

SECTION D — TEXTILES; PAPER

D01 NATURAL OR ARTIFICIAL THREADS OR FIBRES; SPINNING

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)

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

1/00 Spinning or twisting machines in which the product is wound-up continuously (open-end spinning machines D01H 4/00) [5]

- 1/02 • ring type
- 1/04 • flyer type
- 1/06 • cap type
- 1/08 • cup, pot, or disc type, in which annular masses of yarn are formed by centrifugal action
- 1/10 • for imparting multiple twist, e.g. two-for-one twisting
- 1/11 • Spinning by false-twisting [5]
- 1/115 • • using pneumatic means [5]
- 1/14 • Details (drafting arrangements D01H 5/00; twisting arrangements D01H 7/00)
- 1/16 • • Framework; Casings; Coverings
- 1/18 • • Supports for supply packages
- 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) [5]
- 1/22 • • • for rollers (regulating or varying draft D01H 5/32)
- 1/24 • • • for twisting arrangements, e.g. spindles (braking arrangements for spindles D01H 7/22; interrelated flyer and bobbin drive mechanisms D01H 7/50)
- 1/241 • • • • driven by belt [2]
- 1/242 • • • • driven by toothed wheels [2]
- 1/243 • • • • driven by friction discs [2]
- 1/244 • • • • each spindle driven by an electric motor [2]

- 1/26 • • • • with two or more speeds; with variable-speed arrangements
- 1/28 • • • • for two or more machine elements possessing different characteristics but in operative association
- 1/30 • • • • with two or more speeds; with variable-speed arrangements
- 1/32 • • • • for complete machines
- 1/34 • • • • with two or more speeds; with variable-speed arrangements
- 1/36 • • Package-shaping arrangements, e.g. building motions
- 1/38 • • Arrangements for winding reserve lengths of yarn on take-up packages, e.g. transfer tails
- 1/40 • • Arrangements for connecting continuously-delivered material to bobbins or the like
- 1/42 • • Guards or protectors for yarns or threads, e.g. separator plates, anti-ballooning devices (anti-ballooning devices on spindles D01H 7/18)
- 3/00 Spinning or twisting machines in which the product is wound-up intermittently, e.g. mules**
- 3/02 • Details (drafting arrangements D01H 5/00; twisting arrangements D01H 7/00)
- 3/04 • • Carriages; Mechanisms effecting carriage movements
- 3/06 • • • Carriages; Carriage rails; Squaring motions
- 3/08 • • • Drawing-out or taking-in motions
- 3/10 • • • Moving-creel arrangements, e.g. for twiners
- 3/12 • • Package-shaping motions; Faller arrangements

- 3/14 • • Roller-driving arrangements (drafting arrangements of general application in spinning machines D01H 5/18)
- 3/16 • • Spindle-driving arrangements (spindles, spindle bearings, spindle supports D01H 7/04)
- 3/18 • • • Tin rollers; Driving arrangements intimately associated with tin rollers
- 3/20 • • • Spindle-driving arrangements during drawing-out or backing-off
- 3/22 • • • Spindle-driving arrangements during taking-in
- 3/24 • • • • Quadrant motions; Nosing motions
- 3/26 • • Driving or stopping arrangements not otherwise provided for; Locking motions (safety devices D01H 13/14)

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]

Note(s)

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 false-twisting".

- 4/02 • imparting twist by a fluid, e.g. air vortex [5]
- 4/04 • imparting twist by contact of fibres with a running surface [5]
- 4/06 • • co-operating with suction means (D01H 4/08, D01H 4/16 take precedence) [5]
- 4/08 • • Rotor spinning, i.e. the running surface being provided by a rotor [5]
- 4/10 • • • Rotors [5]
- 4/12 • • • Rotor bearings; Arrangements for driving or stopping (control therefor D01H 4/42) [5]
- 4/14 • • • • Rotor driven by an electric motor [5]
- 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]
- 4/18 • • • Friction drums, e.g. arrangement of suction holes [5]
- 4/20 • • • Drum bearings; Arrangements for driving or stopping (control therefor D01H 4/42) [5]
- 4/22 • • Cleaning of running surfaces [5]
- 4/24 • • • in rotor spinning [5]
- 4/26 • • • in friction spinning [5]
- 4/28 • using electrostatic fields [5]
- 4/30 • Arrangements for separating slivers into fibres; Orienting or straightening fibres [5]
- 4/32 • • using opening rollers [5]
- 4/34 • • using air-jet streams [5]
- 4/36 • • with means for taking away impurities [5]
- 4/38 • Channels for feeding fibres to the yarn forming region [5]
- 4/40 • Removing running yarn from the yarn forming region, e.g. using tubes [5]
- 4/42 • Control of driving or stopping [5]
- 4/44 • • in rotor spinning [5]
- 4/46 • • in friction spinning [5]
- 4/48 • Piecing arrangements; Control therefor [5]
- 4/50 • • for rotor spinning [5]
- 4/52 • • for friction spinning [5]

- 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)
- 5/02 • Gill boxes or other drafting machines employing fallers or like pinned bars (lubricating fibres in gill boxes D01G 29/00)
- 5/04 • • with pinned bars actuated by screw members
- 5/06 • • • Intersecting gill boxes
- 5/08 • • with bars connected by links, chains, or the like
- 5/10 • • with pinned bars unconnected with each other but actuated through pressure of one against another
- 5/12 • • Details
- 5/14 • • • Pinned bars
- 5/16 • • • Framework; Casings; Coverings
- 5/18 • Drafting machines or arrangements without fallers or like pinned bars
- 5/20 • • in which fibres are controlled by contact with stationary or reciprocating surfaces
- 5/22 • • in which fibres are controlled by rollers only
- 5/24 • • • with porcupines or like pinned rotary members
- 5/26 • • in which fibres are controlled by one or more endless aprons
- 5/28 • • in which fibres are controlled by inserting twist during drafting (mules D01H 3/00; constructions of false-twist devices D02G 1/04)
- 5/30 • • incorporating arrangements for severing continuous filaments, e.g. in direct spinning (converting tows to slivers or yarns D01G 1/06)
- 5/32 • • Regulating or varying draft
- 5/34 • • • by manual adjustments
- 5/36 • • • according to a pre-arranged pattern, e.g. to produce slubs
- 5/38 • • • in response to irregularities in material
- 5/40 • • • • employing mechanical time-delay devices
- 5/42 • • • • employing electrical time-delay devices
- 5/44 • • Adjusting drafting elements, e.g. altering ratch
- 5/46 • • Loading arrangements
- 5/48 • • • using weights
- 5/50 • • • using springs
- 5/52 • • • using fluid pressure
- 5/54 • • • using magnetic arrangements
- 5/56 • • Supports for drafting elements (saddles or top roller arms forming essential components of weighting arrangements D01H 5/48)
- 5/58 • • Arrangements for traversing drafting elements (traversing arrangements for roving guides D01H 13/06)
- 5/60 • • Arrangements maintaining drafting elements free of fibre accumulations
- 5/62 • • • Non-rotary cleaning pads or plates; Scrapers
- 5/64 • • • Rollers or aprons with cleaning surfaces
- 5/66 • • • Suction devices
- 5/68 • • • • Suction end-catchers
- 5/70 • • Constructional features of drafting elements
- 5/72 • • • Fibre-condensing guides (guides for slivers, rovings, or yarns applicable solely for spinning, twisting, curling, or crimping purposes D01H 13/04)
- 5/74 • • • Rollers
- 5/76 • • • • Loose-boss assemblies
- 5/78 • • • • with flutes or other integral surface characteristics
- 5/80 • • • • with covers; Cots or covers

- 5/82 • • • • Arrangements for coupling roller sections
- 5/84 • • • • Porcupines
- 5/86 • • • Aprons; Apron supports; Apron-tensioning arrangements
- 5/88 • • • • Cradles; Tensors
- 7/00 Spinning or twisting arrangements** (for open-end spinning D01H 4/00) [5]
- 7/02 • for imparting permanent twist
- 7/04 • • Spindles (spindle bearings, supports therefor, in general F16C)
- 7/06 • • • Stationary spindles with package-holding sleeves
- 7/08 • • • Mounting arrangements
- 7/10 • • • • Spindle supports; Rails; Rail supports, e.g. poker guides
- 7/12 • • • • Bolsters; Bearings
- 7/14 • • • • Holding-down arrangements
- 7/16 • • • Arrangements for coupling bobbins or like to spindles
- 7/18 • • • Arrangements on spindles for suppressing yarn balloons (thread guards or protectors D01H 1/42)
- 7/20 • • • Lubricating arrangements
- 7/22 • • • Braking arrangements
- 7/24 • • Flyer or like arrangements (multiple-twist arrangements D01H 7/86)
- 7/26 • • • Flyer constructions
- 7/28 • • • • arranged to guide material over exterior of legs
- 7/30 • • • • with guide channels formed in legs, e.g. slubbing flyers
- 7/32 • • • • • with pressing devices
- 7/34 • • • • with haul pulleys or like arrangements
- 7/36 • • • • with traversing devices
- 7/38 • • • • Ring flyers
- 7/40 • • • Flyer supports, e.g. rails
- 7/42 • • • Arrangements coupling flyers to spindles
- 7/44 • • • Drag arrangements for bobbins or flyers
- 7/46 • • • Devices attached to, or integral with, flyers for temporarily increasing twist in material passing to them
- 7/48 • • • Eyes or like guiding arrangements (D01H 7/46 takes precedence)
- 7/50 • • • Interrelated flyer and bobbin drive mechanisms, e.g. winding-on motions for cotton-roving frames (package-building mechanisms D01H 1/36)
- 7/52 • • Ring-and-traveller arrangements
- 7/54 • • • with fixed rings
- 7/56 • • • with freely-rotatable rings; with braked or dragged rings
- 7/58 • • • with driven rings
- 7/60 • • • Rings or travellers; Manufacture thereof not otherwise provided for (hand tools for applying travellers to rings D01H 17/02)
- 7/62 • • • Arrangements providing lubricant for travellers
- 7/64 • • • Ring supports, e.g. ring rails (poker guides or other rail supports D01H 7/10)
- 7/66 • • Cap arrangements
- 7/68 • • • Cap constructions
- 7/70 • • • Arrangements for supporting caps on spindles
- 7/72 • • • Bobbin-supporting arrangements, e.g. bobbin rails (poker guides or other rail supports D01H 7/10)
- 7/74 • • Cup or like arrangements

- 7/76 • • • Rotary discs
- 7/78 • • • Constructions of cups, e.g. spinning boxes
- 7/80 • • • • adapted to collect wet yarns
- 7/82 • • • Casings or guards for rotary cups or the like
- 7/84 • • • Spindles or yarn carriers for co-operation with rotary cups (removing yarn from centrifugal cups on to yarn carriers D01H 9/06)
- 7/86 • • Multiple-twist arrangements, e.g. two-for-one twisting devices
- 7/88 • • Hollow-spindle arrangements (D01H 7/86 takes precedence)
- 7/90 • • Arrangements with two or more twisting devices in combination (D01H 7/86, D01H 7/88 take precedence)
- 7/92 • for imparting transient twist

Common features or details of, or accessories for, spinning or twisting machines of various kinds or types

- 9/00 Arrangements for replacing or removing bobbins, cores, receptacles, or completed packages at paying-out or take-up stations** (arrangements of general interest in the winding of filamentary material B65H)
- 9/02 • for removing completed take-up packages and replacing by bobbins, cores, or receptacles at take-up stations; Transferring material between adjacent full and empty take-up elements
- 9/04 • • Doffing arrangements integral with spinning or twisting machines
- 9/06 • • • Removing yarn from centrifugal cups on to yarn carriers
- 9/08 • • Doffing arrangements independent of spinning or twisting machines
- 9/10 • • • Doffing carriages
- 9/12 • • • Manual cop-tube applying apparatus; Stands for cop-tube applying apparatus
- 9/14 • • for preparing machines for doffing of yarns (stop motions responsive to delivery of a measured length of material D01H 13/24)
- 9/16 • • Yarn-severing arrangements
- 9/18 • for supplying bobbins, cores, receptacles, or completed packages to, or transporting from, paying-out or take-up stations (D01H 9/10 takes precedence)
- 11/00 Arrangements for confining or removing dust, fly, or the like** (cleaning of running surfaces in open-end spinning machines D01H 4/22; separation in general B01D; cleaning in general B08B; air-conditioning F24F, e.g. by filtering F24F 3/16) [5]
- 13/00 Other common constructional features, details, or accessories** (for open-end spinning D01H 4/00) [5]
- 13/02 • Roller arrangements not otherwise provided for
- 13/04 • Guides for slivers, rovings, or yarns; Smoothing dies (fibre-condensing guides D01H 5/72)
- 13/06 • • Traversing arrangements
- 13/08 • Twist arresters
- 13/10 • Tension devices
- 13/12 • Arrangements preventing snarls or inadvertent doubling of yarns (suction end-catchers D01H 5/68)
- 13/14 • Warning or safety devices, e.g. automatic fault detectors, stop motions (warning or safety devices for filamentary material, not intimately associated with spinning or like machines B65H; safety devices of general application F16P; indicating devices of general application G08B)

D01H

- 13/16

- responsive to reduction in material tension, failure of supply, or breakage, of material
- 13/18

- • stopping supply only
- 13/20

- responsive to excessive tension or irregular operation of apparatus
- 13/22

- responsive to presence of irregularities in running material
- 13/24

- responsive to delivery of a measured length of material, completion of winding of a package or filling of a receptacle
- 13/26

- Arrangements facilitating the inspection or testing of yarns or the like in connection with spinning or twisting
- 13/28

- Heating or cooling arrangements
- 13/30

- Moistening, sizing, oiling, waxing, colouring, or drying yarns or the like as incidental measures during spinning or twisting
- 13/32

- Counting, measuring, recording, or registering devices (in general, see in the appropriate subclass of section G, e.g. G01B)
- 15/00

Piecing arrangements (for open-end spinning machines D01H 4/48; in machines for producing textile fabrics, see the appropriate subclasses) **[5]**
- 15/007

- for two-for-one twisting machines **[5]**
- 15/013

- Carriages travelling along the machines **[5]**
- 17/00

Hand tools (cop-tube applying apparatus D01H 9/12)
- 17/02

- Arrangements for storing ring travellers; Devices for applying travellers to rings