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)

WARNING
In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

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; doubling of yarns B65H 54/00; T; doubled, plied or cabled threads D02G 3/28; e.g. using hollow spindles D02G 3/283; spin-twisting D02G 3/281; threads with alternately "S" and "Z" direction of twist, e.g. self-twist process, D02G 3/286; wrapping strands of filaments or staple fibres by a binder yarn D02G 3/38)

1/003 . [Twisting machines in which twist is imparted from the supply packages, e.g. uptwist]
1/006 . [Twisting machines in which twist is imparted at the paying-out and take-up stations]
1/02 . ring type {arrangements with two or more spinning or twisting devices in combination D01H 7/90}
1/025 . . . {with a condensing device between drafting system and spinning unit}
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
1/101 . . . {in which multiple twist is imparted at the take-up stations}
1/103 . . . . {Two-for-one twisting}
1/105 . . . . {Arrangements using hollow spindles, i.e. the yarns are running through the spindle of the unwound bobbins}
1/106 . . . . . {Two-for-one twisting}
1/108 . . . . . . {for two or more supply bobbins one on top of the other}
1/11 . Spinning by false-twisting { (twisting by false-twisting D01H 7/92; D02G 3/28; increasing the strength of a roving or sliver by false-twisting D01H 7/92, during drafting D01H 5/28)}
1/115 . . . using pneumatic means

1/14 . . Details (drafting arrangements D01H 5/00; twisting arrangements D01H 7/00)
1/16 . . Framework; Casings; Coverings {Removal of heat; Means for generating overpressure of air against infiltration of dust; Ducts for electric cables}
1/162 . . . {for ring type}
1/164 . . . {for flyer type}
1/166 . . . . {for two-for-one type}
1/168 . . . . . {Arrangements for the sound-dampening of the machines (in general G10K 11/00)}
1/18 . . Supports for supply packages
1/183 . . . {Overhead suspension devices}
1/186 . . . {for supplying from cans}
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)
1/22 . . . . . for rollers (of drafting machines; Roller speed control) (regulating or varying draft D01H 5/32)
1/24 . . . . . for twisting (or spinning) 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
1/242 . . . . driven by toothed wheels
1/243 . . . . driven by friction discs
1/244 . . . . each spindle driven by an electric motor
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
1/305 . . . . . . . . . . {Speed control of the spindles in response to the displacements of the ring rail}
1/32 . . . for complete machines
Kinds or types of spinning or twisting machines; Drafting machines or arrangements; Twisting arrangements

1/34 . . . . with two or more speeds; with variable-speed arrangements [, e.g. variation of machine speed according to growing bobbin diameter (responsive to reduction in material tension D01H 13/16)]

1/36 . . . . Package-shaping arrangements, e.g. building motions [, e.g. control for the traversing stroke of ring rails; Stopping ring rails in a predetermined position]

1/365 . . . . [flyer type]

1/38 . . . . Arrangements for winding reserve lengths of yarn on take-up packages {or spindles}, e.g. transfer tails

1/385 . . . . [Removing waste reserve lengths from spindles]

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)

1/422 . . . . [Separator plates]

1/425 . . . . [Anti-ballooning rings]

1/427 . . . . [Anti-ballooning cylinders, e.g. for two-for-one twist machine (with combined cleaning effect D01H 11/00)]

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) ; Control of machines

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 {arrangements with two or more spindles or twisting devices of different types in combination D01H 7/90}

4/02 . . . . imparting twist by a fluid, e.g. air vortex

4/04 . . . . imparting twist by contact of fibres with a running surface

4/06 . . . . co-operating with suction means (D01H 4/08, D01H 4/16 take precedence)

4/08 . . . . Rotor spinning, i.e. the running surface being provided by a rotor

4/10 . . . . Rotors

4/12 . . . . Rotor bearings; Arrangements for driving or stopping (control therefor D01H 4/42)

4/14 . . . . Rotor driven by an electric motor

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 {(false twisting with friction drums D01H 1/11)}

4/18 . . . . Friction drums, e.g. arrangement of suction holes

4/20 . . . . Drum bearings; Arrangements for driving or stopping (control therefor D01H 4/42)

4/22 . . . . Cleaning of running surfaces

4/24 . . . . in rotor spinning

4/26 . . . . in friction spinning

4/28 . . . . using electrostatic fields

4/30 . . . . Arrangements for separating slivers into fibres; Orienting or straightening fibres [, e.g. using guide-rolls]

4/32 . . . . using opening rollers { (stopping of rovings or slivers D01H 13/18]}

4/34 . . . . using air-jet streams

4/36 . . . . with means for taking away impurities

4/38 . . . . Channels for feeding fibres to the yarn forming region

4/40 . . . . Removing running yarn from the yarn forming region, e.g. using tubes

4/42 . . . . Control of driving or stopping

4/44 . . . . in rotor spinning

4/46 . . . . in friction spinning

4/48 . . . . Piecing arrangements; Control therefor { (stopping roving D01H 13/18]}

4/50 . . . . for rotor spinning

4/52 . . . . for friction spinning

5/00 Drafting machines or arrangements [Threading of roving into drafting machine] (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 ; increasing the strength of a roving or sliver by false-twisting D01H 7/92, during drafting D01H 5/28, after drafting and before spinning according to groups D01H 1/02 - D01H 1/08, D01H 7/90; depositing materials in cans after drafting B65H 54/76 + T1)
Kinds or types of spinning or twisting machines; Drafting machines or arrangements; Twisting arrangements

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 (twisting by false-twisting D01H 1/11); mules D01H 3/00; twisting by false-twisting D01H 7/92); 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 (measuring irregularities)
5/385 . . . [employing hydraulic or pneumatic time-delay devices]
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
5/505 . . . (for top roller arms)
5/52 . . . using fluid pressure
5/525 . . . (for top roller arms)
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)
5/565 . . . [Top roller arms]
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
5/625 . . . [in cooperation with suction or blowing means]
5/64 . . . Rollers or aprons with cleaning surfaces
5/645 . . . [in cooperation with suction or blowing means]
5/66 . . . Suction devices (exclusively: (D01H 5/625 and D01H 5/645 take precedence; in cooperation with thread breakage detecting means D01H 13/1691))
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; combined with false twisting before drafting or before spinning according to groups D01H 1/02; D01H 1/08; D01H 7/92))
5/74 . . . Rollers (or roller bearings)
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)
7/02 . . . for imparting permanent twist
7/04 . . . Spindles (bearings for hollow spindles D01H 7/88); spindle bearings, supports therefor, in general F16C
7/041 . . . [Spindles with sliding contact bearings (D01H 7/045 takes precedence)]
7/042 . . . [Spindles with rolling contact bearings (D01H 7/045 takes precedence)]
7/044 . . . [Spindles with fluid bearings]
7/045 . . . [Spindles provided with flexible mounting elements for damping vibration or noise, or for avoiding or reducing out-of-balance forces due to rotation (in general F16F 15/00)]
7/047 . . . . [with springs]
7/048 . . . . [with means using plastic deformation of members]
7/06 . . . . Stationary spindles using plastic deformation of members
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
7/2208 . . . [using mechanical means]
7/2216 . . . [with one or two manually actuated shoe-brakes acting on a part of the whorl]
7/2225 . . . [the braking means surrounding nearly the whole periphery of the whorl]
7/2233 . . . [by suppressing the driving means, e.g. by decoupling]
7/2241 . . . [the belt being moved off the driven whorl]
7/225 . . . . [and the spindle being braked simultaneously]
7/2258 . . . [the pivoted spindle being pulled off the belt]
7/2266 . . . [and braked simultaneously]
7/2275 . . . [using hydraulically or pneumatically operated brakes]
7/2283 . . . [using electromagnetically operated brakes]
7/2291 . . . [characterised by the control of braking means, e.g. operated by a yarn break-detector or tension device]
7/24 . . . . Flyer or like arrangements (multiple-twist arrangements D01H 7/86)
Kinds or types of spinning or twisting machines; Drafting machines or arrangements; Twisting arrangements

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 (variation of machine speed according to growing bobbin diameter D01H 1/34); 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 (; Lubricating arrangements therefor)
7/565 . . . [with fluid bearings]
7/58 . . . with driven rings (; Bearings or braking arrangements therefor)
7/585 . . . [by fluid driving means]
7/60 . . . Rings or travellers; Manufacture thereof not otherwise provided for (hand tools for applying travellers to rings D01H 17/02) (; Cleaning means for rings)
7/602 . . . [Rings]
7/604 . . . [Travellers]
7/606 . . . [Driving means for travellers]
7/608 . . . [Cleaning means for travellers]
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 [Threading of yarn; Devices in hollow spindles for imparting false twist]
7/862 . . . [Arrangements for holding the bobbin in a fixed position]
7/864 . . . [Coupling devices between the fixed and the rotative parts]
7/866 . . . [Means to facilitate the unwinding of yarn]
7/868 . . . [Yarn guiding means, e.g. guiding tubes]
7/88 . . . Hollow-spindle arrangements (D01H 7/86 takes precedence)
7/90 . . . Arrangements with two or more [spinning or twisting] devices [of different types] in combination ((D01H 1/006); D01H 7/86; D01H 7/88 take precedence)
7/92 . . . for imparting transient twist, i.e. false twist (D01H 1/11 takes precedence)
7/923 . . . [by means of rotating devices]
7/926 . . . [by means of traversing devices]

Common features or details of, or accessories for, spinning or twisting machines of various kinds or types (drafting arrangements D01H 5/00; twisting arrangements D01H 7/00)

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 67/00)) (; Combination of spinning-winding machine)
9/001 . . . [Bobbin-taking arrangements]
9/003 . . . [Graspers operating under the action of a fluid]
9/005 . . . [for removing empty packages or cans and replacing by bobbins, cores, or receptacles at take-up stations; also combined with piecing of the roving]
9/006 . . . [for two-for-one twist type machines]
9/008 . . . [for cans]
9/012 . . . 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
9/014 . . . Doffing arrangements integral with spinning or twisting machines
9/043 . . . [for cap type machines]
9/046 . . . [for flyer type 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 (; Loading carriages with cores)
9/12 . . . Manual cop-tube applying apparatus; Stands for cop-tube applying apparatus
9/14 . . . for preparing machines for doffing of yarns, e.g. raising cops prior to removal (stop motions responsive to delivery of a measured length of material D01H 13/24)
9/16 . . . Yarn-severing arrangements, e.g. for cutting transfer tails; Separating of roving in flyer
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) (; Arrangements to prevent unwinding of roving from roving bobbins (transporting full yarn bobbins to subsequent machines B65H 67/06-T))
9/182 . . . [Overhead conveying devices]
9/185 . . . [Transporting cans]
13/00 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 F24E, e.g. by filtering F24F 3/16)

11/00 Other common constructional features, details or accessories (for open-end spinning D01H 4/00)

13/005 [Service carriages travelling along the machines (characteristics relating to the apparatus supported by the carriage, see relevant groups, e.g. D01H 9/005, D01H 9/10, D01H 13/145, D01H 15/000)]

13/02 Roller arrangements not otherwise provided for

13/04 Guides for slivers, rovings, or yarns; Smoothing dies (fibre-condensing guides D01H 5/72 ; means to facilitate the unwinding of yarn in multiple-twist arrangements D01H 7/866)

13/045 [Guide tube]

13/06 Traversing arrangements

13/08 Twister arresters

13/10 Tension devices

13/102 [Regulating tension by regulating delivery of yarn from supply package (D01H 13/108 takes precedence)]

13/104 [Regulating tension by devices acting on running yarn and not associated with supply or take-up devices]

13/106 [for double-twist spindle]

13/108 [Regulating tension by regulating speed of driving mechanisms of unwinding, paying-out, forwarding, winding or depositing devices, e.g. automatically in response to variations in tension]

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; [Monitoring the entanglement of slivers in drafting arrangements]; (safety devices of general application F16P; indicating devices of general application G08B)

13/145 [set on carriages travelling along the machines; Warning or safety devices pulled along the working unit by a band or the like]

13/16 Responsive to reduction in material tension, failure of supply, or breakage, of material

13/1608 [where the paying-out and take-up stations are stopped at one and the same time]

13/1616 [characterised by the detector]

13/1625 [Electro-mechanical actuators]

13/1633 [Electronic actuators]

13/1641 [Capacitor sensing means]

13/165 [Photo-electric sensing means]

13/1658 [Associated actuators with mutual actuation, e.g. for two or more running yarns]

13/1666 [Lighting or luminous devices making easier the setting of the breakage of yarns]

13/1675 [Pencil of rays on side of machines]

13/1683 [Pneumatic sensing means]

13/1691 [Thread breakage detector means associated with pneumatic cleaning devices, e.g. suction of broken end of yarn]

13/18 Stopping supply only

13/181 [by stopping supply packages]

13/182 [by raising or lifting of one of the drafting cylinders, e.g. by removing of the loading means]

13/183 [the yarn moving out of its normal path, e.g. by lateral diverting]

13/185 [a plate moving in the nip of drafting or guiding cylinders]

13/186 [guiding or drafting cylinders moving by gravity when a yarn breakage occurs]

13/187 [using means stopping the driving of the drafting, guiding cylinders, e.g. friction clutches]

13/188 [by cutting or clamping yarns or rovings]

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 (for yarns (removal of heat from machines D01H 1/16)]

13/30 Moistening, sizing, oiling, waxing, colouring, or similar treatment during spinning or twisting}

13/306 [by applying fluids, e.g. steam or oiling liquids]

13/308 [by applying solids, e.g. wax]

13/32 Counting, measuring, recording or registering devices (in general, see the appropriate subclass of Section G, e.g. (G01B 21/12, G01N 33/36))

15/00 Piecing arrangements (for open-end spinning machines D01H 4/48; in machines for producing textile fabrics, see the appropriate subclasses)

15/002 [for false-twisting spinning machines]

15/004 [for centrifugal spinning machines]

15/007 for two-for-one twisting machines

15/013 Carriages travelling along the machines

17/00 Hand tools (cop-tube applying apparatus D01H 9/12)

17/02 Arrangements for storing ring travellers; Devices for applying travellers to rings
2700/20 . Spinning mules; Transmissions
2700/202 . Carriages or their movement; Lubrication
2700/205 . Spindles or spindle control in spinning mules
2700/207 . Yarn delivery rollers; Drawing systems for spinning mules; Silver rollers
2700/21 . Piecing or cleaning in spinning mules
2700/22 . Winding devices for spinning mules
2700/24 . Spinning or twisting machines of different kinds
2700/242 . Spinning or twisting devices wherein twist is created during winding
2700/245 . Conception or fabrication of drafting cylinders
2700/247 . Guiding means for veil or sliver on drafting systems