# SECTION D — TEXTILES; PAPER

### D03 WEAVING

SHEDDING MECHANISMS

### D03C SHEDDING MECHANISMS; PATTERN CARDS OR CHAINS; PUNCHING OF CARDS; DESIGNING PATTERNS

0 1				•	
SIII	าตไ	226	in	dex	

Dobbies; jacquards; cam and other direct-acting	g mechanisms	1/00, 3/00, 5/00
Healds	-	9/00
Selvedge mechanisms not forming part of shede		
Other shedding mechanisms		
PATTERN CARDS OR CHAINS; CARD-PUNCH PATTERNS		
FAI LENIO		13/00, 17/00, 13/00
1/00 Dobbies [1, 2006.01]	3/00	Jacquards (controlling jacquard by scanning design
1/02 • Single-lift dobbies, i.e. dobbies in wh	nich the same	D03C 17/06; for gripper Axminster looms
draw-knife or equivalent operates for	every pick	D03D 39/08) <b>[1, 2006.01]</b>
(D03C 1/10 takes precedence) [1, 20	<b>06.01</b> ] 3/02	<ul> <li>Single-lift jacquards [1, 2006.01]</li> </ul>
1/04 • • Open-shed single-lift dobbies [1, 2	<b>2006.01</b> ] 3/04	<ul> <li>of open-shed type [1, 2006.01]</li> </ul>
1/06 • Double-lift dobbies, i.e. dobbies in w	which separate 3/06	<ul> <li>Double-lift jacquards [1, 2006.01]</li> </ul>
draw-knives or equivalent operate on	alternate 3/08	<ul> <li>of open-shed type [1, 2006.01]</li> </ul>
picks <b>[1, 2006.01]</b>	3/10	<ul> <li>Centre-shed jacquards [1, 2006.01]</li> </ul>
1/08 • reversible, i.e. correct sheds open		<ul> <li>Multiple-shed jacquards, i.e. jacquards which move</li> </ul>
when the loom is driven backward		warp threads to several different heights, e.g. for
1/10 • Centre-shed dobbies, i.e. shed formed	. 1 1 1	weaving pile fabrics [1, 2006.01]
threads and lowering the others from closed position [1, 2006.01]	central shed- 3/14	<ul> <li>Jacquards not employing lifting-hooks, e.g.</li> </ul>
1/12 • Dobbies employing toothed gearing i	instead of draw	employing knotted cords in conjunction with keyhole
knifes [1, 2006.01]		slots [1, 2006.01]
1/14 • Features common to dobbies of diffe	3/16	<ul> <li>Verdol or other jacquards having intermediate power- operated needles between reading needles and lifting-</li> </ul>
motions acting on defective operation		hooks [1, 2006.01]
mechanisms D03D 51/46) <b>[1, 2006.0</b>		<ul> <li>Selvedge jacquards [1, 2006.01]</li> </ul>
1/16 • • Arrangements of dobby in relation	57 10	• Electrically-operated jacquards [1, 2006.01]
loom [1, 2006.01]	3/20	<ul> <li>Fluid-operated jacquards [1, 2006.01]</li> </ul>
1/18 • • Knives; Knife frames <b>[1, 2006.01</b> ]	3/24	Features common to jacquards of different
1/20 • • Hooks; Lifters [1, 2006.01]	3/24	types [1, 2006.01]
1/22 • Needles; Needle boxes; Needle	3/26	<ul> <li>General arrangements of jacquards, or disposition</li> </ul>
boards [1, 2006.01]		in relation to loom [1, 2006.01]
1/24 • Cylinders; Cylinder battens [1, 20	57 20	<ul> <li>Pick-finding arrangements; Arrangements for</li> </ul>
1/26 • Facilitating engagement of lifting-	hooks with	preventing next shed from being opened during
draw-knives [1, 2006.01]		stopping of loom [1, 2006.01]
1/28 • • • by creating and then eliminatin		<ul> <li>Arrangements wherein hooks are positively</li> </ul>
between hooks and knives [1, 2		operated to close shed [1, 2006.01]
1/30 • • • wherein all the hooks are disen knives, and selected hooks ther		• • Jacquard driving mechanisms [1, 2006.01]
engaged [1, 2006.01]	3/34	• • Cylinder operating mechanisms [1, 2006.01]
1/32 • • • wherein all the hooks are engage	3/36	• • • Griffe operating mechanisms [1, 2006.01]
knives, and unselected hooks the	nen 3/30	<ul> <li>Comber boards [1, 2006.01]</li> </ul>
disengaged [1, 2006.01]	3/40	• • Constructions of lifting-cords [1, 2006.01]
1/34 • • Arrangements wherein warp threa	ids pass one 3/42	• • Arrangements of lifting-cords [1, 2006.01]
another at different heights to avoi		• • Lingoes [1, 2006.01]
congestion [1, 2006.01]	5/00	Cam as other direct acting shedding machanisms is
1/36 • • Card- or chain-saving arrangemen	its, e.g. cross-	Cam or other direct-acting shedding mechanisms, i.e. operating heald frames without intervening power-
border dobbies <b>[1, 2006.01]</b>		supplying devices [1, 2006.01]
	5/02	<ul> <li>operated by rotating cams [1, 2006.01]</li> </ul>
	3. 0-	

5/04	• Construction or shape of cams (cams in general F16H 53/00) [1, 2006.01]	13/00	Shedding mechanisms not otherwise provided for [1, 2006.01]
5/06	<ul> <li>operated by cam devices other than rotating cams [1, 2006.01]</li> </ul>	<b>15/00</b> 15/02	Pattern cards or chains [1, 2006.01]  Chains of metal, wood, or similar material with
7/00	Leno or similar shedding mechanisms [1, 2006.01]		projecting pattern-indicating elements [1, 2006.01]
7/02	• Gauze healds [1, 2006.01]	15/04	<ul> <li>Cards or paper perforated to indicate</li> </ul>
7/04	<ul> <li>Mechanisms having discs oscillating about a</li> </ul>		pattern <b>[1, 2006.01]</b>
	weftwise axis and having apertures for warp threads [1, 2006.01]	15/06	<ul> <li>Apparatus for setting pegs in, or removing pegs from, pattern cards [1, 2006.01]</li> </ul>
7/06	<ul> <li>Mechanisms having eyed needles for moving warp threads from side to side of other warp threads [1, 2006.01]</li> </ul>	15/08	<ul> <li>Apparatus for interconnecting, e.g. by lacing, or disconnecting pattern cards [1, 2006.01]</li> </ul>
7/08	<ul> <li>Devices for twisting warp threads repeatedly in the same direction [1, 2006.01]</li> </ul>	17/00	<b>Card-punching apparatus</b> (marking record carriers in digital fashion G06K) <b>[1, 2006.01]</b>
		17/02	manually-controlled, i.e. holes to be punched
9/00	Healds; Heald frames (for leno shedding	45/04	determined by the operator [1, 2006.01]
0.700	D03C 7/00) [1, 2006.01]	17/04	• • power-operated [1, 2006.01]
9/02	• Healds [1, 2006.01]	17/06	automatic, i.e. design scanned optically or otherwise
9/04	• Metal healds [1, 2006.01]		to control punching apparatus or to control loom
9/06	• Heald frames [1, 2006.01]		jacquard directly [1, 2006.01]
11/00	<b>Selvedge shedding mechanisms not forming part of main shedding mechanism</b> (selvedge jacquards D03C 3/18; leno selvedge mechanism D03C 7/00) <b>[1, 2006.01]</b>	19/00	Methods or devices concerned with designing or making patterns, not provided for in other groups of this subclass [1, 2006.01]

#### D03D WOVEN FABRICS; METHODS OF WEAVING; LOOMS

#### Note(s)

- 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, 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.

#### **Subclass index**

WOVEN FABRICS OR CORRESPONDING WEAVING METHODS	
Characterised by: the construction of the yarn or the material; their shape; their resiliency; their	
elasticity	15/00, 3/00, 7/00, 17/00
Kinds of woven fabrics	
open-work fabrics; woven pile fabrics; gauze; lappet- or swivel-woven	9/00, 27/00, 19/00, 21/00
with special disposition of warp or weft threads; multi-ply fabrics not otherwise provided for	13/00, 11/00
for specified articles	1/00
other kinds	25/00
Selvedges	5/00, 47/40
General weaving methods not special to a particular fabric or loom	23/00
LOOMS OR CORRESPONDING METHODS OF WEAVING	
Hand looms	29/00
Characterised by the article to be woven: lappet or swivel type for embroidery-like decoration; for	
narrow ribbon-like fabrics; for pile fabric; other types for other kinds of fabrics	31/00, 35/00, 39/00, 41/00
Characterised by their construction: circular; with change-boxes; with automatic weft replenishment;	
shuttleless type	37/00, 43/00, 45/00, 47/00
Multiple loomsGeneral details and constructional features	33/00
General details and constructional features	49/00
Driving; starting, stopping the loom	51/00

	brics; Methods of weaving other than those	27/00	Woven pile fabrics [1, 2006.01]
<u>characte</u>	rised by the operation of a particular loom	27/02	<ul> <li>wherein the pile is formed by warp or weft [1, 2006.01]</li> </ul>
1/00	Woven fabrics designed to make specified	27/04	• • Weft pile fabrics [1, 2006.01]
4 / 0.0	articles [1, 2006.01]	27/06	• • Warp pile fabrics [1, 2006.01]
1/02	• Inflatable articles [1, 2006.01]	27/08	• • • Terry fabrics [1, 2006.01]
1/04	• Sack- or bag-like articles [1, 2006.01]	27/10	Fabrics woven face-to-face, e.g. double
1/06	• Curtain heading tapes [1, 2006.01]		velvet [1, 2006.01]
1/08	<ul> <li>Ladder tapes (ladder tapes for venetian blinds E06B 9/382) [1, 2006.01]</li> </ul>	27/12	<ul> <li>wherein pile tufts are inserted during weaving [1, 2006.01]</li> </ul>
3/00	Woven fabrics characterised by their	27/14	• • with tufts around warps [1, 2006.01]
	shape [1, 2006.01]	27/16	<ul> <li>with tufts around wefts [1, 2006.01]</li> </ul>
3/02	• Tubular fabrics [1, 2006.01]	27/18	<ul> <li>Chenille fabrics [1, 2006.01]</li> </ul>
3/04	• Endless fabrics [1, 2006.01]		
3/06	<ul> <li>Fabrics of varying width [1, 2006.01]</li> </ul>	Loomer	Methods of weaving characterised by the operation of
3/08	<ul> <li>Arched, corrugated, or like fabrics [1, 2006.01]</li> </ul>	particula	
5/00	Selvedges [1, 2006.01]	29/00	Hand looms [1, 2006.01]
7/00	Moreon fabrics designed to be resilient in to reserver		
7/00	Woven fabrics designed to be resilient, i.e. to recover from compressive stress [1, 2006.01]	31/00	Lappet, swivel or other looms for forming embroidery-like decoration on fabrics [1, 2006.01]
9/00	<b>Open-work fabrics</b> (ladder-tape fabrics D03D 1/08) <b>[1, 2006.01]</b>	33/00	Multiple looms, i.e. two or more looms assembled together, whether or not they have mechanisms in
11/00	Double or multi-ply fabrics not otherwise provided		<b>common</b> (D03D 35/00 takes precedence) <b>[1, 2006.01]</b>
	for [1, 2006.01]	35/00	Smallware looms, i.e. looms for weaving ribbons or
11/02	<ul> <li>Fabrics formed with pockets, tubes, loops, folds,</li> </ul>		other narrow fabrics (D03D 47/00 takes
	tucks, or flaps (fabrics for curtain heading tapes		precedence) [1, 2006.01]
	D03D 1/06; fabrics consisting of a single tube	27/00	Circular la como fara consista conserta fabrica
	D03D 3/02) [1, 2006.01]	37/00	<b>Circular looms</b> (looms for weaving separate fabrics disposed in a circle or polygon
13/00	Woven fabrics characterised by the special		D03D 33/00) [1, 2006.01]
	disposition of the warp or weft threads, e.g. with		2002 35/00) [1, 2000.01]
	curved weft threads, with discontinuous warp	39/00	Pile-fabric looms [1, 2006.01]
	threads, with diagonal warp or weft [1, 2006.01]	39/02	• Axminster looms, i.e. wherein pile tufts are inserted during weaving [1, 2006.01]
15/00	Woven fabrics characterised by the material or	39/04	<ul> <li>Spool Axminster looms [1, 2006.01]</li> </ul>
	construction of the yarn or other warp or weft elements used [1, 2006.01]	39/06	• • • Tuft yarn tube or spool frames [1, 2006.01]
15/02	<ul> <li>the warp or weft elements being of stiff material, e.g.</li> </ul>	39/08	<ul> <li>Gripper Axminster looms [1, 2006.01]</li> </ul>
13/02	wire, cane, slat [1, 2006.01]	39/10	<ul> <li>Wire-tapestry looms, e.g. for weaving velvet or</li> </ul>
15/04	<ul> <li>woven to produce shapes or effects upon differential shrinkage [1, 2006.01]</li> </ul>		Brussels or Wilton carpets, the pile being formed over weftwise wires [1, 2006.01]
15/06	<ul> <li>using scaffolding threads, i.e. threads removed after</li> </ul>	39/12	<ul> <li>Mechanisms for operating the pile</li> </ul>
10,00	weaving [1, 2006.01]		wires [1, 2006.01]
15/08	<ul> <li>using stretchable or elastic threads (woven fabrics whose elastic or stretch properties are due to the</li> </ul>	39/14	• • Construction of the pile wires, e.g. pile wires which cut <b>[1, 2006.01]</b>
	manner of weaving D03D 17/00) [1, 2006.01]	39/16	• Double-plush looms, i.e. for weaving two pile fabrics
15/10	<ul> <li>using threads having high or low coefficients of</li> </ul>	39/18	face-to-face [1, 2006.01]
15/12	friction [1, 2006.01] • using heat-resistant or fireproof threads [1, 2006.01]		Separating the two plush layers, e.g. by cutting [1, 2006.01]  The second of the
17/00	Moven fabrics basing electic or stretch properties	39/20	<ul> <li>Looms forming pile over warpwise wires [1, 2006.01]</li> </ul>
17/00	Woven fabrics having elastic or stretch properties due to manner of weaving (fabrics using stretchable or	39/22	• Terry looms [1, 2006.01]
	elastic threads D03D 15/08) [1, 2006.01]	39/24	<ul> <li>Devices for cutting the pile on the loom (pile wires</li> </ul>
		55724	which cut D03D 39/14; separating two plush layers
19/00	Gauze or leno-woven fabrics [1, 2006.01]		D03D 39/18) [1, 2006.01]
21/00	Lappet- or swivel-woven fabrics [1, 2006.01]	41/00	Looms not otherwise provided for, e.g. for weaving chenille yarn; Details peculiar to these
23/00	General weaving methods not special to the production of any particular woven fabric or the use		looms [1, 2006.01]
	of any particular loom; Weaves not provided for in	43/00	Looms with change-boxes [1, 2006.01]
	any other single group [1, 2006.01]	43/02	<ul> <li>with drop boxes [1, 2006.01]</li> </ul>
25/00	Woven fabrics not otherwise provided	43/04	<ul> <li>Operating mechanisms [1, 2006.01]</li> </ul>
23/00	for [1, 2006.01]	43/06	<ul> <li>with rotary boxes [1, 2006.01]</li> </ul>
	• / •	43/08	• • Operating mechanisms [1, 2006.01]

43/10 <b>45/00</b>	Weft catchers, i.e. means for preventing entanglement of wefts [1, 2006.01]  Learner with outcometic weft replanishment (autometic	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
45/00	<b>Looms with automatic weft replenishment</b> (automatic replenishment in smallware looms D03D 35/00, in circular looms D03D 37/00; bobbins rewound on loom D03J 1/12) [1, 2006.01]	47/02	<ul> <li>D03D 37/00) [1, 2006.01]</li> <li>wherein loops of continuous weft thread are inserted, i.e. double picks (D03D 47/27 takes</li> </ul>
45/02	• Controlling replenishment [1, 2006.01]	45.704	precedence) [1, 3, 2006.01]
45/02	<ul> <li>Pirn feelers or other detectors for initiating</li> </ul>	47/04	<ul> <li>by a reciprocating needle having a permanently- threaded eye [1, 2006.01]</li> </ul>
	replenishment (weft stop motions D03D 51/34) <b>[1, 2006.01]</b>	47/06	<ul> <li>by a pivoted having a permanently-threaded eye [1, 2006.01]</li> </ul>
45/06	• • • mechanical [1, 2006.01]	47/08	<ul> <li>the path of the needle being modified by cams,</li> </ul>
45/08	• • • of the side-slip type [1, 2006.01]		linkages, or other means [1, 2006.01]
45/10	• • • electrical [1, 2006.01]	47/10	by a forked needle pushing loop of weft through
45/12	• • • optical [1, 2006.01]		shed [1, 2006.01]
45/14	<ul> <li>Storing the need for replenishment or the colour required until the spent shuttle returns to the replenishing end of the loom [1, 2006.01]</li> </ul>	47/12	<ul> <li>wherein single picks of weft thread are inserted, i.e. with shedding between each pick (D03D 47/27 takes precedence) [1, 3, 2006.01]</li> </ul>
45/16	• • • selecting thereby weft of correct colour [1, 2006.01]	47/14	<ul> <li>by a gripper needle taking the end of the weft through the shed [1, 2006.01]</li> </ul>
45/18	• • Shuttle feelers or other devices for preventing replenishment if shuttle is incorrectly positioned in	47/16	• • by a gripper needle entering the shed empty and drawing the weft as it retracts [1, 2006.01]
45/20	shuttle box (shuttle stop motions D03D 51/40) [1, 2006.01]  • Changing bobbins, cops, or other shuttle	47/18	<ul> <li>two weft inserters meeting at or near the middle of the shed and transferring the weft from one to the other [1, 2006.01]</li> </ul>
75/20	stock [1, 2006.01]	47/20	Constructional features of the thread-engaging
45/22	effected with shuttle in normal shuttle box [1, 2006.01]	47/22	device on the inserters [1, 2006.01]  • • adapted for working a loop of weft part-way
45/24	• • effected otherwise than in normal box [1, 2006.01]	4//22	inserted in the shed and then straightened-
45/26	Magazines [1, 2006.01]		out [1, 2006.01]
45/28	• • for one type of thread, e.g. same	47/23	<ul> <li>Thread grippers (in dummy or gripper shuttles</li> </ul>
107.00	colour [1, 2006.01]		D03J 5/06) [3, 2006.01]
45/30	• • • • rotary [1, 2006.01]	47/24	<ul> <li>by gripper or dummy shuttle (travelling-wave-</li> </ul>
45/32	• • • for several types of thread, e.g. multicolour [1, 2006.01]		shed looms D03D 47/26; inserting mechanisms for shuttles D03D 49/24; gripper or dummy shuttles
45/34	• Shuttle changing [1, 2006.01]	.=	per se D03J 5/06) [1, 2006.01]
45/36	• • fresh shuttle being substituted for spent shuttle in the same cell of shuttle box [1, 2006.01]	47/25	• • inserted from only one side of loom [3, 2006.01]
45/38	Shuttle box with an extra cell which is used only	47/26	• • Travelling-wave-shed looms [1, 2006.01]
	during replenishment [1, 2006.01]	47/27	Drive or guide mechanisms for weft     The serving IR 2006 011.
45/40	<ul> <li>the spent shuttle being received in the normal</li> </ul>	47/20	inserting [3, 2006.01]
	cell and the fresh shuttle being picked from the extra cell [1, 2006.01]	47/28	• wherein the weft itself is projected into the shed [1, 2006.01]
45/42	• • • the spent shuttle being received in the extra cell	47/30	• • by gas jet [1, 2006.01]
	and the fresh shuttle being picked from the	47/32	• • by liquid jet [1, 2006.01]
45 / 4 4	normal cell [1, 2006.01]	47/34	<ul> <li>Handling the weft between bulk storage and weft- inserting means [1, 2006.01]</li> </ul>
45/44	• • Magazines [1, 2006.01]	47/36	<ul> <li>• Measuring and cutting the weft [1, 2006.01]</li> </ul>
45/46	• • for one type of thread, e.g. single colour [1, 2006.01]	47/38	<ul> <li>Weft pattern mechanisms [1, 2006.01]</li> </ul>
45/48	• • • for several types of threads, e.g.	47/39	wherein cane, straw, slats, material for hair-cloth or
45/50	multicolour <b>[1, 2006.01]</b> • Cutting, holding, manipulating, or disposing of, weft	47/40	similar material is handled [3, 2006.01] • Forming selvedges [1, 2006.01]
	ends [1, 2006.01]	47/42	by knitting or interlacing loops of
45/52	Cutting weft of depleted shuttle near shuttle and		weft [1, 2006.01]
	holding the piece attached to the	47/44	• • • with additional selvedge thread [1, 2006.01]
45 /5 4	fabric [1, 2006.01]	47/46	<ul> <li>by selvedge shuttle or other device passing</li> </ul>
45/54	• • Cutting fresh weft and holding the piece attached to the fabric [1, 2006.01]		selvedge thread through loop of weft (by knitting D03D 47/44) [1, 2006.01]
45/56	<ul> <li>Cutting depleted and fresh wefts at selvedge [1, 2006.01]</li> </ul>	47/48	• • by inserting cut end of weft in next shed, e.g. by tucking, by blowing [1, 2006.01]
45/58	<ul> <li>Removing tip bunch or fresh weft end from fresh bobbin [1, 2006.01]</li> </ul>	47/50	• • by adhesion [1, 2006.01]
45/60	• • • substantially by air stream or suction [1, 2006.01]	49/00	Details or constructional features not peculiar to looms of a particular type (temples
45/62	Disposing of waste pieces of cut weft end		D03J 1/22) [1, 2006.01]
.5, 02	(D03D 45/58 takes precedence) [1, 2006.01]	49/02	Construction of loom framework [1, 2006.01]
	* ***	49/04	• Control of the tension in warp or cloth [1, 2006.01]

49/06	<ul> <li>Warp let-off mechanisms (construction of warp beam D02H) [1, 2006.01]</li> </ul>	49/56	• • • Shuttle relief mechanisms, i.e. reducing shuttle swell pressure before picking [1, 2006.01]
49/08	• • • Warp beam brakes [1, 2006.01]	49/58	• Shuttle guards [1, 2006.01]
49/10	<ul> <li>• Driving the warp beam to let the warp</li> </ul>	49/60	<ul> <li>Construction or operation of slay [1, 2006.01]</li> </ul>
	off <b>[1, 2006.01]</b>	49/62	<ul> <li>Reeds mounted on slay [1, 2006.01]</li> </ul>
49/12	<ul> <li>Controlling warp tension by means other than let- off mechanisms [1, 2006.01]</li> </ul>	49/64	<ul> <li>wherein the slay dwells or moves slowly while the weft is being inserted [1, 2006.01]</li> </ul>
49/14	<ul> <li>Compensating for tension differences during</li> </ul>	49/66	• • Shuttle races [1, 2006.01]
	shedding <b>[1, 2006.01]</b>	49/68	<ul> <li>Reeds or beat-up combs not mounted on the slay</li> </ul>
49/16	• • • Warp supplied by creel [1, 2006.01]		(loose reed stop motion D03D 51/42) [1, 2006.01]
49/18	Devices for indicating warp tension (measuring)	49/70	<ul> <li>Devices for cutting weft threads (cutting weft in</li> </ul>
	tension of threads in general		looms with automatic weft replenishment
40 / 20	G01L 5/04) [1, 2006.01]		D03D 45/50; apparatus for slitting fabric
49/20	<ul> <li>Take-up motions; Cloth beams (storage racks for beams D02H) [1, 2006.01]</li> </ul>		D03J 1/08) <b>[1, 2006.01]</b>
49/22	<ul> <li>Back rests; Lease rods; Brest beams [1, 2006.01]</li> </ul>	51/00	Driving, starting, or stopping arrangements;
49/24	<ul> <li>Mechanisms for inserting shuttle in shed (shuttles per</li> </ul>		Automatic stop motions [1, 2006.01]
43/24	<u>se</u> D03J 5/00) [1, 2006.01]	51/02	General arrangements of driving
49/26	<ul> <li>Picking mechanisms, e.g. for propelling gripper</li> </ul>		mechanism [1, 2006.01]
15, 20	shuttles or dummy shuttles [1, 2006.01]	51/04	<ul> <li>Manual controls [1, 2006.01]</li> </ul>
49/28	Driving mechanisms for the picker	51/06	<ul> <li>using particular methods of stopping [1, 2006.01]</li> </ul>
	stick [1, 2006.01]	51/08	<ul> <li>stopping at definite point in weaving cycle, or</li> </ul>
49/30	• • • • operated by cam [1, 2006.01]		moving to such point after stopping [1, 2006.01]
49/32	• • • operated by previously-loaded spring or	51/10	<ul> <li>stopping suddenly [1, 2006.01]</li> </ul>
	equivalent [1, 2006.01]	51/12	<ul> <li>for adjusting speed [1, 2006.01]</li> </ul>
49/34	<ul> <li>• • • operated by liquid or gas</li> </ul>	51/14	<ul> <li>for reducing speed temporarily [1, 2006.01]</li> </ul>
	pressure [1, 2006.01]	51/16	<ul> <li>for varying speed cyclically [1, 2006.01]</li> </ul>
49/36	Pickers; Arresting means therefor (check straps	51/18	<ul> <li>Automatic stop motions [1, 2006.01]</li> </ul>
40.400	D03D 49/40) [1, 2006.01]	51/20	<ul> <li>Warp stop motions [1, 2006.01]</li> </ul>
49/38	• • Picking sticks; Arresting means therefor (check	51/22	• • • mechanical [1, 2006.01]
40 / 40	straps D03D 49/40) [1, 2006.01]	51/24	• • • wherein droppers are suspended on
49/40	<ul> <li>Check straps; Lug straps; Similar strap components [1, 2006.01]</li> </ul>		individual warp threads or small groups of
49/42	whereby the shuttle is propelled by liquid or gas	E1 /DC	threads [1, 2006.01]
73/72	pressure [1, 2006.01]	51/26	• • • Detector healds [1, 2006.01]
49/44	<ul> <li>• whereby the shuttle is propelled by electric or</li> </ul>	51/28	• • • electrical [1, 2006.01]
107 11	magnetic means [1, 2006.01]	51/30	<ul> <li>• • • wherein droppers are suspended on individual warp threads or small groups of</li> </ul>
49/46	<ul> <li>wherein the shuttle is pushed or pulled positively</li> </ul>		threads [1, 2006.01]
	(travelling-wave-shed type looms	51/32	• • • • Detector healds [1, 2006.01]
	D03D 47/26) [1, 2006.01]	51/34	<ul> <li>Weft stop motions [1, 2006.01]</li> </ul>
49/48	<ul> <li>positioning shuttle in readiness for</li> </ul>	51/36	• • • Centre weft forks [1, 2006.01]
	picking <b>[1, 2006.01]</b>	51/38	• • • Side weft forks [1, 2006.01]
49/50	Devices or arrangements concerning insertion of	51/40	<ul> <li>Shuttle stop motions [1, 2006.01]</li> </ul>
	the weft, not otherwise provided for [1, 2006.01]	51/42	<ul> <li>Loose reed mechanisms [1, 2006.01]</li> </ul>
49/52	• Shuttle boxes (change-boxes	51/44	acting on defective operation of loom
40 /5 4	D03D 43/00) [1, 2006.01]	J1/ <del>77</del>	mechanisms [1, 2006.01]
49/54	• • Braking means; Swells [1, 2006.01]	51/46	• • • of shedding mechanisms [1, 2006.01]
		, -9	

## D03J AUXILIARY WEAVING APPARATUS; WEAVERS' TOOLS; SHUTTLES

1/00	Auxiliary apparatus combined with or associated with looms [1, 2006.01]	1/14	<ul> <li>Apparatus for threading warp stop-motion droppers, healds, or reeds [1, 2006.01]</li> </ul>
1/02	<ul> <li>for treating warp, e.g. cleaning, moistening [1, 2006.01]</li> </ul>	1/16	<ul> <li>Apparatus for joining warp ends (knot-tying tools D03J 3/00) [1, 2006.01]</li> </ul>
1/04 1/06	<ul> <li>for treating weft [1, 2006.01]</li> <li>for treating fabric (cutting pile on the loom</li> </ul>	1/18	• • for joining, e.g. tying, a complete series of fresh warp threads to the used warp threads [1, 2006.01]
1/08	D03D 39/24) [1, 2006.01]  • for slitting fabric [1, 2006.01]	1/20	<ul> <li>Measuring length of fabric or number of picks woven [1, 2006.01]</li> </ul>
1/10	• for indicating pattern to weaver [1, 2006.01]	1/22	• Temples [1, 2006.01]
1/12	<ul> <li>transferring bobbins between loom and winding station (bobbin-winding machines</li> </ul>	1/24	<ul> <li>Mirrors or other arrangements for inspecting loom parts [1, 2006.01]</li> </ul>
1/13	B65H) <b>[1, 2006.01]</b> • for leasing warp (leasing in general D02H 9/00) <b>[2, 2006.01]</b>	<b>3/00</b> 3/02	Weavers' tools, e.g. knot-tying tools [1, 2006.01] • Reed and heald hooks [1, 2006.01]

3/04	• Shuttle-threading tools (threading devices in shuttles D03J 5/20) [1, 2006.01]	5/12 • • • removable <b>[1, 2006.01]</b> 5/14 • • pivoted <b>[1, 2006.01]</b>	
5/00	<b>Shuttles</b> (swivel shuttles D03D 31/00; shuttles for smallware looms D03D 35/00; circular loom shuttles D03D 37/00; selvedge shuttles D03D 47/46) <b>[1, 2006.01]</b>	<ul> <li>5/16 • Bobbin clamps, e.g. for automatic bobbin-changing loom shuttles [1, 2006.01]</li> <li>5/18 • for coreless cops, i.e. shuttles having no perbobbin clamp [1, 2006.01]</li> <li>5/20 • Devices in shuttles for threading (separate too.)</li> </ul>	g or
5/02 5/04 5/06 5/08 5/10	<ul> <li>Construction of shuttle body [1, 2006.01]</li> <li>Shuttle tips [1, 2006.01]</li> <li>Dummy shuttles; Gripper shuttles [1, 2006.01]</li> <li>Supports for pirns, bobbins, or cops [1, 2006.01]</li> <li>Pegs or spindles [1, 2006.01]</li> </ul>	threading shuttles D03J 3/04) [1, 2006.01]  5/22 • for self-threading, i.e. threading automatics when shuttle is picked [1, 2006.01]  5/24 • Tension devices [1, 2006.01]	