

# CPC COOPERATIVE PATENT CLASSIFICATION

**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](#))

## **Kinds or types of spinning or twisting machines; Drafting machines or arrangements; Twisting arrangements**

<b>1/00</b>	<b>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</a> + <a href="#">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> })	1/186	. . . {for supplying from cans}
		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> )
		1/22	. . . for rollers {of drafting machines; Roller speed control} (regulating or varying draft <a href="#">D01H 5/32</a> )
		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> )
1/003	. {Twisting machines in which twist is imparted from the supply packages, e.g. uptwist}	1/241	. . . . driven by belt
1/006	. {Twisting machines in which twist is imparted at the paying-out and take-up stations}	1/242	. . . . driven by toothed wheels
1/02	. ring type {arrangements with two or more spinning or twisting devices in combination <a href="#">D01H 7/90</a> }	1/243	. . . . driven by friction discs
1/025	. . {with a condensing device between drafting system and spinning unit}	1/244	. . . . each spindle driven by an electric motor
1/04	. flyer type	1/26	. . . . with two or more speeds; with variable-speed arrangements
1/06	. cap type	1/28	. . . for two or more machine elements possessing different characteristics but in operative association
1/08	. cup, pot or disc type, in which annular masses of yarn are formed by centrifugal action	1/30	. . . . with two or more speeds; with variable-speed arrangements
1/10	. for imparting multiple twist, e.g. two-for-one twisting	1/305	. . . . {Speed control of the spindles in response to the displacements of the ring rail}
1/101	. . {in which multiple twist is imparted at the take-up stations}	1/32	. . . for complete machines
1/103	. . . {Two-for-one twisting}	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 <a href="#">D01H 13/16</a> )}
1/105	. . {Arrangements using hollow spindles, i.e. the yarns are running through the spindle of the unwound bobbins}	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}
1/106	. . . {Two-for-one twisting}	1/365	. . . {for flyer type}
1/108	. . . . {for two or more supply bobbins one on top of the other}	1/38	. . Arrangements for winding reserve lengths of yarn on take-up packages {or spindles}, e.g. transfer tails
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> )}	1/385	. . . {Removing waste reserve lengths from spindles}
1/115	. . using pneumatic means	1/40	. . Arrangements for connecting continuously-delivered material to bobbins or the like
1/14	. Details (drafting arrangements <a href="#">D01H 5/00</a> ; twisting arrangements <a href="#">D01H 7/00</a> )	1/42	. . Guards or protectors for yarns or threads, e.g. separator plates, anti-ballooning devices (anti-ballooning devices on spindles <a href="#">D01H 7/18</a> )
1/16	. . Framework; Casings; Coverings {Removal of heat; Means for generating overpressure of air against infiltration of dust; Ducts for electric cables}	1/422	. . . {Separator plates}
1/162	. . . {for ring type}	1/425	. . . {Anti-ballooning rings}
1/164	. . . {for flyer type}	1/427	. . . {Anti-ballooning cylinders, e.g. for two-for-one twist machine (with combined cleaning effect <a href="#">D01H 11/00</a> )}
1/166	. . . {for two-for-one type}		
1/168	. . . {Arrangements for the sound-dampening of the machines (in general <a href="#">G10K 11/00</a> )}		
1/18	. . Supports for supply packages	<b>3/00</b>	<b>Spinning or twisting machines in which the product is wound-up intermittently, e.g. mules</b>
1/183	. . . {Overhead suspension devices}		

3/02	Details ( <a href="#">drafting arrangements D01H 5/00</a> ; <a href="#">twisting arrangements D01H 7/00</a> )	4/32	using opening rollers {(stopping of rovings or slivers <a href="#">D01H 13/18</a> )}
3/04	Carriages; Mechanisms effecting carriage movements	4/34	using air-jet streams
3/06	Carriages; Carriage rails; Squaring motions	4/36	with means for taking away impurities
3/08	Drawing-out or taking-in motions	4/38	Channels for feeding fibres to the yarn forming region
3/10	Moving-creel arrangements, e.g. for twiners	4/40	Removing running yarn from the yarn forming region, e.g. using tubes
3/12	Package-shaping motions; Faller arrangements	4/42	Control of driving or stopping
3/14	Roller-driving arrangements ( <a href="#">drafting arrangements of general application in spinning machines D01H 5/18</a> )	4/44	in rotor spinning
3/16	Spindle-driving arrangements ( <a href="#">spindles, spindle bearings, spindle supports D01H 7/04</a> )	4/46	in friction spinning
3/18	Tin rollers; Driving arrangements intimately associated with tin rollers	4/48	Piecing arrangements; Control therefor {(stopping roving <a href="#">D01H 13/18</a> )}
3/20	Spindle-driving arrangements during drawing-out or backing-off	4/50	for rotor spinning
3/22	Spindle-driving arrangements during taking-in	4/52	for friction spinning
3/24	Quadrant motions; Nosing motions		
3/26	Driving or stopping arrangements not otherwise provided for; Locking motions ( <a href="#">safety devices D01H 13/14</a> ) {Control of machines}	<b>5/00</b>	<b>Drafting machines or arrangements {Threading of roving into drafting machine}</b> (arrangements in which draft is dependent on linear movement of take-up spindles, e.g. in mules, <a href="#">D01H 3/00</a> ; devices for combing or orienting fibres for open-end spinning machines <a href="#">D01H 4/30</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> , after drafting and before spinning according to groups <a href="#">D01H 1/02</a> - <a href="#">D01H 1/08</a> , <a href="#">D01H 7/90</a> ; depositing materials in cans after drafting <a href="#">B65H 54/76 + T</a> })
<b>4/00</b>	<b>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 <a href="#">D01H 7/90</a>)}</b>	5/005	{Arrangements for feeding or conveying the slivers to the drafting machine}
	<b>NOTE</b>	5/02	Gill boxes or other drafting machines employing fallers or like pinned bars ( <a href="#">lubricating fibres in gill boxes D01G 29/00</a> )
	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"	5/04	with pinned bars actuated by screw members
4/02	imparting twist by a fluid, e.g. air vortex	5/06	Intersecting gill boxes
4/04	imparting twist by contact of fibres with a running surface	5/08	with bars connected by links, chains, or the like
4/06	co-operating with suction means ( <a href="#">D01H 4/08</a> , <a href="#">D01H 4/16</a> take precedence)	5/10	with pinned bars unconnected with each other but actuated through pressure of one against another
4/08	Rotor spinning, i.e. the running surface being provided by a rotor	5/12	Details
4/10	Rotors	5/14	Pinned bars
4/12	Rotor bearings; Arrangements for driving or stopping ( <a href="#">control therefor D01H 4/42</a> )	5/16	Framework; Casings; Coverings
4/14	Rotor driven by an electric motor	5/18	Drafting machines or arrangements without fallers or like pinned bars
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 <a href="#">D01H 1/11</a> )}	5/20	in which fibres are controlled by contact with stationary or reciprocating surfaces
4/18	Friction drums, e.g. arrangement of suction holes	5/22	in which fibres are controlled by rollers only
4/20	Drum bearings; Arrangements for driving or stopping ( <a href="#">control therefor D01H 4/42</a> )	5/24	with porcupines or like pinned rotary members
4/22	Cleaning of running surfaces	5/26	in which fibres are controlled by one or more endless aprons
4/24	in rotor spinning	5/28	in which fibres are controlled by inserting twist during drafting ({spinning by false-twisting <a href="#">D01H 1/11</a> }; mules <a href="#">D01H 3/00</a> ; {twisting by false-twisting <a href="#">D01H 7/92</a> }; constructions of false-twist devices <a href="#">D02G 1/04</a> )
4/26	in friction spinning	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> )
4/28	using electrostatic fields	5/32	Regulating or varying draft
4/30	Arrangements for separating slivers into fibres; Orienting or straightening fibres, {e.g. using guide-rolls}	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	7/048	. . . . {with means using plastic deformation of members}
5/42	. . . . employing electrical time-delay devices	7/06	. . . Stationary spindles with package-holding sleeves
5/44	. . Adjusting drafting elements, e.g. altering ratch	7/08	. . . Mounting arrangements
5/46	. . Loading arrangements	7/10	. . . Spindle supports; Rails; Rail supports, e.g. poker guides
5/48	. . . using weights	7/12	. . . . Bolsters; Bearings
5/50	. . . using springs	7/14	. . . . Holding-down arrangements
5/505	. . . . {for top roller arms}	7/16	. . . Arrangements for coupling bobbins or like to spindles
5/52	. . . using fluid pressure	7/18	. . . Arrangements on spindles for suppressing yarn balloons (thread guards or protectors D01H 1/42)
5/525	. . . . {for top roller arms}	7/20	. . . Lubricating arrangements
5/54	. . . using magnetic arrangements	7/22	. . . Braking arrangements
5/56	. . Supports for drafting elements (saddles or top roller arms forming essential components of weighting arrangements D01H 5/48)	7/2208	. . . . {using mechanical means}
5/565	. . . {Top roller arms}	7/2216	. . . . . {with one or two manually actuated shoe-brakes acting on a part of the whorl}
5/58	. . Arrangements for traversing drafting elements (traversing arrangements for roving guides D01H 13/06)	7/2225	. . . . . {the braking means surrounding nearly the whole periphery of the whorl}
5/60	. . Arrangements maintaining drafting elements free of fibre accumulations	7/2233	. . . . . {by suppressing the driving means, e.g. by declutching}
5/62	. . . Non-rotary cleaning pads or plates; Scrapers	7/2241	. . . . . {the belt being moved off the driven whorl}
5/625	. . . . {in cooperation with suction or blowing means}	7/225	. . . . . . {and the spindle being braked simultaneously}
5/64	. . . Rollers or aprons with cleaning surfaces	7/2258	. . . . . . {the pivoted spindle being pulled off the belt}
5/645	. . . . {in cooperation with suction or blowing means}	7/2266	. . . . . . {and braked simultaneously}
5/66	. . . Suction devices {exclusively; (D01H 5/625 and D01H 5/645 take precedence; in cooperation with thread breakage detecting means D01H 13/1691)}	7/2275	. . . . . {using hydraulically or pneumatically operated brakes}
5/68	. . . . Suction end-catchers	7/2283	. . . . . {using electromagnetically operated brakes}
5/70	. . Constructional features of drafting elements	7/2291	. . . . . {characterised by the control of braking means, e.g. operated by a yarn break-detector or tension device}
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})	7/24	. . Flyer or like arrangements (multiple-twist arrangements D01H 7/86)
5/74	. . . Rollers {or roller bearings}	7/26	. . . Flyer constructions
5/76	. . . . Loose-boss assemblies	7/28	. . . . arranged to guide material over exterior of legs
5/78	. . . . with flutes or other integral surface characteristics	7/30	. . . . with guide channels formed in legs, e.g. slubbing flyers
5/80	. . . . with covers; Cots or covers	7/32	. . . . . with pressing devices
5/82	. . . . Arrangements for coupling roller sections	7/34	. . . . with haul pulleys or like arrangements
5/84	. . . . Porcupines	7/36	. . . . with traversing devices
5/86	. . . Aprons; Apron supports; Apron tensioning arrangements	7/38	. . . . Ring flyers
5/88	. . . . Cradles; Tensors	7/40	. . . Flyer supports, e.g. rails
7/00	<b>Spinning or twisting arrangements (for open-end spinning D01H 4/00)</b>	7/42	. . . Arrangements coupling flyers to spindles
7/02	. for imparting permanent twist	7/44	. . . Drag arrangements for bobbins or flyers
7/04	. . Spindles ({bearings for hollow spindles D01H 7/88}; spindle bearings, supports therefor, in general F16C)	7/46	. . . Devices attached to, or integral with, flyers for temporarily increasing twist in material passing to them
7/041	. . . {Spindles with sliding contact bearings (D01H 7/045 takes precedence)}	7/48	. . . Eyes or like guiding arrangements (D01H 7/46 takes precedence)
7/042	. . . {Spindles with rolling contact bearings (D01H 7/045 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)
7/044	. . . {Spindles with fluid bearings}	7/52	. . Ring-and-traveller arrangements
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)}	7/54	. . . with fixed rings
7/047	. . . . {with springs}		

7/56	. . . with freely-rotatable rings; with braked or dragged rings; {Lubricating arrangements therefor}	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}
7/565	. . . . {with fluid bearings}	9/006	. . {for two-for-one twist type machines}
7/58	. . . with driven rings; {Bearings or braking arrangements therefor}	9/008	. . {for cans}
7/585	. . . . {by fluid driving means}	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
7/60	. . . Rings or travellers; Manufacture thereof not otherwise provided for (hand tools for applying travellers to rings <a href="#">D01H 17/02</a> ) {Cleaning means for rings}	9/04	. . Doffing arrangements integral with spinning or twisting machines
7/602	. . . . {Rings}	9/043	. . . {for cap type machines}
7/604	. . . . {Travellers}	9/046	. . . {for flyer type machines}
7/606	. . . . . {Driving means for travellers}	9/06	. . . Removing yarn from centrifugal cups on to yarn carriers
7/608	. . . . . {Cleaning means for travellers}	9/08	. . Doffing arrangements independent of spinning or twisting machines
7/62	. . . Arrangements providing lubricant for travellers	9/10	. . . Doffing carriages; {Loading carriages with cores}
7/64	. . . Ring supports, e.g. ring rails (poker guides or other rail supports <a href="#">D01H 7/10</a> )	9/12	. . . Manual cop-tube applying apparatus; Stands for cop-tube applying apparatus
7/66	. . Cap arrangements	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 <a href="#">D01H 13/24</a> )
7/68	. . . Cap constructions	9/16	. . Yarn-severing arrangements, {e.g. for cutting transfer tails; Separating of roving in flyer}
7/70	. . . Arrangements for supporting caps on spindles	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 (transporting full yarn bobbins to subsequent machines <a href="#">B65H 67/06+T</a> )}
7/72	. . . Bobbin-supporting arrangements, e.g. bobbin rails (poker guides or other rail supports <a href="#">D01H 7/10</a> )	9/182	. . {Overhead conveying devices}
7/74	. . Cup or like arrangements	9/185	. . {Transporting cans}
7/76	. . . Rotary discs	9/187	. . {on individual supports, e.g. pallets}
7/78	. . . Constructions of cups, e.g. spinning boxes	11/00	<b>Arrangements for confining or removing dust, fly, or the like (cleaning of running surfaces in open-end spinning machines <a href="#">D01H 4/22</a>; separation in general <a href="#">B01D</a>; cleaning in general <a href="#">B08B</a>; air-conditioning <a href="#">F24F</a>, e.g. by filtering <a href="#">F24F 3/16</a>)</b>
7/80	. . . . adapted to collect wet yarns	11/001	. {Hand tools used for cleaning the machines}
7/82	. . . Casings or guards for rotary cups or the like	11/003	. . {with a rotary pin}
7/84	. . . Spindles or yarn carriers for co-operation with rotary cups (removing yarn from centrifugal cups on to yarn carriers <a href="#">D01H 9/06</a> )	11/005	. {with blowing and/or suction devices (in general <a href="#">A47L 7/00</a> ; in cooperation with thread breakage detecting means <a href="#">D01H 13/1691</a> )}
7/86	. . Multiple-twist arrangements, e.g. two-for-one twisting devices {Threading of yarn; Devices in hollow spindles for imparting false twist}	11/006	. . {travelling along the machines}
7/862	. . . {Arrangements for holding the bobbin in a fixed position}	11/008	. {with static field means}
7/864	. . . {Coupling devices between the fixed and the rotative parts}	13/00	<b>Other common constructional features, details or accessories (for open-end spinning <a href="#">D01H 4/00</a>)</b>
7/866	. . . {Means to facilitate the unwinding of yarn}	13/005	. {Service carriages travelling along the machines (characteristics relating to the apparatus supported by the carriage, see relevant groups, e.g. <a href="#">D01H 9/005</a> , <a href="#">D01H 9/10</a> , <a href="#">D01H 13/145</a> , <a href="#">D01H 15/00</a> )}
7/868	. . . {Yarn guiding means, e.g. guiding tubes}	13/02	. Roller arrangements not otherwise provided for
7/88	. . Hollow-spindle arrangements ( <a href="#">D01H 7/86</a> takes precedence)	13/04	. Guides for slivers, rovings, or yarns; Smoothing dies (fibre-condensing guides <a href="#">D01H 5/72</a> ; {means to facilitate the unwinding of yarn in multiple-twist arrangements <a href="#">D01H 7/866</a> )}
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)	13/045	. . {Guide tube}
7/92	. for imparting transient twist {, i.e. false twist ( <a href="#">D01H 1/11</a> takes precedence)}		
7/923	. . {by means of rotating devices}		
7/926	. . {by means of traversing devices}		
<b>Common features or details of, or accessories for, spinning or twisting machines of various kinds or types (drafting arrangements <a href="#">D01H 5/00</a>; twisting arrangements <a href="#">D01H 7/00</a>)</b>			
9/00	<b>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 {<a href="#">B65H 67/00</a>}) {; Combination of spinning-winding machine}</b>		
9/001	. {Bobbin-taking arrangements}		
9/003	. . {Graspers operating under the action of a fluid}		



13/06	. . Traversing arrangements	13/26	. Arrangements facilitating the inspection or testing of yarns or the like in connection with spinning or twisting
13/08	. Twist arresters		
13/10	. Tension devices	13/28	. Heating or cooling arrangements {for yarns (removal of heat from machines D01H 1/16)}
13/102	. . {Regulating tension by regulating delivery of yarn from supply package (D01H 13/108 takes precedence)}	13/30	. Moistening, sizing, oiling, waxing, colouring, or drying yarns or the like as incidental measures during spinning or twisting
13/104	. . {Regulating tension by devices acting on running yarn and not associated with supply or take-up devices}	13/302	. . {Moistening, e.g. for wet spinning}
13/106	. . . {for double-twist spindle}	13/304	. . {Conditioning during spinning or twisting (for carding or combing D01G 99/005)}
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}	13/306	. . {by applying fluids, e.g. steam or oiling liquids}
13/12	. Arrangements preventing snarls or inadvertent doubling of yarns (suction end-catchers D01H 5/68)	13/308	. . {by applying solids, e.g. wax}
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)	13/32	. Counting, measuring, recording or registering devices (in general, see the appropriate subclass of Section G, e.g. {G01B 21/12, G01N 33/36})
13/145	. . {set on carriages travelling along the machines; Warning or safety devices pulled along the working unit by a band or the like}	<b>15/00</b>	<b>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)}</b>
13/16	. . responsive to reduction in material tension, failure of supply, or breakage, of material	15/002	. {for false-twisting spinning machines}
13/1608	. . . {where the paying-out and take-up stations are stopped at one and the same time}	15/004	. {for centrifugal spinning machines}
13/1616	. . . {characterised by the detector}	15/007	. for two-for-one twisting machines
13/1625	. . . . {Electro-mechanical actuators}	15/013	. Carriages travelling along the machines
13/1633	. . . . {Electronic actuators}	<b>17/00</b>	<b>Hand tools (cop-tube applying apparatus D01H 9/12)</b>
13/1641	. . . . . {Capacitor sensing means}	17/02	. Arrangements for storing ring travellers; Devices for applying travellers to rings
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}	<b>2700/00</b>	<b>Spinning or twisting machines; Drafting devices</b>
13/1675	. . . . . {Pencil of rays on side of machines}	2700/01	. Preparatory spinning machines
13/1683	. . . . . {Pneumatic sensing means}	2700/20	. Spinning mules; Transmissions
13/1691	. . . {Thread breakage detector means associated with pneumatic cleaning devices, e.g. suction of broken end of yarn}	2700/202	. . Carriages or their movement; Lubrication
13/18	. . . stopping supply only	2700/205	. . Spindles or spindle control in spinning mules
13/181	. . . . {by stopping supply packages}	2700/207	. . Yarn delivery rollers; Drawing systems for spinning mules; Silver rollers
13/182	. . . . {by raising or lifting of one of the drafting cylinders, e.g. by removing of the loading means}	2700/21	. Piecing or cleaning in spinning mules
13/183	. . . . {the yarn moving out of its normal path, e.g. by lateral diverting}	2700/22	. Winding devices for spinning mules
13/185	. . . . {a plate moving in the nip of drafting or guiding cylinders}	2700/24	. Spinning or twisting machines of different kinds
13/186	. . . . {guiding or drafting cylinders moving by gravity when a yarn breakage occurs}	2700/242	. . Spinning or twisting devices wherein twist is created during winding
13/187	. . . . {using means stopping the driving of the drafting, guiding cylinders, e.g. friction clutches}	2700/245	. Conception or fabrication of drafting cylinders
13/188	. . . . . {by cutting or clamping yarns or rovings}	2700/247	. Guiding means for veil or sliver on drafting systems
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		