

# CPC COOPERATIVE PATENT CLASSIFICATION

## D TEXTILES; PAPER

### TEXTILES OR FLEXIBLE MATERIALS NOT OTHERWISE PROVIDED FOR

#### D01 NATURAL OR MAN-MADE THREADS OR FIBRES; SPINNING

(NOTE omitted)

**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.

<b>Kinds or types of spinning or twisting machines; Drafting machines or arrangements; Twisting arrangements</b>	1/14	. Details (drafting arrangements <a href="#">D01H 5/00</a> ; twisting arrangements <a href="#">D01H 7/00</a> )
<b>1/00 Spinning or twisting machines in which the product is wound-up continuously</b> (open-end spinning machines <a href="#">D01H 4/00</a> {; doubling of yarns <a href="#">B65H 54/00+T</a> ; doubled, plied or cabled threads <a href="#">D02G 3/28</a> , e.g. using hollow spindles <a href="#">D02G 3/283</a> ; spin-twisting <a href="#">D02G 3/281</a> ; threads with alternately "S" and "Z" direction of twist, e.g. self-twist process, <a href="#">D02G 3/286</a> ; wrapping strands of filaments or staple fibres by a binder yarn <a href="#">D02G 3/38</a> )	1/16	. . Framework; Casings; Coverings {Removal of heat; Means for generating overpressure of air against infiltration of dust; Ducts for electric cables}
1/003 . {Twisting machines in which twist is imparted from the supply packages, e.g. uptwist}	1/162	. . . {for ring type}
1/006 . {Twisting machines in which twist is imparted at the paying-out and take-up stations}	1/164	. . . {for flyer type}
1/02 . ring type {arrangements with two or more spinning or twisting devices in combination <a href="#">D01H 7/90</a> }	1/166	. . . {for two-for-one type}
1/025 . . {with a condensing device between drafting system and spinning unit}	1/168	. . . {Arrangements for the sound-dampening of the machines (in general <a href="#">G10K 11/00</a> )}
1/04 . flyer type	1/18	. . Supports for supply packages
1/06 . cap type	1/183	. . . {Overhead suspension devices}
1/08 . cup, pot or disc type, in which annular masses of yarn are formed by centrifugal action	1/186	. . . {for supplying from cans}
1/10 . for imparting multiple twist, e.g. two-for-one twisting	1/20	. . Driving or stopping arrangements (for open-end spinning machines <a href="#">D01H 4/12</a> , <a href="#">D01H 4/20</a> , <a href="#">D01H 4/42</a> ; safety devices <a href="#">D01H 13/14</a> )
1/101 . . {in which multiple twist is imparted at the take-up stations}	1/22	. . . for rollers {of drafting machines; Roller speed control} (regulating or varying draft <a href="#">D01H 5/32</a> )
1/103 . . . {Two-for-one twisting}	1/24	. . . for twisting {or spinning} arrangements, e.g. spindles (braking arrangements for spindles <a href="#">D01H 7/22</a> ; interrelated flyer and bobbin drive mechanisms <a href="#">D01H 7/50</a> )
1/105 . . {Arrangements using hollow spindles, i.e. the yarns are running through the spindle of the unwound bobbins}	1/241	. . . . driven by belt
1/106 . . . {Two-for-one twisting}	1/242	. . . . driven by toothed wheels
1/108 . . . . {for two or more supply bobbins one on top of the other}	1/243	. . . . driven by friction discs
1/11 . Spinning by false-twisting {(twisting by false-twisting <a href="#">D01H 7/92</a> ; <a href="#">D02G 3/28</a> ; increasing the strength of a roving or sliver by false-twisting <a href="#">D01H 7/92</a> , during drafting <a href="#">D01H 5/28</a> )}	1/244	. . . . each spindle driven by an electric motor
1/115 . . using pneumatic means	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

- 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 . . . {for 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 spinning or twisting devices of different types in combination [D01H 7/90](#))}**
- NOTE**
- 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
- 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 + T](#))}**
- 5/005 . . {Arrangements for feeding or conveying the slivers to the drafting machine}
- 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	5/76	. . . . Loose-boss assemblies
5/16	. . . Framework; Casings; Coverings	5/78	. . . . with flutes or other integral surface characteristics
5/18	. Drafting machines or arrangements without fallers or like pinned bars	5/80	. . . . with covers; Cots or covers
5/20	. . in which fibres are controlled by contact with stationary or reciprocating surfaces	5/82	. . . . Arrangements for coupling roller sections
5/22	. . in which fibres are controlled by rollers only	5/84	. . . . Porcupines
5/24	. . . with porcupines or like pinned rotary members	5/86	. . . Aprons; Apron supports; Apron tensioning arrangements
5/26	. . in which fibres are controlled by one or more endless aprons	5/88	. . . . Cradles; Tensors
5/28	. . in which fibres are controlled by inserting twist during drafting ( <a href="#">{spinning by false-twisting D01H 1/11}</a> ; <a href="#">mules D01H 3/00</a> {; <a href="#">twisting by false-twisting D01H 7/92</a> }; <a href="#">constructions of false-twist devices D02G 1/04</a> )	<b>7/00</b>	<b>Spinning or twisting arrangements (for open-end spinning <a href="#">D01H 4/00</a>)</b>
5/30	. . incorporating arrangements for severing continuous filaments, e.g. in direct spinning ( <a href="#">converting tows to slivers or yarns D01G 1/06</a> )	7/02	. for imparting permanent twist
5/32	. . Regulating or varying draft	7/04	. . Spindles ( <a href="#">{bearings for hollow spindles D01H 7/88}</a> ; <a href="#">spindle bearings, supports therefor, in general F16C</a> )
5/34	. . . by manual adjustments	7/041	. . . { <a href="#">Spindles with sliding contact bearings (D01H 7/045 takes precedence)</a> }
5/36	. . . according to a pre-arranged pattern, e.g. to produce slubs	7/042	. . . { <a href="#">Spindles with rolling contact bearings (D01H 7/045 takes precedence)</a> }
5/38	. . . in response to irregularities in material {; <a href="#">Measuring irregularities</a> }	7/044	. . . { <a href="#">Spindles with fluid bearings</a> }
5/385	. . . . { <a href="#">employing hydraulic or pneumatic time-delay devices</a> }	7/045	. . . { <a href="#">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)</a> }
5/40	. . . . employing mechanical time-delay devices	7/047	. . . . { <a href="#">with springs</a> }
5/42	. . . . employing electrical time-delay devices	7/048	. . . . { <a href="#">with means using plastic deformation of members</a> }
5/44	. . Adjusting drafting elements, e.g. altering ratch	7/06	. . . Stationary spindles with package-holding sleeves
5/46	. . Loading arrangements	7/08	. . . Mounting arrangements
5/48	. . . using weights	7/10	. . . . Spindle supports; Rails; Rail supports, e.g. poker guides
5/50	. . . using springs	7/12	. . . . Bolsters; Bearings
5/505	. . . . { <a href="#">for top roller arms</a> }	7/14	. . . . Holding-down arrangements
5/52	. . . using fluid pressure	7/16	. . . Arrangements for coupling bobbins or like to spindles
5/525	. . . . { <a href="#">for top roller arms</a> }	7/18	. . . Arrangements on spindles for suppressing yarn balloons ( <a href="#">thread guards or protectors D01H 1/42</a> )
5/54	. . . using magnetic arrangements	7/20	. . . Lubricating arrangements
5/56	. . Supports for drafting elements ( <a href="#">saddles or top roller arms forming essential components of weighting arrangements D01H 5/48</a> )	7/22	. . . Braking arrangements
5/565	. . . { <a href="#">Top roller arms</a> }	7/2208	. . . . { <a href="#">using mechanical means</a> }
5/58	. . Arrangements for traversing drafting elements ( <a href="#">traversing arrangements for roving guides D01H 13/06</a> )	7/2216	. . . . . { <a href="#">with one or two manually actuated shoe-brakes acting on a part of the whorl</a> }
5/60	. . Arrangements maintaining drafting elements free of fibre accumulations	7/2225	. . . . . { <a href="#">the braking means surrounding nearly the whole periphery of the whorl</a> }
5/62	. . . Non-rotary cleaning pads or plates; Scrapers	7/2233	. . . . . { <a href="#">by suppressing the driving means, e.g. by declutching</a> }
5/625	. . . . { <a href="#">in cooperation with suction or blowing means</a> }	7/2241	. . . . . { <a href="#">the belt being moved off the driven whorl</a> }
5/64	. . . Rollers or aprons with cleaning surfaces	7/225	. . . . . . { <a href="#">and the spindle being braked simultaneously</a> }
5/645	. . . . { <a href="#">in cooperation with suction or blowing means</a> }	7/2258	. . . . . . { <a href="#">the pivoted spindle being pulled off the belt</a> }
5/66	. . . Suction devices ( <a href="#">exclusively; (D01H 5/625 and D01H 5/645 take precedence; in cooperation with thread breakage detecting means D01H 13/1691)</a> )	7/2266	. . . . . . . { <a href="#">and braked simultaneously</a> }
5/68	. . . . Suction end-catchers	7/2275	. . . . . { <a href="#">using hydraulically or pneumatically operated brakes</a> }
5/70	. . Constructional features of drafting elements	7/2283	. . . . . { <a href="#">using electromagnetically operated brakes</a> }
5/72	. . . Fibre-condensing guides ( <a href="#">guides for slivers, rovings, or yarns applicable solely for spinning, twisting, curling, or crimping purposes D01H 13/04</a> {; <a href="#">combined with false twisting before drafting or before spinning according to groups D01H 1/02 - D01H 1/08 : D01H 7/92</a> })	7/2291	. . . . . { <a href="#">characterised by the control of braking means, e.g. operated by a yarn break-detector or tension device</a> }
5/74	. . . Rollers { <a href="#">or roller bearings</a> }	7/24	. . Flyer or like arrangements ( <a href="#">multiple-twist arrangements D01H 7/86</a> )

7/26	. . .	Flyer constructions	7/864	. . .	{Coupling devices between the fixed and the rotative parts}
7/28	. . . .	arranged to guide material over exterior of legs	7/866	. . .	{Means to facilitate the unwinding of yarn}
7/30	. . . .	with guide channels formed in legs, e.g. slubbing flyers	7/868	. . .	{Yarn guiding means, e.g. guiding tubes}
7/32	. . . . .	with pressing devices	7/88	. .	Hollow-spindle arrangements ( <a href="#">D01H 7/86</a> takes precedence)
7/34	. . . .	with haul pulleys or like arrangements	7/90	. .	Arrangements with two or more {spinning or} twisting devices {of different types} in combination ({ <a href="#">D01H 1/006</a> }, <a href="#">D01H 7/86</a> , <a href="#">D01H 7/88</a> take precedence)
7/36	. . . .	with traversing devices	7/92	. .	for imparting transient twist {, i.e. false twist ( <a href="#">D01H 1/11</a> takes precedence)}
7/38	. . . .	Ring flyers	7/923	. .	{by means of rotating devices}
7/40	. . .	Flyer supports, e.g. rails	7/926	. .	{by means of traversing devices}
7/42	. . .	Arrangements coupling flyers to spindles	<b>Common features or details of, or accessories for, spinning or twisting machines of various kinds or types</b> ( <a href="#">drafting arrangements D01H 5/00</a> ; <a href="#">twisting arrangements D01H 7/00</a> )		
7/44	. . .	Drag arrangements for bobbins or flyers	<b>9/00</b>	<b>Arrangements for replacing or removing bobbins, cores, receptacles, or completed packages at paying-out or take-up stations</b> (arrangements of general interest in the winding of filamentary material { <a href="#">B65H 67/00</a> } ) {; <b>Combination of spinning-winding machine</b> }	
7/46	. . .	Devices attached to, or integral with, flyers for temporarily increasing twist in material passing to them	9/001	. {Bobbin-taking arrangements}	
7/48	. . .	Eyes or like guiding arrangements ( <a href="#">D01H 7/46</a> takes precedence)	9/003	. . {Graspers operating under the action of a fluid}	
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 <a href="#">D01H 1/34</a> }; package-building mechanisms <a href="#">D01H 1/36</a> )	9/005	. {for removing empty packages or cans and replacing by completed (full) packages or cans at paying-out stations; also combined with piecing of the roving}	
7/52	. .	Ring-and-traveller arrangements	9/006	. . {for two-for-one twist type machines}	
7/54	. . .	with fixed rings	9/008	. . {for cans}	
7/56	. . .	with freely-rotatable rings; with braked or dragged rings {; Lubricating arrangements therefor}	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	
7/565	. . . .	{with fluid bearings}	9/04	. . Doffing arrangements integral with spinning or twisting machines	
7/58	. . .	with driven rings {; Bearings or braking arrangements therefor}	9/043	. . . {for cap type machines}	
7/585	. . . .	{by fluid driving means}	9/046	. . . {for flyer type machines}	
7/60	. . .	Rings or travellers; Manufacture thereof not otherwise provided for ( <a href="#">hand tools for applying travellers to rings D01H 17/02</a> ) {; <a href="#">Cleaning means for rings</a> }	9/06	. . . Removing yarn from centrifugal cups on to yarn carriers	
7/602	. . . .	{Rings}	9/08	. . Doffing arrangements independent of spinning or twisting machines	
7/604	. . . .	{Travellers}	9/10	. . . Doffing carriages {; <a href="#">Loading carriages with cores</a> }	
7/606	. . . . .	{Driving means for travellers}	9/12	. . . Manual cop-tube applying apparatus; Stands for cop-tube applying apparatus	
7/608	. . . . .	{Cleaning means for travellers}	9/14	. . for preparing machines for doffing of yarns, {e.g. <a href="#">raising cops prior to removal</a> } ( <a href="#">stop motions responsive to delivery of a measured length of material D01H 13/24</a> )	
7/62	. . .	Arrangements providing lubricant for travellers	9/16	. . Yarn-severing arrangements {, e.g. for cutting transfer tails; <a href="#">Separating of roving in flyer</a> }	
7/64	. . .	Ring supports, e.g. ring rails ( <a href="#">poker guides or other rail supports D01H 7/10</a> )	9/18	. for supplying bobbins, cores, receptacles, or completed packages to, or transporting from, paying-out or take-up stations ( <a href="#">D01H 9/10</a> takes precedence) {; Arrangements to prevent unwinding of roving from roving bobbins ( <a href="#">transporting full yarn bobbins to subsequent machines B65H 67/06+T</a> )}	
7/66	. .	Cap arrangements	9/182	. . {Overhead conveying devices}	
7/68	. . .	Cap constructions	9/185	. . {Transporting cans}	
7/70	. . .	Arrangements for supporting caps on spindles			
7/72	. . .	Bobbin-supporting arrangements, e.g. bobbin rails ( <a href="#">poker guides or other rail supports D01H 7/10</a> )			
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 ( <a href="#">removing yarn from centrifugal cups on to yarn carriers D01H 9/06</a> )			
7/86	. .	Multiple-twist arrangements, e.g. two-for-one twisting devices { <a href="#">Threading of yarn</a> ; <a href="#">Devices in hollow spindles for imparting false twist</a> }			
7/862	. . .	{Arrangements for holding the bobbin in a fixed position}			

- 9/187 . . {on individual supports, e.g. pallets}
- 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](#))
- 11/001 . {Hand tools used for cleaning the machines}
- 11/003 . . {with a rotary pin}
- 11/005 . {with blowing and/or suction devices (in general [A47L 7/00](#); in cooperation with thread breakage detecting means [D01H 13/1691](#))}
- 11/006 . . {travelling along the machines}
- 11/008 . {with static field means}
- 13/00 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 15/00](#))}
- 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 . Twist 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 drying yarns or the like as incidental measures during spinning or twisting
- 13/302 . . {Moistening, e.g. for wet spinning}
- 13/304 . . {Conditioning during spinning or twisting (for carding or combing [D01G 99/005](#))}
- 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) {; **Automatic end-finding, e.g. by suction and reverse package rotation; Devices for temporarily storing yarn during piecing** (piecing of rovings in combination with replacing of completed packages or cans [D01H 9/005](#))}
- 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
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- 2700/00 Spinning or twisting machines; Drafting devices**
- 2700/01 . Preparatory spinning machines

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- 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