

## 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><b>1/00 Producing crimped or curled fibres, filaments, yarns, or threads, giving them latent characteristics</b> (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 • • Bulked 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><b>3/00 Yarns or threads, e.g. fancy yarns; Processes or apparatus for the production thereof, not otherwise provided for</b> (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 fibres 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

<b>1/00</b>	<b>Creels, i.e. apparatus for supplying a multiplicity of individual threads</b>	13/08	• • • electrical
		13/10	• • responsive to thread-measuring devices, e.g. stopping the machine when required length of warp has been wound
<b>3/00</b>	<b>Warping machines</b>		
<b>5/00</b>	<b>Beaming machines</b>	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
<b>7/00</b>	<b>Combined warping and beaming machines</b>	13/18	• • with adjustable spacing
		13/20	• • with fixed spacing
<b>9/00</b>	<b>Leasing</b>	13/22	• Tensioning devices
9/02	• Lease rods or bands	13/24	• • for individual threads
<b>11/00</b>	<b>Methods or apparatus not provided for in groups D02H 1/00-D02H 9/00, e.g. for cleaning the warp</b>	13/26	• • for threads in warp form (controlling the driving of beams, or the like, to keep tension constant D02H 13/14)
<b>13/00</b>	<b>Details of machines of the other groups of this subclass</b>	13/28	• Warp beams (cloth beams D03D 49/20)
13/02	• Stop motions	13/30	• • with flanges
13/04	• • responsive to breakage, slackness, or excessive tension of threads, with detectors for individual threads or small groups of threads	13/32	• • • adjustable
		13/34	• • sectional
		13/36	• • Means for attaching warp to beam
13/06	• • • mechanical	13/38	• Storage racks for beams
<b>D02J</b>	<b>FINISHING OR DRESSING OF FILAMENTS, YARNS, THREADS, CORDS, ROPES, OR THE LIKE</b> (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, <u>see</u> 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

<b>1/00</b>	<b>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</b> (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 calendering 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)