

SECTION D — TEXTILES; PAPER

D02 YARNS; MECHANICAL FINISHING OF YARNS OR ROPES; WARPING OR BEAMING

Note(s)

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

- "fibre" means a relatively-short, elongated member of natural or artificial material;
- "filament" means an endless or quasi-endless, elongated member of natural or artificial material;
- "yarn" means a unitary assembly of fibres, usually produced by spinning;
- "thread" means an assembly of yarns or filaments, usually produced by twisting.

D02G CRIMPING OR CURLING FIBRES, FILAMENTS, YARNS, OR THREADS; YARNS OR THREADS

Note(s)

Attention is drawn to the Note following the title of class D02.

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| <p>1/00 Producing crimped or curled fibres, filaments, yarns, or threads, giving them latent characteristics (yarns <i>per se</i> D02G 3/00; during formation of artificial filaments, threads, or the like D01D 5/22; general aspects of chemical treatment D06M)</p> | <p>3/10 • • Yarns or threads formed from collagenous materials, e.g. catgut</p> |
| <p>1/02 • by twisting, fixing the twist and backtwisting, i.e. by imparting false twist</p> | <p>3/12 • • Threads containing metallic filaments or strips</p> |
| <p>1/04 • • Devices for imparting false twist</p> | <p>3/14 • • Horse-hair threads</p> |
| <p>1/06 • • • Spindles</p> | <p>3/16 • • Yarns or threads made from mineral substances</p> |
| <p>1/08 • • • Rollers</p> | <p>3/18 • • • from glass or the like</p> |
| <p>1/10 • using knife edges, e.g. heated knife edges, for edge crimping</p> | <p>3/20 • • • from asbestos</p> |
| <p>1/12 • using stuffer boxes</p> | <p>3/22 • Yarns or threads characterised by constructional features</p> |
| <p>1/14 • using grooved rollers or gear-wheel-type members</p> | <p>3/24 • • Bulkled yarns or threads, e.g. formed from staple fibre components with different relaxation characteristics</p> |
| <p>1/16 • using jets or streams of turbulent gases, e.g. air, steam</p> | <p>3/26 • • with characteristics dependent on the amount or direction of twist</p> |
| <p>1/18 • by combining fibres, filaments, or yarns, having different shrinkage characteristics</p> | <p>3/28 • • • Doubled, plied, or cabled threads</p> |
| <p>1/20 • Combinations of two or more of the above-mentioned operations or devices; After-treatments for fixing crimp or curl</p> | <p>3/30 • • • Crêped or other highly-twisted yarns or threads</p> |
| <p>3/00 Yarns or threads, e.g. fancy yarns; Processes or apparatus for the production thereof, not otherwise provided for (for producing crimped or curled yarns D02G 1/00)</p> | <p>3/32 • • Elastic yarns or threads</p> |
| <p>3/02 • Yarns or threads characterised by the material or by the materials from which they are made</p> | <p>3/34 • • Yarns or threads having slubs, knops, spirals, loops, tufts, or other irregular or decorative effects, i.e. effect yarns</p> |
| <p>3/04 • • Blended or other yarns or threads containing components made from different materials</p> | <p>3/36 • • Cored or coated yarns or threads (elastic yarns or threads D02G 3/32)</p> |
| <p>3/06 • • Threads formed from strip material other than paper</p> | <p>3/38 • • Threads in which fibres, filaments, or yarns are wound with other yarns or filaments (covering endless core threads with fibres by using open-end spinning techniques D01H 4/00)</p> |
| <p>3/08 • • Paper yarns or threads</p> | <p>3/40 • • Yarns in which fibres are united by adhesives; Impregnated yarns or threads</p> |
| | <p>3/42 • • Chenille threads</p> |
| | <p>3/44 • Yarns or threads characterised by the purpose for which they are designed</p> |
| | <p>3/46 • • Sewing-cottons or the like</p> |
| | <p>3/48 • • Tyre cords</p> |

D02H WARPING, BEAMING, OR LEASING

D02H

Note(s)

Attention is drawn to the Note following the title of class D02.

Subclass index

CREELS.....	1/00
WARPING; BEAMING; WARPING AND BEAMING COMBINED.....	3/00, 5/00, 7/00
LEASING.....	9/00
OTHER MACHINES AND METHODS.....	11/00
DETAILS OF MACHINES.....	13/00

1/00	Creels, i.e. apparatus for supplying a multiplicity of individual threads	13/08	• • • electrical
		13/10	• • responsive to thread-measuring devices, e.g. stopping the machine when required length of warp has been wound
3/00	Warping machines		
5/00	Beaming machines	13/12	• Variable-speed driving mechanisms
5/02	• combined with apparatus for sizing or other treatment of warps (sizing <u>per se</u> D06B)	13/14	• controlled automatically by tension in the warp
		13/16	• Reeds, combs, or other devices for determining the spacing of threads
7/00	Combined warping and beaming machines	13/18	• • with adjustable spacing
		13/20	• • with fixed spacing
9/00	Leasing	13/22	• Tensioning devices
9/02	• Lease rods or bands	13/24	• • for individual threads
11/00	Methods or apparatus not provided for in groups D02H 1/00-D02H 9/00, e.g. for cleaning the warp	13/26	• • for threads in warp form (controlling the driving of beams, or the like, to keep tension constant D02H 13/14)
13/00	Details of machines of the other groups of this subclass	13/28	• Warp beams (cloth beams D03D 49/20)
		13/30	• • with flanges
13/02	• Stop motions	13/32	• • • adjustable
13/04	• • responsive to breakage, slackness, or excessive tension of threads, with detectors for individual threads or small groups of threads	13/34	• • sectional
		13/36	• • Means for attaching warp to beam
13/06	• • • mechanical	13/38	• Storage racks for beams

D02J FINISHING OR DRESSING OF FILAMENTS, YARNS, THREADS, CORDS, ROPES, OR THE LIKE (curling or crimping D02G; by treatment with liquids, gases or vapours D06B; finishing other than by liquid treatment, of yarns in warp or sheet form D06C; for chemical matters, see D06L, D06M, D06P, D06Q; treatment during rope-making, apparatus for treating ropes auxiliary to rope-making D07B)

Note(s)

Attention is drawn to the Note following the title of class D02.

Subclass index

MODIFYING THE STRUCTURE, FORM, OR SURFACE.....	1/00, 3/00
REMOVING UNDESIRABLE BODIES.....	7/00
COMBINATIONS OF ABOVE PROCESSES NOT COVERED BY ONE SINGLE GROUP.....	11/00
HEATING OR COOLING OPERATIONS NOT SPECIFIC TO ONE OF THE ABOVE PROCESSES.....	13/00

1/00	Modifying the structure or properties resulting from a particular structure; Modifying, retaining, or restoring the physical form or cross-sectional shape, e.g. by use of dies or squeeze rollers (modifying only the surface D02J 3/00)	1/12	• Modifying stretch/bulk properties of textured yarns or the like by after-treatment
		1/14	• Rendering uniform or evening non-uniform features
		1/16	• Rubbing or similar working, e.g. to redistribute or remove fibres
1/02	• Bulking, e.g. looping (by crimping, by curling D02G)	1/18	• Separating or spreading
1/04	• Compacting	1/20	• Stressing or stress-relieving, e.g. by vibration or subjection to electrostatic stress or electric discharge
1/06	• Imparting irregularity, e.g. slubbing or other non-uniform features, e.g. high- and low-shrinkage or strengthened and weakened sections	1/22	• Stretching or tensioning, shrinking or relaxing, e.g. by use of overfeed and underfeed apparatus, or preventing stretch (stretch spinning D01D 5/12)
1/08	• Interlacing constituent filaments without breakage thereof, e.g. by use of turbulent air streams		

3/00 Modifying the surface

- 3/02 • by abrading, scraping, scuffing, cutting, or nicking (preliminary roughening of fibres, e.g. for spinning, D01G 3/00)
- 3/04 • by brushing
- 3/06 • by polishing, e.g. glazing, glossing
- 3/08 • • by compressing, e.g. by calendaring or ironing
- 3/10 • by indenting
- 3/12 • by removing projecting ends of fibres
- 3/14 • • by shearing
- 3/16 • • by singeing
- 3/18 • Treating with particulate, semi-solid, or solid substances, e.g. wax (during package formation B65H 71/00; waxing yarns or the like as incidental measures during spinning or twisting D01H 13/30)

7/00 Cleaning, e.g. removing dust, loose fibres, charred ends (in combination with the shearing, singeing, or otherwise removing of projecting fibre ends D02J 3/12, D02J 3/14, D02J 3/16)

11/00 Combinations, not covered by any one of groups D02J 1/00-D02J 7/00, of processes provided for in such groups; Plant for carrying-out such combinations of processes

13/00 Heating or cooling the yarn, thread, cord, rope, or the like, not specific to any one of the processes provided for in this subclass (heating, cooling, or drying during spinning or twisting D01H; drying of yarns, or the like, in general F26B)