.01]
6/12	hydrocarbons [2, 2006.01]	6/82	 from polyester amides or polyether
6/14	from polymers of unsaturated alcohols, e.g.		amides [2, 2006.01]
0/14	polyvinyl alcohol, or of their acetals or	6/84	• • from copolyesters [2, 2006.01]
	ketals [2, 2006.01]	6/86	 from polyetheresters [2, 2006.01]
	: ,		

6/88	 from mixtures of polycondensation products as major 	9/145	 • • from pitch or distillation
	constituent with other polymers or low-molecular-		residues [5, 2006.01]
C /00	weight compounds [2, 2006.01]	9/15	• • • • from coal pitch [5, 2006.01]
6/90	• • of polyamides [2, 2006.01]	9/155	• • • • from petroleum pitch [5, 2006.01]
6/92	• • of polyesters [2, 2006.01]	9/16	• • • from products of vegetable origin or
6/94	• • of other polycondensation products [2, 2006.01]		derivatives thereof, e.g. from cellulose acetat
6/96	• from other synthetic polymers [2, 2006.01]		(D01F 9/18 takes precedence) [2, 5, 2006.01]
8/00	Conjugated, i.e. bi- or multicomponent, man-made	9/17	• • • • from lignin [5, 2006.01]
	filaments or the like; Manufacture	9/18	• • • • from proteins, e.g. from wool [2, 2006.01]
	thereof [2, 2006.01]	9/20	• • • from polyaddition, polycondensation or
8/02	 from cellulose, cellulose derivatives, or 		polymerisation products (D01F 9/145,
	proteins [2, 2006.01]		D01F 9/16, D01F 9/18 take
8/04	• from synthetic polymers [2, 2006.01]		precedence) [2, 5, 2006.01]
8/06	• • with at least one polyolefin as	9/21	• • • • from macromolecular compounds
0 /00	constituent [2, 2006.01]		obtained by reactions only involving
8/08	 with at least one polyacrylonitrile as constituent [2, 2006.01] 		carbon-to-carbon unsaturated bonds [5, 2006.01]
8/10	with at least one other macromolecular compound	9/22	• • • • • from polyacrylonitriles [2, 5, 2006.01]
0/10	obtained by reactions only involving carbon-to-	9/24	• • • • from macromolecular compounds
	carbon unsaturated bonds as	3, 2 .	obtained otherwise than by reactions only
	constituent [2, 2006.01]		involving carbon-to-carbon unsaturated
8/12	 with at least one polyamide as 		bonds [5, 2006.01]
	constituent [2, 2006.01]	9/26	• • • • • from polyesters [5, 2006.01]
8/14	• • with at least one polyester as	9/28	• • • • • from polyamides [5, 2006.01]
0/16	constituent [2, 2006.01]	9/30	• • • • • • from aromatic
8/16	 with at least one other macromolecular compound obtained otherwise than by reactions only 	0 / 22	polyamides [5, 2006.01]
	involving carbon-to-carbon unsaturated	9/32	• • • • Apparatus therefor [5, 2006.01]
	bonds [2, 2006.01]	11/00	Chemical after-treatment of man-made filaments or
8/18	• from other substances [2, 2006.01]	11/00	Chemical after-treatment of man-made filaments or the like during manufacture (finishing
	• from other substances [2, 2006.01]	11/00	the like during manufacture (finishing D06M) [2, 2006.01]
8/18 9/00	 from other substances [2, 2006.01] Man-made filaments or the like of other substances; 	11/00 11/02	the like during manufacture (finishing D06M) [2, 2006.01]of cellulose, cellulose derivatives, or
	 from other substances [2, 2006.01] Man-made filaments or the like of other substances; Manufacture thereof; Apparatus specially adapted 	11/02	 the like during manufacture (finishing D06M) [2, 2006.01] of cellulose, cellulose derivatives, or proteins [2, 2006.01]
	 from other substances [2, 2006.01] Man-made filaments or the like of other substances; Manufacture thereof; Apparatus specially adapted for the manufacture of carbon 	11/02 11/04	 the like during manufacture (finishing D06M) [2, 2006.01] of cellulose, cellulose derivatives, or proteins [2, 2006.01] of synthetic polymers [2, 2006.01]
	 from other substances [2, 2006.01] Man-made filaments or the like of other substances; Manufacture thereof; Apparatus specially adapted 	11/02	 the like during manufacture (finishing D06M) [2, 2006.01] of cellulose, cellulose derivatives, or proteins [2, 2006.01] of synthetic polymers [2, 2006.01] of macromolecular compounds obtained by
9/00	 from other substances [2, 2006.01] Man-made filaments or the like of other substances; Manufacture thereof; Apparatus specially adapted for the manufacture of carbon filaments [1, 5, 2006.01] 	11/02 11/04	 the like during manufacture (finishing D06M) [2, 2006.01] of cellulose, cellulose derivatives, or proteins [2, 2006.01] of synthetic polymers [2, 2006.01] of macromolecular compounds obtained by reactions only involving carbon-to-carbon
9/00	 from other substances [2, 2006.01] Man-made filaments or the like of other substances; Manufacture thereof; Apparatus specially adapted for the manufacture of carbon filaments [1, 5, 2006.01] of reaction products of rubber with acids or acid 	11/02 11/04 11/06	 the like during manufacture (finishing D06M) [2, 2006.01] of cellulose, cellulose derivatives, or proteins [2, 2006.01] of synthetic polymers [2, 2006.01] of macromolecular compounds obtained by reactions only involving carbon-to-carbon unsaturated bonds [2, 2006.01]
9/00 9/02	 from other substances [2, 2006.01] Man-made filaments or the like of other substances; Manufacture thereof; Apparatus specially adapted for the manufacture of carbon filaments [1, 5, 2006.01] of reaction products of rubber with acids or acid anhydrides, e.g. sulfur dioxide [1, 2006.01] of alginates [1, 2006.01] of inorganic material (working or processing of metal 	11/02 11/04	 the like during manufacture (finishing D06M) [2, 2006.01] of cellulose, cellulose derivatives, or proteins [2, 2006.01] of synthetic polymers [2, 2006.01] of macromolecular compounds obtained by reactions only involving carbon-to-carbon
9/00 9/02 9/04	 from other substances [2, 2006.01] Man-made filaments or the like of other substances; Manufacture thereof; Apparatus specially adapted for the manufacture of carbon filaments [1, 5, 2006.01] of reaction products of rubber with acids or acid anhydrides, e.g. sulfur dioxide [1, 2006.01] of alginates [1, 2006.01] of inorganic material (working or processing of metal wire B21F; from softened glass, minerals, or slags 	11/02 11/04 11/06	 the like during manufacture (finishing D06M) [2, 2006.01] of cellulose, cellulose derivatives, or proteins [2, 2006.01] of synthetic polymers [2, 2006.01] of macromolecular compounds obtained by reactions only involving carbon-to-carbon unsaturated bonds [2, 2006.01] of macromolecular compounds obtained otherwise
9/00 9/02 9/04	 from other substances [2, 2006.01] Man-made filaments or the like of other substances; Manufacture thereof; Apparatus specially adapted for the manufacture of carbon filaments [1, 5, 2006.01] of reaction products of rubber with acids or acid anhydrides, e.g. sulfur dioxide [1, 2006.01] of alginates [1, 2006.01] of inorganic material (working or processing of metal wire B21F; from softened glass, minerals, or slags C03B 37/00; incandescent bodies F21H, H01K 1/02, 	11/02 11/04 11/06 11/08	 the like during manufacture (finishing D06M) [2, 2006.01] of cellulose, cellulose derivatives, or proteins [2, 2006.01] of synthetic polymers [2, 2006.01] of macromolecular compounds obtained by reactions only involving carbon-to-carbon unsaturated bonds [2, 2006.01] of macromolecular compounds obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds [2, 2006.01] of carbon [2, 2006.01]
9/00 9/02 9/04 9/08	 from other substances [2, 2006.01] Man-made filaments or the like of other substances; Manufacture thereof; Apparatus specially adapted for the manufacture of carbon filaments [1, 5, 2006.01] of reaction products of rubber with acids or acid anhydrides, e.g. sulfur dioxide [1, 2006.01] of alginates [1, 2006.01] of inorganic material (working or processing of metal wire B21F; from softened glass, minerals, or slags C03B 37/00; incandescent bodies F21H, H01K 1/02, H01K 3/02) [2, 2006.01] 	11/02 11/04 11/06 11/08 11/10 11/12	 the like during manufacture (finishing D06M) [2, 2006.01] of cellulose, cellulose derivatives, or proteins [2, 2006.01] of synthetic polymers [2, 2006.01] of macromolecular compounds obtained by reactions only involving carbon-to-carbon unsaturated bonds [2, 2006.01] of macromolecular compounds obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds [2, 2006.01] of carbon [2, 2006.01] with inorganic substances [5, 2006.01]
9/00 9/02 9/04	 from other substances [2, 2006.01] Man-made filaments or the like of other substances; Manufacture thereof; Apparatus specially adapted for the manufacture of carbon filaments [1, 5, 2006.01] of reaction products of rubber with acids or acid anhydrides, e.g. sulfur dioxide [1, 2006.01] of alginates [1, 2006.01] of inorganic material (working or processing of metal wire B21F; from softened glass, minerals, or slags C03B 37/00; incandescent bodies F21H, H01K 1/02, H01K 3/02) [2, 2006.01] by decomposition of organic substances 	11/02 11/04 11/06 11/08	 the like during manufacture (finishing D06M) [2, 2006.01] of cellulose, cellulose derivatives, or proteins [2, 2006.01] of synthetic polymers [2, 2006.01] of macromolecular compounds obtained by reactions only involving carbon-to-carbon unsaturated bonds [2, 2006.01] of macromolecular compounds obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds [2, 2006.01] of carbon [2, 2006.01] with inorganic substances [5, 2006.01] with organic compounds, e.g. macromolecular
9/00 9/02 9/04 9/08	 from other substances [2, 2006.01] Man-made filaments or the like of other substances; Manufacture thereof; Apparatus specially adapted for the manufacture of carbon filaments [1, 5, 2006.01] of reaction products of rubber with acids or acid anhydrides, e.g. sulfur dioxide [1, 2006.01] of alginates [1, 2006.01] of inorganic material (working or processing of metal wire B21F; from softened glass, minerals, or slags C03B 37/00; incandescent bodies F21H, H01K 1/02, H01K 3/02) [2, 2006.01] by decomposition of organic substances (D01F 9/12 takes precedence) [2, 2006.01] 	11/02 11/04 11/06 11/08 11/10 11/12 11/14	 the like during manufacture (finishing D06M) [2, 2006.01] of cellulose, cellulose derivatives, or proteins [2, 2006.01] of synthetic polymers [2, 2006.01] of macromolecular compounds obtained by reactions only involving carbon-to-carbon unsaturated bonds [2, 2006.01] of macromolecular compounds obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds [2, 2006.01] of carbon [2, 2006.01] with inorganic substances [5, 2006.01] with organic compounds, e.g. macromolecular compounds [5, 2006.01]
9/00 9/02 9/04 9/08	 from other substances [2, 2006.01] Man-made filaments or the like of other substances; Manufacture thereof; Apparatus specially adapted for the manufacture of carbon filaments [1, 5, 2006.01] of reaction products of rubber with acids or acid anhydrides, e.g. sulfur dioxide [1, 2006.01] of alginates [1, 2006.01] of inorganic material (working or processing of metal wire B21F; from softened glass, minerals, or slags C03B 37/00; incandescent bodies F21H, H01K 1/02, H01K 3/02) [2, 2006.01] by decomposition of organic substances 	11/02 11/04 11/06 11/08 11/10 11/12	 the like during manufacture (finishing D06M) [2, 2006.01] of cellulose, cellulose derivatives, or proteins [2, 2006.01] of synthetic polymers [2, 2006.01] of macromolecular compounds obtained by reactions only involving carbon-to-carbon unsaturated bonds [2, 2006.01] of macromolecular compounds obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds [2, 2006.01] of carbon [2, 2006.01] with inorganic substances [5, 2006.01] with organic compounds, e.g. macromolecular
9/00 9/02 9/04 9/08	 from other substances [2, 2006.01] Man-made filaments or the like of other substances; Manufacture thereof; Apparatus specially adapted for the manufacture of carbon filaments [1, 5, 2006.01] of reaction products of rubber with acids or acid anhydrides, e.g. sulfur dioxide [1, 2006.01] of alginates [1, 2006.01] of inorganic material (working or processing of metal wire B21F; from softened glass, minerals, or slags C03B 37/00; incandescent bodies F21H, H01K 1/02, H01K 3/02) [2, 2006.01] by decomposition of organic substances (D01F 9/12 takes precedence) [2, 2006.01] Carbon filaments; Apparatus specially adapted for the manufacture thereof [2, 5, 2006.01] by thermal decomposition of hydrocarbon gases 	11/02 11/04 11/06 11/08 11/10 11/12 11/14 11/16	 the like during manufacture (finishing D06M) [2, 2006.01] of cellulose, cellulose derivatives, or proteins [2, 2006.01] of synthetic polymers [2, 2006.01] of macromolecular compounds obtained by reactions only involving carbon-to-carbon unsaturated bonds [2, 2006.01] of macromolecular compounds obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds [2, 2006.01] of carbon [2, 2006.01] with inorganic substances [5, 2006.01] with organic compounds, e.g. macromolecular compounds [5, 2006.01] by physicochemical methods [5, 2006.01]
9/00 9/02 9/04 9/08 9/10 9/12 9/127	 from other substances [2, 2006.01] Man-made filaments or the like of other substances; Manufacture thereof; Apparatus specially adapted for the manufacture of carbon filaments [1, 5, 2006.01] of reaction products of rubber with acids or acid anhydrides, e.g. sulfur dioxide [1, 2006.01] of alginates [1, 2006.01] of inorganic material (working or processing of metal wire B21F; from softened glass, minerals, or slags C03B 37/00; incandescent bodies F21H, H01K 1/02, H01K 3/02) [2, 2006.01] by decomposition of organic substances (D01F 9/12 takes precedence) [2, 2006.01] Carbon filaments; Apparatus specially adapted for the manufacture thereof [2, 5, 2006.01] by thermal decomposition of hydrocarbon gases or vapours [5, 2006.01] 	11/02 11/04 11/06 11/08 11/10 11/12 11/14	 the like during manufacture (finishing D06M) [2, 2006.01] of cellulose, cellulose derivatives, or proteins [2, 2006.01] of synthetic polymers [2, 2006.01] of macromolecular compounds obtained by reactions only involving carbon-to-carbon unsaturated bonds [2, 2006.01] of macromolecular compounds obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds [2, 2006.01] of carbon [2, 2006.01] with inorganic substances [5, 2006.01] with organic compounds, e.g. macromolecular compounds [5, 2006.01] by physicochemical methods [5, 2006.01] Recovery of starting material, waste material or solvents during the manufacture of man-made
9/00 9/02 9/04 9/08 9/10 9/12 9/127 9/133	 from other substances [2, 2006.01] Man-made filaments or the like of other substances; Manufacture thereof; Apparatus specially adapted for the manufacture of carbon filaments [1, 5, 2006.01] of reaction products of rubber with acids or acid anhydrides, e.g. sulfur dioxide [1, 2006.01] of alginates [1, 2006.01] of inorganic material (working or processing of metal wire B21F; from softened glass, minerals, or slags C03B 37/00; incandescent bodies F21H, H01K 1/02, H01K 3/02) [2, 2006.01] by decomposition of organic substances (D01F 9/12 takes precedence) [2, 2006.01] Carbon filaments; Apparatus specially adapted for the manufacture thereof [2, 5, 2006.01] by thermal decomposition of hydrocarbon gases or vapours [5, 2006.01] Apparatus therefor [5, 2006.01] 	11/02 11/04 11/06 11/08 11/10 11/12 11/14 11/16	 the like during manufacture (finishing D06M) [2, 2006.01] of cellulose, cellulose derivatives, or proteins [2, 2006.01] of synthetic polymers [2, 2006.01] of macromolecular compounds obtained by reactions only involving carbon-to-carbon unsaturated bonds [2, 2006.01] of macromolecular compounds obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds [2, 2006.01] of carbon [2, 2006.01] with inorganic substances [5, 2006.01] with organic compounds, e.g. macromolecular compounds [5, 2006.01] by physicochemical methods [5, 2006.01] Recovery of starting material, waste material or solvents during the manufacture of man-made filaments or the like [2, 2006.01]
9/00 9/02 9/04 9/08 9/10 9/12 9/127	 from other substances [2, 2006.01] Man-made filaments or the like of other substances; Manufacture thereof; Apparatus specially adapted for the manufacture of carbon filaments [1, 5, 2006.01] of reaction products of rubber with acids or acid anhydrides, e.g. sulfur dioxide [1, 2006.01] of alginates [1, 2006.01] of inorganic material (working or processing of metal wire B21F; from softened glass, minerals, or slags C03B 37/00; incandescent bodies F21H, H01K 1/02, H01K 3/02) [2, 2006.01] by decomposition of organic substances (D01F 9/12 takes precedence) [2, 2006.01] Carbon filaments; Apparatus specially adapted for the manufacture thereof [2, 5, 2006.01] by thermal decomposition of hydrocarbon gases or vapours [5, 2006.01] Apparatus therefor [5, 2006.01] by decomposition of organic 	11/02 11/04 11/06 11/08 11/10 11/12 11/14 11/16	 the like during manufacture (finishing D06M) [2, 2006.01] of cellulose, cellulose derivatives, or proteins [2, 2006.01] of synthetic polymers [2, 2006.01] of macromolecular compounds obtained by reactions only involving carbon-to-carbon unsaturated bonds [2, 2006.01] of macromolecular compounds obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds [2, 2006.01] of carbon [2, 2006.01] with inorganic substances [5, 2006.01] with organic compounds, e.g. macromolecular compounds [5, 2006.01] by physicochemical methods [5, 2006.01] Recovery of starting material, waste material or solvents during the manufacture of man-made filaments or the like [2, 2006.01] of cellulose, cellulose derivatives, or
9/00 9/02 9/04 9/08 9/10 9/12 9/127 9/133	 from other substances [2, 2006.01] Man-made filaments or the like of other substances; Manufacture thereof; Apparatus specially adapted for the manufacture of carbon filaments [1, 5, 2006.01] of reaction products of rubber with acids or acid anhydrides, e.g. sulfur dioxide [1, 2006.01] of alginates [1, 2006.01] of inorganic material (working or processing of metal wire B21F; from softened glass, minerals, or slags C03B 37/00; incandescent bodies F21H, H01K 1/02, H01K 3/02) [2, 2006.01] by decomposition of organic substances (D01F 9/12 takes precedence) [2, 2006.01] Carbon filaments; Apparatus specially adapted for the manufacture thereof [2, 5, 2006.01] by thermal decomposition of hydrocarbon gases or vapours [5, 2006.01] Apparatus therefor [5, 2006.01] 	11/02 11/04 11/06 11/08 11/10 11/12 11/14 11/16 13/00	 the like during manufacture (finishing D06M) [2, 2006.01] of cellulose, cellulose derivatives, or proteins [2, 2006.01] of synthetic polymers [2, 2006.01] of macromolecular compounds obtained by reactions only involving carbon-to-carbon unsaturated bonds [2, 2006.01] of macromolecular compounds obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds [2, 2006.01] of carbon [2, 2006.01] with inorganic substances [5, 2006.01] with organic compounds, e.g. macromolecular compounds [5, 2006.01] by physicochemical methods [5, 2006.01] Recovery of starting material, waste material or solvents during the manufacture of man-made filaments or the like [2, 2006.01]

D01G PRELIMINARY TREATMENT OF FIBRES, e.g. FOR SPINNING (winding or unwinding, conducting or guiding laps, webs, slivers, or rovings in general, sliver or roving cans, depositing in sliver or roving cans B65H; preparation of fibres for paper-making D21)

Note(s)

Attention is drawn to the Note following the title of class D01.

Subclass index

OPERATIONS BEFORE CARDING; MACHINES THEREFOR

Opening fibre bales; separating and sorting of fibres; opening or cleaning fibres.......7/00, 5/00, 9/00

6

Recov Mixin CARDING Feedin Cardin SILK-DR COMBIN WARNIN HAND TO	ing of continuous filaments; roughening of fibres	OR ; lubricating f US PROCES	11/00 13/00 Sibres
1/00	Severing continuous filaments or long fibres, e.g. stapling (drafting arrangements, twisting arrangements D01H) [1, 2006.01]	11/04	 Opening rags to obtain fibres for re-use (mechanical treatment of rags for paper-making D21B) [1, 2006.01]
1/02	 to form staple fibres not delivered in strand form [1, 2006.01] 	13/00	Mixing, e.g. blending, fibres; Mixing non-fibrous materials with fibres (mixing of fibres combined with
1/04	• • by cutting [1, 2006.01]		other operations, e.g. bale-breaking or fibre-opening, see
1/06	 Converting tows to slivers or yarns, e.g. in direct spinning [1, 2006.01] 		the appropriate groups for such operations) [1, 2006.01]
1/08 1/10	 by stretching or abrading [1, 2006.01] by cutting [1, 2006.01]	15/00	Carding machines or accessories; Card clothing;
3/00	Roughening of fibres [1, 2006.01]		Burr-crushing or removing arrangements associated with carding or other preliminary-treatment machines (de-burring apparatus or machines operating independently DOLD) 11, 2006 011
5/00	Separating, e.g. sorting, fibres (separating fibres of	15/02	independently D01B) [1, 2006.01] • Carding machines [1, 2006.01]
	differing lengths in silk-dressing machines D01G 17/00; in combing machines D01G 19/00) [1, 2006.01]	15/04	 with worker and stripper or like rollers operating in association with a main cylinder [1, 2006.01]
7/00	Breaking or opening fibre bales [1, 2006.01]	15/06	• • • Garnett machines [1, 2006.01]
7/02	• by means of beater arms [1, 2006.01]	15/08	 with flats or like members or endless card sheets
7/04	• by means of toothed members [1, 2006.01]		operating in association with a main
7/06	• Details of apparatus or machines [1, 2006.01]		cylinder [1, 2006.01]
7/08	 Arrangements for feeding bales to comminuting elements [1, 2006.01] 	15/10	 with other apparatus, e.g. drafting devices, in integral or closely-associated combination (web- dividing apparatus D01G 15/46; burr-crushing or
7/10	• • Arrangements for discharging fibres [1, 2006.01]		removing arrangements D01G 15/94) [1, 2006.01]
7/12	 Framework; Casings; Coverings; 	15/12	 Details [1, 2006.01]
	Grids [1, 2006.01]	15/14	 Constructional features of carding elements,
7/14 9/00	 Driving arrangements [1, 2006.01] Opening or cleaning fibres, e.g. scutching cotton 	10,11	e.g. for facilitating attachment of card clothing [1, 2006.01]
3/00	(scutching flax or like fibres D01B; making cellulose	15/16	• • • • Main cylinders; Breasts [1, 2006.01]
	wadding in paper-making machines D21F 11/14) [1, 2006.01]	15/18	• • • • Workers; Strippers; Doffers (doffers specially adapted for web dividing
9/02	• by agitation within a moving receptacle [1, 2006.01]		D01G 15/54) [1, 2006.01]
9/04	• by means of beater arms [1, 2006.01]	15/20	• • • Feed rollers; Takers-in [1, 2006.01]
9/06	• by means of toothed members [1, 2006.01]	15/22	• • • • Fancies [1, 2006.01]
9/08	• by means of air draught arrangements [1, 2006.01]	15/24	• • • Flats or like members [1, 2006.01]
9/10	using foraminous cylinders (foraminous suction cylinders for lap-forming Research (2016) 18 2000 2011	15/26 15/28	 • Arrangements or disposition of carding elements [1, 2006.01] • Supporting arrangements for carding elements;
9/12	D01G 25/00) [1, 2006.01] • Combinations of opening or cleaning	13/20	Arrangements for adjusting relative positions of carding elements [1, 2006.01]
9/14	machines [1, 2006.01] Details of machines or apparatus [1, 2006.01]	15/30	• • • Bends [1, 2006.01]
9/14	Feeding arrangements (fibre-feeding apparatus of	15/32	• • • Framework; Casings; Coverings [1, 2006.01]
3/10	general application in fibre-treating machines D01G 23/00) [1, 2006.01]	15/34 15/36	• • Grids; Dirt knives; Angle blades [1, 2006.01]• • Driving or speed control
9/18	 Arrangements for discharging fibres [1, 2006.01] 		arrangements [1, 2006.01]
9/20	Framework; Casings; Coverings; Grids [1, 2006.01]	15/38	• • • • for use during the grinding of card clothing [1, 2006.01]
9/22	• • Driving arrangements [1, 2006.01]	15/40	• • • Feeding apparatus (fibre-feeding apparatus of general application to fibre-treating machines,
11/00	Disintegrating fibre-containing articles to obtain		e.g. hopper feeders, D01G 23/00) [1, 2006.01]
44.00	fibres for re-use [1, 2006.01]	15/42	• • • • Feeding from laps [1, 2006.01]
11/02	 Opening, unravelling, or teasing ropes or like fibrous strands to obtain fibres for re-use [1, 2006.01] 	15/44	• • • • Intermediate feeds [1, 2006.01]

15/46	• • • Doffing or like arrangements for removing fibres from carding elements; Web-dividing	19/12	 Devices for laying or holding fibres in combs, e.g. dabbing brushes [1, 2006.01]
	apparatus; Condensers (lap-forming devices	19/14	• • Drawing-off and delivery apparatus [1, 2006.01]
	D01G 25/00; fibre condensing guides	19/16	 Nipper mechanisms [1, 2006.01]
15/40	D01H 5/72) [1, 2006.01]	19/18	 Roller, or roller and apron, devices, e.g.
15/48	• • • • Stripping-combs [1, 2006.01]		operating to draw-off fibres
15/50	• • • • Stripping-rollers or like devices [1, 2006.01]		continuously [1, 2006.01]
15/52 15/54	• • • • Web-dividing arrangements [1, 2006.01]• • • • employing doffers specially adapted for	19/20	• • • operating to draw-off fibres intermittently [1, 2006.01]
	web dividing [1, 2006.01]	19/22	• • Arrangements for removing, or disposing of, noil
15/56	• • • • employing tapes [1, 2006.01]		or waste [1, 2006.01]
15/58	• • • Sliver or like rubbing apparatus [1, 2006.01]	19/24	 Framework; Casings; Coverings [1, 2006.01]
15/60	• • • • Constructions of rubbing	19/26	 Driving arrangements [1, 2006.01]
	leathers [1, 2006.01]	19/28	Air draught or like pneumatic
15/62	Slubbing-winding apparatus (winding	10.100	arrangements [1, 2006.01]
	apparatus of general application to the winding of filamentary material	19/30	• • Heating arrangements [1, 2006.01]
.=	B65H) [1, 2006.01]	21/00	Combinations of machines, apparatus, or processes,
15/64	• • • Drafting or twisting apparatus associated		e.g. for continuous processing (D01G 1/06, D01G 9/12, D01G 15/46, D01G 15/94 take
	with doffing arrangements or with web-dividing apparatus [1, 2006.01]		precedence) [1, 2006.01]
15/66	• • • • with arrangements inserting false twist		precedence [1, 2000.01]
13/00	(false-twist devices D01H) [1, 2006.01]	23/00	Feeding fibres to machines; Conveying fibres
15/68	• • • • with arrangements inserting permanent		between machines (D01G 21/00 takes precedence;
157 00	twist, e.g. spinning [1, 2006.01]		intermediate feeds in carding machines
15/70	Arrangements for producing decorative or fancy	00.400	D01G 15/40) [1, 2006.01]
	effects in products [1, 2006.01]	23/02	• Hoppers; Delivery shoots [1, 2006.01]
15/72	 Arrangements for returning waste to be re- 	23/04	• • with means for regulating of feed [1, 2006.01]
	carded [1, 2006.01]	23/06	Arrangements in which a machine or apparatus is regulated in response to changes in the volume or
15/74	 Air draught arrangements (air draught 		regulated in response to changes in the volume or weight of fibres fed, e.g. piano motions
	arrangements for stripping or for removing dust or		(arrangements in which draft is regulated in response
	fly D01G 15/76) [1, 2006.01]		to irregularities in fibre supply D01H) [1, 2006.01]
15/76	Stripping or cleaning carding surfaces; Maintaining Application of south accounts 11, 2006 011.	23/08	Air draught or like pneumatic
15/70	cleanliness of carding area [1, 2006.01]		arrangements [1, 2006.01]
15/78	• • Arrangements for stripping flats [1, 2006.01]		
15/80	 Arrangements for stripping cylinders or rollers [1, 2006.01] 	25/00	Lap-forming devices not integral with machines
15/82	 Arrangements for confining or removing dust, fly, 		specified above (forming mats or batts of continuous filaments for non-woven fabrics D04H) [1, 2006.01]
13/02	or the like [1, 2006.01]		maments for non-woven labrics D0411) [1, 2000.01]
15/84	Card clothing; Manufacture thereof not otherwise	27/00	Lap- or sliver-winding devices, e.g. for products of
	provided for (arrangements for driving carding-		cotton scutchers, jute cards, or worsted gill
	machine elements during grinding D01G 15/38;		boxes [1, 2006.01]
	grinding card clothing B24B) [1, 2006.01]	27/02	 with lap roll or the like loaded to provide firm
15/86	 with flexible non-metallic backing [1, 2006.01] 		packages [1, 2006.01]
15/88	 formed from metal sheets or strips [1, 2006.01] 	27/04	• with automatic discharge of lap roll or the
15/90	 Lags, e.g. for jute cards [1, 2006.01] 		like [1, 2006.01]
15/92	 Attaching card clothing to carding 	29/00	Arrangements for lubricating fibres, e.g. in gill boxes
	elements [1, 2006.01]	25700	(processes involving the use of particular lubricants
15/94	• Burr-crushing or removing arrangements [1, 2006.01]		D06M 15/00) [1, 2006.01]
15/96	• • Burr-crushing rollers [1, 2006.01]		
15/98	 Morel or like apparatus [1, 2006.01] 	31/00	Warning or safety devices, e.g. automatic fault
17/00	Silk-dressing machines [1, 2006.01]		detectors, stop motions (safety devices of general application F16P; indicating devices of general application G08B) [1, 2006.01]
19/00	Combing machines [1, 2006.01]		11 / 12
19/02	 with pinned circles, e.g. Noble [1, 2006.01] 	33/00	Hand tools for treatment of fibres [1, 2006.01]
19/04	• with pinned cylinders, e.g. rectilinear [1, 2006.01]	DE /00	Tuestment of column [4, 2006 04]
19/06	• Details [1, 2006.01]	35/00	Treatment of oakum [1, 2006.01]
19/08	• • Feeding apparatus [1, 2006.01]	99/00	Subject matter not provided for in other groups of
19/10	 Construction, mounting, or operating features of combing elements [1, 2006.01] 	23,00	this subclass [2010.01]
	comoning elements [1, 2000,01]		

D01H

SPINNING OR TWISTING (unwinding, paying-out, forwarding, winding, or coiling filamentary material, not intimately associated with spinning or twisting, B65H; cores, formers, supports, or holders for coiled or wound material, e.g. bobbins, B65H; twisting oakum D01G 35/00; crimping or curling of fibres, filaments, or yarns D02G 1/00; making chenille D03D, D04D 3/00; testing yarns, rovings, slivers, fibres, or fibre webs G01)

3/16

3/18

3/20

3/22

3/24

Note(s)

Attention is drawn to the Note following the title of class D01.

Subclass index

SPINNING OR TWISTING MACHINES	
With continuous wind-up; with intermittent wind-up	1/00, 3/00
Open-end spinning	4/00
Drafting machines or arrangements	5/00
Spinning or twisting arrangements	7/00
COMMON STRUCTURAL FEATURES, DETAILS, OR ACCESSORIES	
Replacing bobbins; confining or removing dust or fly	9/00, 11/00
Other structural features, details, or accessories	13/00
Piecing arrangements; hand tools	15/00, 17/00

Kinds or types of spinning or twisting machines; Drafting
machines or arrangements; Twisting arrangements

Kinds or types of spinning or twisting machines; Drafting machines or arrangements; Twisting arrangements						
1/00	Spinning or twisting machines in which the product is wound-up continuously (open-end spinning machines D01H 4/00) [1, 5, 2006.01]					
1/02	• ring type [1, 2006.01]					
1/04	• flyer type [1, 2006.01]					
1/06	• cap type [1, 2006.01]					
1/08	• cup, pot, or disc type, in which annular masses of yarn are formed by centrifugal action [1, 2006.01]					
1/10	 for imparting multiple twist, e.g. two-for-one twisting [1, 2006.01] 					
1/11	 Spinning by false-twisting [5, 2006.01] 					
1/115	 using pneumatic means [5, 2006.01] 					
1/14	 Details (drafting arrangements D01H 5/00; twisting arrangements D01H 7/00) [1, 2006.01] 					
1/16	 Framework; Casings; Coverings [1, 2006.01] 					
1/18	• • Supports for supply packages [1, 2006.01]					
1/20	 Driving or stopping arrangements (for open-end spinning machines D01H 4/12, D01H 4/20, D01H 4/42; safety devices D01H 13/14) [1, 5, 2006.01] 					
1/22	• • • for rollers (regulating or varying draft D01H 5/32) [1, 2006.01]					
1/24	• • • for twisting arrangements, e.g. spindles (braking arrangements for spindles D01H 7/22; interrelated flyer and bobbin drive mechanisms D01H 7/50) [1, 2006.01]					
1/241	• • • driven by belt [2, 2006.01]					
1/242	• • • driven by toothed wheels [2, 2006.01]					
1/243	• • • driven by friction discs [2, 2006.01]					
1/244	• • • each spindle driven by an electric motor [2, 2006.01]					
1/26	• • • with two or more speeds; with variable- speed arrangements [1, 2006.01]					
1/28	 • • for two or more machine elements possessing different characteristics but in operative association [1, 2006.01] 					
1/30	• • • with two or more speeds; with variable- speed arrangements [1, 2006.01]					

• • • for complete machines [1, 2006.01]

1/34	• • • • with two or more speeds; with variable- speed arrangements [1, 2006.01]				
1/36	 Package-shaping arrangements, e.g. building motions [1, 2006.01] 				
1/38	• • Arrangements for winding reserve lengths of yarn on take-up packages, e.g. transfer tails [1, 2006.01]				
1/40	 Arrangements for connecting continuously- delivered material to bobbins or the like [1, 2006.01] 				
1/42	 Guards or protectors for yarns or threads, e.g. separator plates, anti-ballooning devices (anti- ballooning devices on spindles D01H 7/18) [1, 2006.01] 				
3/00	Spinning or twisting machines in which the product				
3/00	Spinning or twisting machines in which the product is wound-up intermittently, e.g. mules [1, 2006.01]				
3/00 3/02					
	 is wound-up intermittently, e.g. mules [1, 2006.01] Details (drafting arrangements D01H 5/00; twisting 				
3/02	 is wound-up intermittently, e.g. mules [1, 2006.01] Details (drafting arrangements D01H 5/00; twisting arrangements D01H 7/00) [1, 2006.01] Carriages; Mechanisms effecting carriage 				
3/02	 is wound-up intermittently, e.g. mules [1, 2006.01] Details (drafting arrangements D01H 5/00; twisting arrangements D01H 7/00) [1, 2006.01] Carriages; Mechanisms effecting carriage movements [1, 2006.01] Carriages; Carriage rails; Squaring 				
3/02 3/04 3/06	 is wound-up intermittently, e.g. mules [1, 2006.01] Details (drafting arrangements D01H 5/00; twisting arrangements D01H 7/00) [1, 2006.01] Carriages; Mechanisms effecting carriage movements [1, 2006.01] Carriages; Carriage rails; Squaring motions [1, 2006.01] 				
3/02 3/04 3/06 3/08	 is wound-up intermittently, e.g. mules [1, 2006.01] Details (drafting arrangements D01H 5/00; twisting arrangements D01H 7/00) [1, 2006.01] Carriages; Mechanisms effecting carriage movements [1, 2006.01] Carriages; Carriage rails; Squaring motions [1, 2006.01] Drawing-out or taking-in motions [1, 2006.01] Moving-creel arrangements, e.g. for 				

Spindle-driving arrangements (spindles, spindle

Tin rollers; Driving arrangements intimately associated with tin rollers [1, 2006.01]

out or backing-off [1, 2006.01]

Quadrant motions; Nosing motions [1, 2006.01]

Spindle-driving arrangements during drawing-

Spindle-driving arrangements during taking-

bearings, spindle supports D01H 7/04) [1, 2006.01]

in **[1, 2006.01]**

8

- Driving or stopping arrangements not otherwise provided for; Locking motions (safety devices D01H 13/14) [1, 2006.01]
- 4/00 Open-end spinning machines or arrangements for imparting twist to independently moving fibres separated from slivers; Piecing arrangements therefor; Covering endless core threads with fibres by open-end spinning techniques [5, 2006.01]

Note(s) [5]

In this group, the expression "open-end spinning" covers such expressions as "break spinning", "ringless spinning", "rotor spinning" and "friction spinning", but does not cover the expression "spinning by falsetwisting".

- 4/02 imparting twist by a fluid, e.g. air vortex [5, 2006.01]
- 4/04 imparting twist by contact of fibres with a running surface [5, 2006.01]
- 4/06 co-operating with suction means (D01H 4/08, D01H 4/16 take precedence) **[5, 2006.01]**
- 4/08 Rotor spinning, i.e. the running surface being provided by a rotor [5, 2006.01]
- 4/10 • Rotors [5, 2006.01]
- 4/12 • Rotor bearings; Arrangements for driving or stopping (control therefor D01H 4/42) [5, 2006.01]
- 4/14 • • Rotor driven by an electric motor **[5, 2006.01]**
- 4/16
 Friction spinning, i. e. the running surface being provided by a pair of closely spaced friction drums, e.g. at least one suction drum [5, 2006.01]
- 4/18 • Friction drums, e.g. arrangement of suction holes [5, 2006.01]
- 4/20
 Drum bearings; Arrangements for driving or stopping (control therefor D01H 4/42) [5, 2006.01]
- 4/22 • Cleaning of running surfaces **[5, 2006.01]**
- 4/24 • in rotor spinning [5, 2006.01]
- 4/26 • in friction spinning **[5, 2006.01]**
- 4/28 using electrostatic fields **[5, 2006.01]**
- 4/30 Arrangements for separating slivers into fibres;
 Orienting or straightening fibres [5, 2006.01]
- 4/32 using opening rollers **[5, 2006.01]**
- 4/34 using air-jet streams **[5, 2006.01]**
- 4/36 • with means for taking away impurities **[5, 2006.01]**
- Channels for feeding fibres to the yarn forming region [5, 2006.01]
- Removing running yarn from the yarn forming region, e.g. using tubes [5, 2006.01]
- 4/42 Control of driving or stopping **[5, 2006.01]**
- 4/44 • in rotor spinning [5, 2006.01]
- 4/46 • in friction spinning [5, 2006.01]
- 4/48 Piecing arrangements; Control therefor **[5, 2006.01]**
- 4/50 for rotor spinning **[5, 2006.01]**
- 4/52 • for friction spinning **[5, 2006.01]**
- 5/00 Drafting machines or arrangements (arrangements in which draft is dependent on linear movement of take-up spindles, e.g. in mules, D01H 3/00; devices for combing or orienting fibres for open-end spinning machines D01H 4/30) [1, 2006.01]
- Gill boxes or other drafting machines employing fallers or like pinned bars (lubricating fibres in gill boxes D01G 29/00) [1, 2006.01]

- 5/04 with pinned bars actuated by screw members [1, 2006.01]
- 5/06 • Intersecting gill boxes [1, 2006.01]
- 5/08 • with bars connected by links, chains, or the like [1, 2006.01]
- with pinned bars unconnected with each other but actuated through pressure of one against another [1, 2006.01]
- 5/12 Details [1, 2006.01]
- 5/14 • Pinned bars [1, 2006.01]
- 5/16 • Framework; Casings; Coverings [1, 2006.01]
- Drafting machines or arrangements without fallers or like pinned bars [1, 2006.01]
- 5/20 in which fibres are controlled by contact with stationary or reciprocating surfaces [1, 2006.01]
- 5/22 in which fibres are controlled by rollers only [1, 2006.01]
- 5/24 • with porcupines or like pinned rotary members [1, 2006.01]
- 5/26 in which fibres are controlled by one or more endless aprons [1, 2006.01]
- 5/28 • in which fibres are controlled by inserting twist during drafting (mules D01H 3/00; constructions of false-twist devices D02G 1/04) [1, 2006.01]
- 5/30 incorporating arrangements for severing continuous filaments, e.g. in direct spinning (converting tows to slivers or yarns D01G 1/06) [1, 2006.01]
- 5/32 • Regulating or varying draft [1, 2006.01]
- 5/34 • by manual adjustments **[1, 2006.01]**
- 5/36 • according to a pre-arranged pattern, e.g. to produce slubs [1, 2006.01]
- 5/38 • in response to irregularities in material [1, 2006.01]
- 5/40 • employing mechanical time-delay devices [1, 2006.01]
- 5/42 • employing electrical time-delay devices [1, 2006.01]
- • Adjusting drafting elements, e.g. altering ratch [1, 2006.01]
- 5/46 • Loading arrangements [1, 2006.01]
- 5/48 • using weights **[1, 2006.01]**
- 5/50 • using springs [1, 2006.01]
- 5/52 • using fluid pressure **[1, 2006.01]**
- 5/54 • using magnetic arrangements **[1, 2006.01]**
- 5/56 Supports for drafting elements (saddles or top roller arms forming essential components of weighting arrangements D01H 5/48) [1, 2006.01]
- 5/58 • Arrangements for traversing drafting elements (traversing arrangements for roving guides D01H 13/06) [1, 2006.01]
- 5/60 Arrangements maintaining drafting elements free of fibre accumulations [1, 2006.01]
- 5/62 • Non-rotary cleaning pads or plates; Scrapers [1, 2006.01]
- 5/64 • Rollers or aprons with cleaning surfaces [1, 2006.01]
- 5/66 • Suction devices **[1, 2006.01]**
- 5/68 • • Suction end-catchers [1, 2006.01]
- 5/70 Constructional features of drafting elements [1, 2006.01]
- 5/72
 Fibre-condensing guides (guides for slivers, rovings, or yarns applicable solely for spinning, twisting, curling, or crimping purposes D01H 13/04) [1, 2006.01]
- 5/74 • Rollers [1, 2006.01]

5/76	• • • Loose-boss assemblies [1, 2006.01]	7/64	• • • Ring supports, e.g. ring rails (poker guides or
5/78	• • • with flutes or other integral surface		other rail supports D01H 7/10) [1, 2006.01]
	characteristics [1, 2006.01]	7/66	• • Cap arrangements [1, 2006.01]
5/80	• • • • with covers; Cots or covers [1, 2006.01]	7/68	• • • Cap constructions [1, 2006.01]
5/82	• • • Arrangements for coupling roller sections [1, 2006.01]	7/70	 • Arrangements for supporting caps on spindles [1, 2006.01]
5/84	• • • • Porcupines [1, 2006.01]	7/72	Bobbin-supporting arrangements, e.g. bobbin
5/86	• • Aprons; Apron supports; Apron-tensioning arrangements [1, 2006.01]		rails (poker guides or other rail supports D01H 7/10) [1, 2006.01]
5/88	• • • • Cradles; Tensors [1, 2006.01]	7/74	 Cup or like arrangements [1, 2006.01]
57 00	Crudics, Tensors (1) 200001	7/76	• • • Rotary discs [1, 2006.01]
7/00	Spinning or twisting arrangements (for open-end spinning D01H 4/00) [1, 5, 2006.01]	7/78	• • • Constructions of cups, e.g. spinning boxes [1, 2006.01]
7/02	• for imparting permanent twist [1, 2006.01]	7/80	• • • • adapted to collect wet yarns [1, 2006.01]
7/04	• • Spindles (spindle bearings, supports therefor, in general F16C) [1, 2006.01]	7/82	• • • Casings or guards for rotary cups or the
7/06	 • Stationary spindles with package-holding 	7/84	like [1, 2006.01]• • • Spindles or yarn carriers for co-operation with
7/08	sleeves [1, 2006.01] • • • Mounting arrangements [1, 2006.01]		rotary cups (removing yarn from centrifugal
7/10	• • • Spindle supports; Rails; Rail supports, e.g.		cups on to yarn carriers D01H 9/06) [1, 2006.01]
	poker guides [1, 2006.01]	7/86	 Multiple-twist arrangements, e.g. two-for-one
7/12	• • • Bolsters; Bearings [1, 2006.01]	7.00	twisting devices [1, 2006.01]
7/14 7/16	• • • Holding-down arrangements [1, 2006.01]• • Arrangements for coupling bobbins or like to	7/88	 Hollow-spindle arrangements (D01H 7/86 takes precedence) [1, 2006.01]
	spindles [1, 2006.01]	7/90	Arrangements with two or more twisting devices The combination (D01H 7/00, D01H 7/00 teles)
7/18	 Arrangements on spindles for suppressing yarn balloons (thread guards or protectors 		in combination (D01H 7/86, D01H 7/88 take precedence) [1, 2006.01]
	D01H 1/42) [1, 2006.01]	7/92	 for imparting transient twist [1, 2006.01]
7/20	• • • Lubricating arrangements [1, 2006.01]		
7/22	• • • Braking arrangements [1, 2006.01]	Common	features or details of, or accessories for, spinning or
7/24	 Flyer or like arrangements (multiple-twist arrangements D01H 7/86) [1, 2006.01] 		machines of various kinds or types
7/26	• • • Flyer constructions [1, 2006.01]	9/00	Arrangements for replacing or removing bobbins,
7/28	• • • arranged to guide material over exterior of		cores, receptacles, or completed packages at paying-
7 /20	legs [1, 2006.01]		out or take-up stations (arrangements of general
7/30	• • • with guide channels formed in legs, e.g. slubbing flyers [1, 2006.01]		interest in the winding of filamentary material B65H) [1, 2006.01]
7/32	• • • • • with pressing devices [1, 2006.01]	9/02	 for removing completed take-up packages and
7/34	• • • • with haul pulleys or like		replacing by bobbins, cores, or receptacles at take-up
	arrangements [1, 2006.01]		stations; Transferring material between adjacent full
7/36	• • • with traversing devices [1, 2006.01]		and empty take-up elements [1, 2006.01]
7/38	• • • Ring flyers [1, 2006.01]	9/04	Doffing arrangements integral with spinning or
7/40	• • • Flyer supports, e.g. rails [1, 2006.01]	0./00	twisting machines [1, 2006.01]
7/42	 • Arrangements coupling flyers to spindles [1, 2006.01] 	9/06	• • • Removing yarn from centrifugal cups on to yarn carriers [1, 2006.01]
7/44	• • • Drag arrangements for bobbins or flyers [1, 2006.01]	9/08	 Doffing arrangements independent of spinning or twisting machines [1, 2006.01]
7/46	• • Devices attached to, or integral with, flyers for	9/10	• • • Doffing carriages [1, 2006.01]
7, 10	temporarily increasing twist in material passing to them [1, 2006.01]	9/12	• • • Manual cop-tube applying apparatus; Stands for cop-tube applying apparatus [1, 2006.01]
7/48	• • • Eyes or like guiding arrangements (D01H 7/46	9/14	for preparing machines for doffing of yarns (stop motions responsive to delivery of a measured
7/50	takes precedence) [1, 2006.01]Interrelated flyer and bobbin drive mechanisms,		length of material D01H 13/24) [1, 2006.01]
7750	e.g. winding-on motions for cotton-roving	9/16	• • Yarn-severing arrangements [1, 2006.01]
	frames (package-building mechanisms	9/18	for supplying bobbins, cores, receptacles, or
7/50	D01H 1/36) [1, 2006.01]		completed packages to, or transporting from, paying- out or take-up stations (D01H 9/10 takes
7/52 7/54	• Ring-and-traveller arrangements [1, 2006.01]		precedence) [1, 2006.01]
7/54 7/56	• with fixed rings [1, 2006.01]• with freely-rotatable rings; with braked or		
, , 50	dragged rings [1, 2006.01]	11/00	Arrangements for confining or removing dust, fly, or the like (cleaning of running surfaces in open-end
7/58	• • • with driven rings [1, 2006.01]		spinning machines D01H 4/22; separation in general
7/60	• • • Rings or travellers; Manufacture thereof not		B01D; cleaning in general B08B; air-conditioning F24F,
	otherwise provided for (hand tools for applying travellers to rings D01H 17/02) [1, 2006.01]		e.g. by filtering F24F 3/16) [1, 5, 2006.01]
= / CD			
7/62	 Arrangements providing lubricant for 		
7/62	 Arrangements providing lubricant for travellers [1, 2006.01] 		

13/00	Other common constructional features, details, or accessories (for open-end spinning D01H 4/00) [1, 5, 2006.01]	13/22 13/24	 responsive to presence of irregularities in running material [1, 2006.01] responsive to delivery of a measured length of
13/02	 Roller arrangements not otherwise provided for [1, 2006.01] 		material, completion of winding of a package or filling of a receptacle [1, 2006.01]
13/04	 Guides for slivers, rovings, or yarns; Smoothing dies (fibre-condensing guides D01H 5/72) [1, 2006.01] 	13/26	• Arrangements facilitating the inspection or testing of yarns or the like in connection with spinning or
13/06	 Traversing arrangements [1, 2006.01] 		twisting [1, 2006.01]
13/08	• Twist arresters [1, 2006.01]	13/28	 Heating or cooling arrangements [1, 2006.01]
13/10	• Tension devices [1, 2006.01]	13/30	 Moistening, sizing, oiling, waxing, colouring, or
13/12	 Arrangements preventing snarls or inadvertent doubling of yarns (suction end-catchers 		drying yarns or the like as incidental measures during spinning or twisting [1, 2006.01]
	D01H 5/68) [1, 2006.01]	13/32	Counting, measuring, recording, or registering
13/14	 Warning or safety devices, e.g. automatic fault detectors, stop motions (warning or safety devices for 		devices (in general, <u>see</u> in the appropriate subclass of section G, e.g. G01B) [1, 2006.01]
	filamentary material, not intimately associated with spinning or like machines B65H; safety devices of general application F16P; indicating devices of general application G08B) [1, 2006.01]	15/00	Piecing arrangements (for open-end spinning machines D01H 4/48; in machines for producing textile fabrics, see the appropriate subclasses) [1, 5, 2006.01]
13/16	 responsive to reduction in material tension, failure 	15/007	• for two-for-one twisting machines [5, 2006.01]
15/10	of supply, or breakage, of material [1, 2006.01]	15/013	• Carriages travelling along the machines [5, 2006.01]
13/18 13/20	 • stopping supply only [1, 2006.01] • responsive to excessive tension or irregular 	17/00	Hand tools (cop-tube applying apparatus D01H 9/12) [1, 2006.01]
	operation of apparatus [1, 2006.01]	17/02	 Arrangements for storing ring travellers; Devices for applying travellers to rings [1, 2006.01]