

CPC COOPERATIVE PATENT CLASSIFICATION

D TEXTILES; PAPER

TEXTILES OR FLEXIBLE MATERIALS NOT OTHERWISE PROVIDED FOR

D03 WEAVING

D03D WOVEN FABRICS; METHODS OF WEAVING; LOOMS

NOTES

1. Class [D06](#) takes precedence over this subclass in respect of processes involving both weaving and finishing steps and in respect of the finished fabrics.
2. A method of weaving is classified in the group designating the fabric woven unless the method is characterised by the operation of a particular loom rather than by the production of a particular fabric. In this case, the method is classified in the group for the loom.
3. In this subclass, further classification in indexing scheme [D10B](#) for aspects relating to textiles is required.
4. In this subclass, if there is any doubt as to which of the essential features is the most important (this is usually the most restrictive feature), the groups designating woven fabrics should be considered in the order in which they appear at each level of indentation, except that groups designating woven pile fabrics are to be considered as taking precedence over groups designating other woven fabrics.

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. }

Woven fabrics; Methods of weaving other than those characterised by the operation of a particular loom

1/00 Woven fabrics designed to make specified articles

- 1/0005 . { Woven fabrics for safety belts }
- 1/0011 . { Woven fabrics for labels }
- 1/0017 . { Woven household fabrics }
- 1/0023 . . { Mobs or wipes }
- 1/0029 . . { Doormats }
- 1/0035 . { Protective fabrics }

WARNING

Group [D03D 1/0035](#) is impacted by reclassification into group [D03D 1/0043](#).

Groups [D03D 1/0035](#) and [D03D 1/0043](#) should be considered in order to perform a complete search.

- 1/0041 . . { Cut or abrasion resistant }
- 1/0043 . . { for elongated members, i.e. sleeves }

WARNING

Group [D03D 1/0043](#) is incomplete pending reclassification of documents from groups [D03D 1/0035](#) and [D03D 3/02](#).

Groups [D03D 1/0035](#), [D03D 3/02](#) and [D03D 1/0043](#) should be considered in order to perform a complete search.

- 1/0047 . . { Camouflage fabrics }
- 1/0052 . . { Antiballistic fabrics }
- 1/0058 . . { Electromagnetic radiation resistant }
- 1/0064 . . { Noise dampening }
- 1/007 . . { UV radiation protecting }
- 1/0076 . { Photovoltaic fabrics }

- 1/0082 . { Fabrics for printed circuit boards }
- 1/0088 . { Fabrics having an electronic function }
- 1/0094 . { Belts ([D03D 1/0005](#) takes precedence) }
- 1/02 . Inflatable articles
- 1/04 . Sack- or bag-like articles
- 1/06 . Curtain heading tapes
- 1/08 . Ladder tapes ([ladder tapes for venetian blinds E06B 9/382](#))

3/00 Woven fabrics characterised by their shape

- 3/005 . { Tapes or ribbons not otherwise provided for ([D03D 1/0005](#), [D03D 1/0011](#), [D03D 1/06](#), [D03D 1/08](#), [D03D 1/0094](#) take precedence) }
- 3/02 . Tubular fabrics

WARNING

Group [D03D 3/02](#) is impacted by reclassification into group [D03D 1/0043](#).

Groups [D03D 1/0043](#) and [D03D 3/02](#) should be considered in order to perform a complete search.

- 3/04 . Endless fabrics
- 3/06 . Fabrics of varying width
- 3/08 . Arched, corrugated, or like fabrics

5/00 Selvedges

7/00 Woven fabrics designed to be resilient, i.e. to recover from compressive stress

9/00 Open-work fabrics

11/00 Double or multi-ply fabrics not otherwise provided for

- 11/02 . Fabrics formed with pockets, tubes, loops, folds, tucks or flaps ([fabrics consisting of a single tube D03D 3/02](#))

13/00 Woven fabrics characterised by the special disposition of the warp or weft threads, e.g. with curved weft threads, with discontinuous warp threads, with diagonal warp or weft

WARNING

Group [D03D 13/00](#) is impacted by reclassification into group [D07B 7/021](#).

Groups [D03D 13/00](#) and [D07B 7/021](#) should be considered in order to perform a complete search.

- 13/002 . {With diagonal warps or wefts}
 13/004 . {with weave pattern being non-standard or providing special effects}
 13/006 . {With additional leno yarn}
 13/008 . {characterised by weave density or surface weight}

15/00 Woven fabrics characterised by the material, structure or properties of the fibres, filaments, yarns, threads or other warp or weft elements used

WARNING

Group [D03D 15/00](#) is impacted by reclassification into groups [D03D 15/20](#), [D03D 15/208](#), [D03D 15/217](#), [D03D 15/225](#), [D03D 15/233](#), [D03D 15/242](#), [D03D 15/25](#), [D03D 15/275](#), [D03D 15/283](#), [D03D 15/30](#), [D03D 15/37](#), [D03D 15/40](#), [D03D 15/41](#), [D03D 15/50](#), [D03D 15/52](#), [D03D 15/527](#), [D03D 15/547](#), [D03D 15/553](#), [D03D 15/573](#), [D03D 15/587](#), [D03D 15/60](#), [D03D 15/62](#), and [D03D 15/67](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 15/20 . characterised by the material of the fibres or filaments constituting the yarns or threads

WARNING

Groups [D03D 15/20](#), [D03D 15/208](#), [D03D 15/217](#), [D03D 15/225](#), [D03D 15/242](#), [D03D 15/25](#), [D03D 15/275](#), and [D03D 15/283](#) are incomplete pending reclassification of documents from group [D03D 15/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 15/208 . . cellulose-based
 15/217 . . . natural from plants, e.g. cotton
 15/225 . . . artificial, e.g. viscose
 15/233 . . protein-based, e.g. wool or silk

WARNING

Group [D03D 15/233](#) is incomplete pending reclassification of documents from groups [D03D 15/00](#) and [D03D 15/63](#).

Groups [D03D 15/00](#), [D03D 15/63](#) and [D03D 15/233](#) should be considered in order to perform a complete search.

- 15/235 . . . {Cashmere or silk}
 15/242 . . inorganic, e.g. basalt
 15/247 . . . {Mineral}

- 15/25 . . . Metal
 15/258 Noble metal
 15/267 . . . Glass
 15/275 . . . Carbon fibres
 15/283 . . synthetic polymer-based, e.g. polyamide or polyester fibres ([cellulose-based artificial fibres D03D 15/225](#))
 15/292 . . Conjugate, i.e. bi- or multicomponent, fibres or filaments

WARNING

Group [D03D 15/292](#) is incomplete pending reclassification of documents from group [D03D 15/47](#).

Groups [D03D 15/47](#) and [D03D 15/292](#) should be considered in order to perform a complete search.

- 15/30 . characterised by the structure of the fibres or filaments

WARNING

Group [D03D 15/30](#) is incomplete pending reclassification of documents from group [D03D 15/00](#).

Groups [D03D 15/00](#) and [D03D 15/30](#) should be considered in order to perform a complete search.

- 15/33 . . Ultrafine fibres, e.g. microfibrils or nanofibrils
 15/37 . . with specific cross-section or surface shape

WARNING

Group [D03D 15/37](#) is incomplete pending reclassification of documents from groups [D03D 15/00](#) and [D03D 15/44](#).

Groups [D03D 15/00](#), [D03D 15/44](#), and [D03D 15/37](#) should be considered in order to perform a complete search.

- 15/40 . characterised by the structure of the yarns or threads

WARNING

Groups [D03D 15/40](#) and [D03D 15/41](#) are incomplete pending reclassification of documents from group [D03D 15/00](#).

Groups [D03D 15/00](#), [D03D 15/40](#), and [D03D 15/41](#) should be considered in order to perform a complete search.

- 15/41 . . with specific twist
 15/43 . . with differing diameters
 15/44 . . with specific cross-section or surface shape

WARNING

Group [D03D 15/44](#) is impacted by reclassification into group [D03D 15/37](#).

Groups [D03D 15/44](#) and [D03D 15/37](#) should be considered in order to perform a complete search.

- 15/46 . . . Flat yarns, e.g. tapes or films

- 15/47 . . multicomponent, e.g. blended yarns or threads ([multicomponent fibres or filaments D03D 15/292](#))

WARNING

Group [D03D 15/47](#) is impacted by reclassification into group [D03D 15/292](#).

Groups [D03D 15/47](#) and [D03D 15/292](#) should be considered in order to perform a complete search.

- 15/49 . . textured ([chenille D03D 27/18](#)); curled; crimped
 15/497 . . {[Knitted threads](#)}
 15/50 . . characterised by the properties of the yarns or threads

WARNING

Groups [D03D 15/50](#), [D03D 15/527](#), [D03D 15/547](#), [D03D 15/553](#), [D03D 15/573](#), and [D03D 15/587](#) are incomplete pending reclassification of documents from group [D03D 15/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 15/507 . . magnetic
 15/513 . . heat-resistant or fireproof

WARNING

Group [D03D 15/513](#) is impacted by reclassification into group [D03D 15/52](#).

Groups [D03D 15/513](#) and [D03D 15/52](#) should be considered in order to perform a complete search.

- 15/52 . . thermal insulating, e.g. heating or cooling

WARNING

Group [D03D 15/52](#) is incomplete pending reclassification of documents from groups [D03D 15/00](#) and [D03D 15/513](#).

Groups [D03D 15/00](#), [D03D 15/513](#), and [D03D 15/52](#) should be considered in order to perform a complete search.

- 15/527 . . waterproof or water-repellent
 15/533 . . antistatic; electrically conductive
 15/54 . . coloured
 15/547 . . with optical functions other than colour, e.g. comprising light-emitting fibres
 15/553 . . . with metallic effect ([metal D03D 15/25](#))
 15/56 . . elastic
 15/567 . . Shapes or effects upon shrinkage
 15/573 . . Tensile strength
 15/58 . . characterised by the coefficients of friction
 15/587 . . adhesive; fusible
 15/593 . . Stiff materials, e.g. cane or slat

WARNING

Group [D03D 15/593](#) is impacted by reclassification into group [D03D 15/67](#).

Groups [D03D 15/593](#) and [D03D 15/67](#) should be considered in order to perform a complete search.

- 15/60 . . characterised by the warp or weft elements other than yarns or threads

WARNING

Groups [D03D 15/60](#) and [D03D 15/62](#) are incomplete pending reclassification of documents from group [D03D 15/00](#).

Groups [D03D 15/00](#), [D03D 15/60](#), and [D03D 15/62](#) should be considered in order to perform a complete search.

- 15/62 . . Cords or ropes
 15/63 . . Straps, e.g. leather straps

WARNING

Group [D03D 15/63](#) is impacted by reclassification into group [D03D 15/233](#).

Groups [D03D 15/63](#) and [D03D 15/233](#) should be considered in order to perform a complete search.

- 15/65 . . Paper
 15/67 . . Metal wires

WARNING

Group [D03D 15/67](#) is incomplete pending reclassification of documents from groups [D03D 15/00](#) and [D03D 15/593](#).

Groups [D03D 15/00](#), [D03D 15/593](#), and [D03D 15/67](#) should be considered in order to perform a complete search.

- 15/68 . . Scaffolding threads, i.e. threads removed after weaving
 15/69 . . {[Threads with beads](#)}

17/00 Woven fabrics having elastic or stretch properties due to manner of weaving ([fabrics using stretchable or elastic threads D03D 15/56](#))

19/00 Gauze or leno-woven fabrics

21/00 Lappet- or swivel-woven fabrics

23/00 General weaving methods not special to the production of any particular woven fabric or the use of any particular loom; Weaves not provided for in any other single group

25/00 Woven fabrics not otherwise provided for

- 25/005 . . {[Three-dimensional woven fabrics](#)}

27/00 Woven pile fabrics

- 27/02 . . wherein the pile is formed by warp or weft
 27/04 . . Weft pile fabrics
 27/06 . . Warp pile fabrics
 27/08 . . . Terry fabrics
 27/10 . . Fabrics woven face-to-face, e.g. double velvet
 27/12 . . wherein pile tufts are inserted during weaving
 27/14 . . with tufts around warps
 27/16 . . with tufts around wefts
 27/18 . . Chenille fabrics

Looms; Methods of weaving characterised by the operation of particular looms

29/00 Hand looms

31/00	Lappet, swivel or other looms for forming embroidery-like decoration on fabrics	45/14	<ul style="list-style-type: none"> Storing the need for replenishment or the colour required until the spent shuttle returns to the replenishing end of the loom
33/00	Multiple looms, i.e. two or more looms assembled together, whether or not they have mechanisms in common (D03D 35/00 takes precedence)	45/16 45/18	<ul style="list-style-type: none"> selecting thereby weft of correct colour Shuttle feelers or other devices for preventing replenishment if shuttle is incorrectly positioned in shuttle box (shuttle stop motions D03D 51/40)
35/00	Smallware looms, i.e. looms for weaving ribbons or other narrow fabrics (D03D 47/00 takes precedence)	45/20	<ul style="list-style-type: none"> Changing bobbins, cops, or other shuttle stock
35/005	<ul style="list-style-type: none"> {Shuttles} 	45/22	<ul style="list-style-type: none"> effected with shuttle in normal shuttle box
37/00	Circular looms (looms for weaving separate fabrics disposed in a circle or polygon D03D 33/00)	45/24 45/26 45/28	<ul style="list-style-type: none"> Magazines for one type of thread, e.g. same colour
39/00	Pile-fabric looms	45/30	<ul style="list-style-type: none"> rotary
39/02	<ul style="list-style-type: none"> Axminster looms, i.e. wherein pile tufts are inserted during weaving 	45/32	<ul style="list-style-type: none"> for several types of thread, e.g. multicolour
39/04	<ul style="list-style-type: none"> Spool Axminster looms 	45/34	<ul style="list-style-type: none"> Shuttle changing
39/06	<ul style="list-style-type: none"> Tuft yarn tube or spool frames 	45/36	<ul style="list-style-type: none"> fresh shuttle being substituted for spent shuttle in the same cell of shuttle box
39/08	<ul style="list-style-type: none"> Gripper Axminster looms 	45/38	<ul style="list-style-type: none"> Shuttle box with an extra cell which is used only during replenishment
39/083	<ul style="list-style-type: none"> {Selecting mechanisms} 	45/40	<ul style="list-style-type: none"> the spent shuttle being received in the normal cell and the fresh shuttle being picked from the extra cell
39/086	<ul style="list-style-type: none"> {Gripper details} 	45/42	<ul style="list-style-type: none"> the spent shuttle being received in the extra cell and the fresh shuttle being picked from the normal cell
39/10	<ul style="list-style-type: none"> Wire-tapestry looms, e.g. for weaving velvet or Brussels or Wilton carpets, the pile being formed over weftwise wires 	45/44	<ul style="list-style-type: none"> Magazines
39/12	<ul style="list-style-type: none"> Mechanisms for operating the pile wires 	45/46	<ul style="list-style-type: none"> for one type of thread, e.g. single colour
39/14	<ul style="list-style-type: none"> Construction of the pile wires, e.g. pile wires which cut 	45/48	<ul style="list-style-type: none"> for several types of threads, e.g. multicolour
39/16	<ul style="list-style-type: none"> Double-plush looms, i.e. for weaving two pile fabrics face-to-face 	45/50	<ul style="list-style-type: none"> Cutting, holding, manipulating, or disposing of, weft ends
39/18	<ul style="list-style-type: none"> Separating the two plush layers, e.g. by cutting 	45/52	<ul style="list-style-type: none"> Cutting weft of depleted shuttle near shuttle and holding the piece attached to the fabric
39/20	<ul style="list-style-type: none"> Looms forming pile over warpwise wires 	45/54	<ul style="list-style-type: none"> Cutting fresh weft and holding the piece attached to the fabric
39/22	<ul style="list-style-type: none"> Terry looms 	45/56	<ul style="list-style-type: none"> Cutting depleted and fresh wefts at selvage
39/223	<ul style="list-style-type: none"> {Cloth control} 	45/58	<ul style="list-style-type: none"> Removing tip bunch or fresh weft end from fresh bobbin
39/226	<ul style="list-style-type: none"> {Sley control} 	45/60	<ul style="list-style-type: none"> substantially by air stream or suction
39/24	<ul style="list-style-type: none"> Devices for cutting the pile on the loom (pile wires which cut D03D 39/14; separating two plush layers D03D 39/18) 	45/62	<ul style="list-style-type: none"> Disposing of waste pieces of cut weft end (D03D 45/58 takes precedence)
41/00	Looms not otherwise provided for, e.g. for weaving chenille yarn; Details peculiar to these looms	45/60 45/62	
41/001	<ul style="list-style-type: none"> {Hair-cloth looms} 		
41/002	<ul style="list-style-type: none"> {Looms for weaving reed, straw or wood} 		
41/004	<ul style="list-style-type: none"> {Looms for three-dimensional fabrics} 	47/00	Looms in which bulk supply of weft does not pass through shed, e.g. shuttleless looms, gripper shuttle looms, dummy shuttle looms (circular looms D03D 37/00)
41/005	<ul style="list-style-type: none"> {Linear-shed multiphase looms} 	47/02	<ul style="list-style-type: none"> wherein loops of continuous weft thread are inserted, i.e. double picks
41/007	<ul style="list-style-type: none"> {Vertical looms} 	47/04	<ul style="list-style-type: none"> by a reciprocating needle having a permanently-threaded eye
41/008	<ul style="list-style-type: none"> {Looms for weaving flat yarns} 	47/06	<ul style="list-style-type: none"> by a pivoted needle having a permanently-threaded eye
43/00	Looms with change-boxes	47/08	<ul style="list-style-type: none"> the path of the needle being modified by cams, linkages, or other means
43/02	<ul style="list-style-type: none"> with drop boxes 	47/10	<ul style="list-style-type: none"> by a forked needle pushing loop of weft through shed
43/04	<ul style="list-style-type: none"> Operating mechanisms 	47/12	<ul style="list-style-type: none"> wherein single picks of weft thread are inserted, i.e. with shedding between each pick
43/06	<ul style="list-style-type: none"> with rotary boxes 	47/125	<ul style="list-style-type: none"> {Weft holding devices (if the weft is reinserted in the next shed D03D 47/48; in jet looms D03D 47/308)}
43/08	<ul style="list-style-type: none"> Operating mechanisms 	47/14	<ul style="list-style-type: none"> by a gripper needle taking the end of the weft through the shed
43/10	<ul style="list-style-type: none"> Weft catchers, i.e. means for preventing entanglement of wefts 	47/16	<ul style="list-style-type: none"> by a gripper needle entering the shed empty and drawing the weft as it retracts
45/00	Looms with automatic weft replenishment (automatic replenishment in smallware looms D03D 35/00, in circular looms D03D 37/00)		
45/02	<ul style="list-style-type: none"> Controlling replenishment 		
45/04	<ul style="list-style-type: none"> Pirn feelers or other detectors for initiating replenishment (weft stop motions D03D 51/34) 		
45/06	<ul style="list-style-type: none"> mechanical 		
45/08	<ul style="list-style-type: none"> of the side-slip type 		
45/10	<ul style="list-style-type: none"> electrical 		
45/12	<ul style="list-style-type: none"> optical 		

- 47/18 . . . two weft inserters meeting at or near the middle of the shed and transferring the weft from one to the other
- 47/20 . . . Constructional features of the thread-engaging device on the inserters
- 47/22 . . . adapted for working a loop of weft part-way inserted in the shed and then straightened-out
- 47/23 . . . Thread grippers ([in dummy or gripper shuttles D03J 5/06](#))
- 47/233 {Carrying grippers}
- 47/236 {Drawing grippers}
- 47/24 . . . by gripper or dummy shuttle ([travelling-wave-shed looms D03D 47/26; inserting mechanisms for shuttles D03D 49/24](#))
- 47/25 . . . inserted from only one side of loom
- 47/26 . . . Travelling-wave-shed looms
- 47/261 . . . {Preparation of weft}
- 47/262 . . . {Shedding, weft insertion or beat-up mechanisms}
- 47/263 {Weft insertion and beat-up mechanisms}
- 47/265 {Beat-up mechanisms ([D03D 47/263 takes precedence](#))}
- 47/266 {Weft insertion mechanisms ([D03D 47/263 takes precedence](#))}
- 47/267 {Shedding mechanisms}
- 47/268 . . . {Mechanisms for compensating warp tension}
- 47/27 . . . Drive or guide mechanisms for weft inserting
- 47/271 . . . {Rapiers}
- 47/272 . . . {Rapier bands}
- 47/273 . . . {Rapier rods}
- 47/275 . . . {Drive mechanisms}
- 47/276 . . . {Details or arrangement of sprocket wheels}
- 47/277 . . . {Guide mechanisms ([for shuttles D03D 49/24](#))}
- 47/278 . . . {for pneumatic looms}
- 47/28 . . . wherein the weft itself is projected into the shed
- 47/30 . . . by gas jet
- 47/3006 {Construction of the nozzles}
- 47/3013 {Main nozzles}
- 47/302 {Auxiliary nozzles}
- 47/3026 {Air supply systems}
- 47/3033 {Controlling the air supply}
- 47/304 {Controlling of the air supply to the auxiliary nozzles}
- 47/3046 {Weft yarn selection}
- 47/3053 {Arrangements or lay out of air supply systems}
- 47/306 {Construction or details of parts, e.g. valves, ducts}
- 47/3066 {Control or handling of the weft at or after arrival}
- 47/3073 {Detection means therefor}
- 47/308 {Stretching or holding the weft}
- 47/3086 {Weft removal ([extraction of defective weft after stopping at definite point in weaving cycle D03D 51/085](#))}
- 47/3093 {Displaying data}
- 47/32 . . . by liquid jet
- 47/34 . . . Handling the weft between bulk storage and weft-inserting means
- 47/342 . . . {knot detection}
- 47/345 . . . {Rotating bobbins}
- 47/347 . . . {Yarn brakes ([D03D 47/364 takes precedence](#))}
- 47/36 . . . Measuring and cutting the weft
- 47/361 {Drum-type weft feeding devices}
- 47/362 {with yarn retaining devices, e.g. stopping pins ([D03D 47/367 takes precedence](#))}
- 47/363 {Construction or control of the yarn retaining devices}
- 47/364 {Yarn braking means acting on the drum}
- 47/365 {Brushes}
- 47/366 {Conical}
- 47/367 {Monitoring yarn quantity on the drum}
- 47/368 {Air chamber storage devices}
- 47/369 {Communication systems}
- 47/38 . . . Weft pattern mechanisms
- 47/39 . . . wherein cane, straw, slats, material for hair-cloth or similar material is handled
- 47/40 . . . Forming selvages
- 47/42 . . . by knitting or interlacing loops of weft
- 47/44 . . . with additional selvage thread
- 47/46 . . . by selvage shuttle or other device passing selvage thread through loop of weft ([by knitting D03D 47/44](#))
- 47/48 . . . by inserting cut end of weft in next shed, e.g. by tucking, by blowing
- 47/50 . . . by adhesion
- 49/00 Details or constructional features not specially adapted for looms of a particular type**
- 49/02 . . . Construction of loom framework
- WARNING**
- This group is in the process of being reorganised to its subgroups
- 49/022 . . . {Protective hoods or curtains}
- 49/025 . . . {Ground supports}
- 49/027 . . . {Arrangements or means for noise reduction}
- 49/04 . . . Control of the tension in warp or cloth
- 49/06 . . . Warp let-off mechanisms
- 49/08 . . . Warp beam brakes
- 49/10 . . . Driving the warp beam to let the warp off
- 49/12 . . . Controlling warp tension by means other than let-off mechanisms
- 49/14 Compensating for tension differences during shedding
- 49/16 Warp supplied by creel
- 49/18 . . . Devices for indicating warp tension
- 49/20 . . . Take-up motions; Cloth beams
- 49/22 . . . Back rests; Lease rods; Brest beams
- 49/24 . . . Mechanisms for inserting shuttle in shed
- 49/26 . . . Picking mechanisms, e.g. for propelling gripper shuttles or dummy shuttles
- 49/28 Driving mechanisms for the picker stick
- 49/30 operated by cam
- 49/32 operated by previously-loaded spring or equivalent
- 49/34 operated by liquid or gas pressure
- 49/36 Pickers; Arresting means therefor ([check straps D03D 49/40](#))
- 49/38 Picking sticks; Arresting means therefor ([check straps D03D 49/40](#))
- 49/40 Check straps; Lug straps; Similar strap components
- 49/42 . . . whereby the shuttle is propelled by liquid or gas pressure

- 49/44 . . whereby the shuttle is propelled by electric or magnetic means
- 49/46 . . wherein the shuttle is pushed or pulled positively ([travelling-wave-shed looms D03D 47/26](#))
- 49/48 . . positioning shuttle in readiness for picking
- 49/50 . . Miscellaneous devices or arrangements concerning insertion of weft and not otherwise provided for
- 49/52 . Shuttle boxes ([change-boxes D03D 43/00](#))
- 49/54 . . Braking means; Swells
- 49/56 . . . Shuttle relief mechanisms, i.e. reducing shuttle swell pressure before picking
- 49/58 . Shuttle guards
- 49/60 . Construction or operation of slay
- 49/62 . . Reeds mounted on slay
- 49/64 . . wherein the slay dwells or moves slowly while the weft is being inserted
- 49/66 . . Shuttle races
- 49/68 . Reeds or beat-up combs not mounted on the slay ([loose reed stop motion D03D 51/42](#))
- 49/70 . Devices for cutting weft threads ([cutting weft in looms with automatic weft replenishment D03D 45/50](#))
- 51/00 Driving, starting, or stopping arrangements; Automatic stop motions {(loom control associated with fabric inspection on the loom [D03J 1/007](#))}**
- 51/002 . {[Avoiding starting marks](#)}
- 51/005 . {[Independent drive motors \(independent frame drives for dobbies \[D03C 1/146\]\(#\), for other shedding mechanisms \[D03C 13/02\]\(#\)\)](#)}
- 51/007 . {[Loom optimisation](#)}
- 51/02 . General arrangements of driving mechanism
- 51/04 . Manual controls
- 51/06 . using particular methods of stopping
- 51/08 . . stopping at definite point in weaving cycle, or moving to such point after stopping
- 51/085 . . . {[Extraction of defective weft](#)}
- 51/10 . . stopping suddenly
- 51/12 . for adjusting speed
- 51/14 . for reducing speed temporarily
- 51/16 . for varying speed cyclically
- 51/18 . Automatic stop motions
- 51/20 . . Warp stop motions
- 51/22 . . . mechanical
- 51/24 wherein droppers are suspended on individual warp threads or small groups of threads
- 51/26 Detector healds
- 51/28 . . . electrical
- 51/30 wherein droppers are suspended on individual warp threads or small groups of threads
- 51/32 Detector healds
- 51/34 . . Weft stop motions
- 51/36 . . . Centre weft forks
- 51/38 . . . Side weft forks
- 51/40 . . Shuttle stop motions
- 51/42 . . . Loose reed mechanisms
- 51/44 . . acting on defective operation of loom mechanisms
- 51/46 . . . of shedding mechanisms