

# CPC COOPERATIVE PATENT CLASSIFICATION

## D TEXTILES; PAPER

### TEXTILES OR FLEXIBLE MATERIALS NOT OTHERWISE PROVIDED FOR

#### D04 BRAIDING; LACE-MAKING; KNITTING; TRIMMINGS; NON-WOVEN FABRICS

#### D04B KNITTING

##### NOTES

1. In this subclass, the groups designating machines, apparatus, devices, or implements include processes characterised by, or dependent on, their use and the products of such processes
2. Knitted products, i.e. fabrics, articles, are classified in this subclass only if they have constructional features which are of interest from the knitting aspect

##### Weft knitting; Machines therefor

**1/00 Weft knitting processes for the production of fabrics or articles not dependent on the use of particular machines; Fabrics or articles defined by such processes**

- 1/02 . Pile fabrics or articles having similar surface features
- 1/025 . . {incorporating loose fibres, e.g. high-pile fabrics or artificial fur}
- 1/04 . . characterised by thread material
- 1/06 . Non-run fabrics or articles
- 1/08 . . characterised by thread material
- 1/10 . Patterned fabrics or articles
- 1/102 . . {with stitch pattern ([D04B 1/06](#), [D04B 1/08](#) take precedence)}
- 1/104 . . . {Openwork fabric, e.g. pelerine fabrics}
- 1/106 . . . {at a selvedge, e.g. hems or turned welts}
- 1/108 . . . {Gussets, e.g. pouches or heel or toe portions}
- 1/12 . . characterised by thread material
- 1/123 . . . {with laid-in unlooped yarn, e.g. fleece fabrics (with elastic weft yarn [D04B 1/18](#))}
- 1/126 . . . {with colour pattern, e.g. intarsia fabrics}
- 1/14 . Other fabrics or articles characterised primarily by the use of particular thread materials
  - 1/16 . . synthetic threads
  - 1/18 . . elastic threads
  - 1/20 . . . crimped threads
  - 1/22 . specially adapted for knitting goods of particular configuration
- 1/225 . . {Elongated tubular articles of small diameter, e.g. coverings or reinforcements for cables or hoses}
- 1/24 . . wearing apparel
  - 1/243 . . . {upper parts of panties; pants}
  - 1/246 . . . {Upper torso garments, e.g. sweaters, shirts, leotards}
- 1/26 . . . stockings
- 1/265 . . . . {Surgical stockings (of unspecified knit construction and reinforced [A41B 11/02](#); of unspecified knit construction and elastic [A61F 13/08](#))}
- 1/28 . . . gloves

**3/00 Hand tools or implements**

- 3/02 . Needles

- 3/04 . Finger protectors; Thread tensioners
- 3/06 . Ball holders or receptacles

**5/00 Knitting apparatus or machines without needles for domestic use (with needles [D04B 7/08](#))**

**7/00 Flat-bed knitting machines with independently-movable needles (straight-bar machines with fixed needles [D04B 11/00](#))**

- 7/02 . with one set of needles
- 7/025 . . {with stitch-length regulation (cam systems for stitch-length regulation [D04B 15/327](#))}
- 7/04 . with two sets of needles
- 7/045 . . {with stitch-length regulation (cam systems for stitch-length regulation [D04B 15/327](#))}
- 7/06 . . for purl work or Links-Links loop formation
- 7/08 . for domestic use
- 7/10 . with provision for narrowing or widening to produce fully-fashioned goods
- 7/12 . with provision for incorporating pile threads
- 7/14 . with provision for incorporating internal threads in laid-in fabrics
- 7/16 . for producing fabrics consisting of, or incorporating, elastic threads
  - 7/18 . . incorporated as weft or inlaid threads
- 7/20 . with provision for changing the fabric construction, e.g. from plain to rib-loop fabric
- 7/22 . with special provision for commencing goods, e.g. with non-run edges
- 7/24 . for producing patterned fabrics
  - 7/26 . . with colour patterns
  - 7/28 . . with stitch patterns
- 7/30 . specially adapted for knitting goods of particular configuration
  - 7/32 . . tubular goods
  - 7/34 . . . gloves

**9/00 Circular knitting machines with independently-movable needles (with fixed spring or bearded needles [D04B 13/00](#))**

- 9/02 . with one set of needles
- 9/025 . . {with stitch-length regulation (cam systems for stitch-length regulation [D04B 15/327](#))}
- 9/04 . . with spring or bearded needles
- 9/06 . with needle cylinder and dial for ribbed goods

9/065	. . {with stitch-length regulation (cam systems for stitch-length regulation <a href="#">D04B 15/327</a> )}	11/26	. specially adapted for producing goods of particular configuration
9/08	. . for interlock goods	11/28	. . stockings, or portions thereof
9/10	. with two needle cylinders for purl work or for Links-Links loop formation	11/30	. . . non-run stockings
9/12	. with provision for incorporating pile threads	11/32	. . . welts, e.g. double or turned welts
9/14	. with provision for incorporating loose fibres, e.g. in high-pile fabrics	11/34	. . . heel or toe portions
9/16	. with provision for incorporating internal threads in laid-in fabrics	11/36	. . other wearing apparel
9/18	. with provision for splicing by incorporating reinforcing threads	<b>13/00</b>	<b>Circular knitting machines with fixed spring or bearded needles, e.g. loop-wheel machines (with independently-movable needles <a href="#">D04B 9/00</a>)</b>
9/20	. with provision for narrowing or widening; with reciprocatory action, e.g. for knitting of flat portions	13/02	. with horizontal needles
9/22	. with provision for changing the fabric construction, e.g. from plain to rib-loop fabric	<b>15/00</b>	<b>Details of, or auxiliary devices incorporated in, weft knitting machines, restricted to machines of this kind (details or auxiliary devices not so restricted <a href="#">D04B 35/00</a>)</b>
9/24	. with special provision for commencing goods, e.g. with non-run edges	15/02	. Loop-transfer points
9/26	. for producing patterned fabrics	15/04	. . for straight-bar knitting machines
9/28	. . with colour patterns	15/06	. Sinkers
9/30	. . . by striping	15/08	. Needle latch openers; Brushes
9/32	. . . . by wrap striping	15/10	. Needle beds
9/34	. . . by plating	15/12	. . Shogging devices therefor
9/36	. . . Intarsia work obtained by reciprocatory action	15/14	. Needle cylinders
9/38	. . with stitch patterns	15/16	. . Driving devices for reciprocatory action
9/40	. with provision for transfer of knitted goods from one machine to another	15/18	. Dials
9/42	. specially adapted for producing goods of particular configuration	15/20	. Needle bars
9/44	. . elongated tubular articles of small diameter, e.g. coverings for cables ( <a href="#">sheathing electric cables H01B 13/22</a> )	15/22	. . Driving devices therefor
9/46	. . stockings, or portions thereof	15/24	. Sinker heads; Sinker bars
9/48	. . . non-run stockings	15/26	. Slurcocks
9/50	. . . . micromesh stockings	15/28	. Needle pressers
9/52	. . . surgical stockings	15/30	. Driving devices for thread-carrier rods
9/54	. . . welts, e.g. double or turned welts	15/32	. Cam systems or assemblies for operating knitting instruments
9/56	. . . heel or toe portions	15/322	. . {in circular knitting machines with needle cylinder and dial (cam systems specially provided for dials <a href="#">D04B 15/34</a> )}
9/58	. . gloves	15/325	. . {in circular knitting machines with two opposed needle cylinders}
<b>11/00</b>	<b>Straight-bar knitting machines with fixed needles (flat-bed machines with independently-movable needles <a href="#">D04B 7/00</a>)</b>	15/327	. . {for stitch-length regulation}
11/02	. with one set of needles	15/34	. . for dials
11/025	. . {with stitch-length-regulating mechanism}	15/36	. . for flat-bed knitting machines
11/04	. with two sets of needles	15/362	. . . {with two needle beds in V-formation}
11/06	. with provision for narrowing or widening to produce fully-fashioned goods	15/365	. . . . {with provision for loop transfer from one needle bed to the other}
11/08	. with provision for incorporating pile threads	15/367	. . . {with two opposed needle beds}
11/10	. with provision for incorporating internal threads in laid-in fabrics	15/38	. Devices for supplying, feeding, or guiding threads to needles
11/12	. for producing fabrics from, or incorporating, elastic threads	15/40	. . Holders or supports for thread packages
11/14	. with provision for changing the fabric construction, e.g. from plain to rib-loop fabric	15/42	. . . Frames for assemblies of two or more reels
11/16	. with special provision for commencing goods, e.g. with non-run edges	15/44	. . Tensioning devices for individual threads
11/18	. for producing patterned fabrics	15/46	. . . for elastic threads
11/20	. . with colour patterns	15/48	. . Thread-feeding devices
11/22	. . with stitch patterns	15/482	. . . {comprising a rotatable or stationary intermediate storage drum from which the thread is axially and intermittently pulled off; Devices which can be switched between positive feed and intermittent feed}
11/24	. with provision for transfer of knitted goods from one machine to another	15/484	. . . . {Yarn braking means acting on the drum}
		15/486	. . . . {Monitoring reserve quantity}
		15/488	. . . {in co-operation with stitch-length-regulating mechanism}
		15/50	. . . for elastic threads
		15/52	. . . for straight-bar knitting machines

- 15/54 . . Thread guides
- 15/56 . . . for flat-bed knitting machines
- 15/565 . . . . {Associated thread-clamping or thread-severing devices}
- 15/58 . . . for circular knitting machines; Thread-changing devices
- 15/60 . . . . with thread-clamping or -severing devices
- 15/61 . . . . . arranged within needle circle
- 15/62 . . . . with thread knotters
- 15/64 . . . for straight-bar knitting machines
- 15/66 . Devices for determining or controlling patterns {; Programme-control arrangements}
- 15/665 . . {Driving-gear for programme or pattern devices}
- 15/68 . . characterised by the knitting instruments used
- 15/70 . . . in flat-bed knitting machines
- 15/72 . . . in straight-bar knitting machines
- 15/74 . . . Pattern drums {(driving-gear therefor D04B 15/665)}
- 15/76 . . . Pattern wheels
- 15/78 . . . Electrical devices
- 15/80 . . characterised by the thread guides used
- 15/82 . . characterised by the needle cams used
- 15/84 . . Jacquard cards or mechanisms (stamping apparatus therefor D03C)
- 15/86 . . . in flat-bed knitting machines
- 15/88 . Take-up or draw-off devices for knitting products
- 15/885 . . {for straight-bar knitting machines}
- 15/90 . . for flat-bed knitting machines
- 15/92 . . pneumatic
- 15/94 . Driving-gear not otherwise provided for
- 15/96 . . in flat-bed knitting machines
- 15/98 . . in straight-bar knitting machines
- 15/99 . . electrically controlled

**Repairing or unravelling knitted fabrics****17/00 Repairing knitted fabrics by knitting operations**

- 17/02 . by darning
- 17/04 . by picking-up dropped stitches

**19/00 Unravelling knitted fabrics****Warp knitting; Machines therefor****21/00 Warp knitting processes for the production of fabrics or articles not dependent on the use of particular machines; Fabrics or articles defined by such processes**

- 21/02 . Pile fabrics or articles having similar surface features
- 21/04 . . characterised by thread material
- 21/06 . Patterned fabrics or articles (open-work fabrics D04B 21/10)
- 21/08 . . characterised by thread material
- 21/10 . Open-work fabrics
- 21/12 . . characterised by thread material
- 21/14 . Fabrics characterised by the incorporation by knitting, in one or more thread, fleece, or fabric layers, of reinforcing, binding, or decorative threads; Fabrics incorporating small auxiliary elements, e.g. for decorative purposes (pile fabrics D04B 21/02; non-woven fabrics in general D04H)
- 21/145 . . {with stitches drawn from loose fibres, e.g. web-knitted fabrics}
- 21/16 . . incorporating synthetic threads

- 21/165 . . . {with yarns stitched through one or more layers or tows, e.g. stitch-bonded fabrics (layered products not united by stitch loops B32B 5/22)}
- 21/18 . . incorporating elastic threads
- 21/20 . specially adapted for knitting articles of particular configuration
- 21/202 . . {warp knitted yarns}
- 21/205 . . {Elongated tubular articles of small diameter, e.g. coverings or reinforcements for cables or hoses}
- 21/207 . . {Wearing apparel or garment blanks}

**23/00 Flat warp knitting machines**

- 23/02 . with two sets of needles
- 23/04 . with independently-movable knitting needles
- 23/06 . for producing fabrics consisting of, or incorporating, elastic threads
- 23/08 . with provision for incorporating pile threads
- 23/10 . for knitting through thread, fleece, or fabric layers, or around elongated core material
- 23/12 . with provision for incorporating unlooped wefts extending from selvedge to selvedge
- 23/14 . with provision for incorporating small auxiliary elements, e.g. for decorative purposes
- 23/16 . specially adapted for producing fabrics, or article blanks, of particular form or configuration
- 23/18 . . with provision for narrowing or widening
- 23/20 . . for producing stocking blanks
- 23/22 . with special thread-guiding means
- 23/24 . with cut needle presser arrangements to produce patterns

**25/00 Warp knitting machines not otherwise provided for**

- 25/02 . Tubular machines
- 25/04 . Milanese machines
- 25/06 . Galloon crocheting machines
- 25/08 . . for producing pile fabrics
- 25/10 . . for producing patterned fabrics
- 25/12 . . . with independently-movable weft-thread guides controlled by Jacquard mechanisms
- 25/14 . . specially adapted for producing articles of particular configuration

**27/00 Details of, or auxiliary devices incorporated in, warp knitting machines, restricted to machines of this kind (details or auxiliary devices not so restricted D04B 35/00)**

- 27/02 . Warp-thread guides
- 27/04 . Sinkers
- 27/06 . Needle bars; Sinker bars
- 27/08 . . Driving devices therefor
- 27/10 . Devices for supplying, feeding, or guiding threads to needles
- 27/12 . . Tensioning devices for individual threads
- 27/14 . . Thread tensioning rod arrangements
- 27/16 . . Warp beams; Bearings therefor
- 27/18 . . . Warp beam braking devices for thread tensioning
- 27/20 . . . Warp beam driving devices
- 27/22 . . . . electrically controlled
- 27/24 . . Thread guide bar assemblies
- 27/26 . . . Shogging devices therefor

- 27/28 . . . . with arrangements to reduce the number of members of pattern chains
- 27/30 . . . . with driving-gear comprising force-multiplication devices
- 27/32 . . . . with independently-movable thread guides controlled by Jacquard mechanisms
- 27/34 . Take-up or draw-off devices for knitted products
- 27/36 . . with temples

**Crocheting; Apparatus therefor** ([galloon crocheting machines for warp knitting D04B 25/06](#))

- 31/00 Crocheting processes for the production of fabrics or articles**
- 31/02 . Crocheted strips or threads
- 33/00 Crocheting tools or apparatus**
- 35/00 Details of, or auxiliary devices incorporated in, knitting machines, not otherwise provided for**
- 35/02 . Knitting tools or instruments not provided for in group [D04B 15/00](#) or [D04B 27/00](#) (needle manufacture [B21G 1/00](#))
- 35/04 . . Latch needles
- 35/06 . . Sliding-tongue needles
- 35/08 . . Spring or bearded needles
- 35/10 . Indicating, warning, or safety devices, e.g. stop motions
- 35/12 . . responsive to thread consumption
- 35/14 . . responsive to thread breakage
- 35/16 . . . with detectors associated with a series of threads
- 35/18 . . responsive to breakage, misplacement, or malfunctioning of knitting instruments
- 35/20 . . responsive to defects, e.g. holes, in knitted products
- 35/22 . Devices for preparatory treatment of threads
- 35/24 . . by moistening or lubricating
- 35/26 . . by heating
- 35/28 . Devices for lubricating machine parts ([in general F16N](#))
- 35/30 . Devices for controlling temperature of machine parts
- 35/32 . Devices for removing lint or fluff
- 35/34 . Devices for cutting knitted fabrics
- 35/36 . Devices for printing, coating, or napping knitted fabrics
- 37/00 Auxiliary apparatus or devices for use with knitting machines** ([Jacquard cards, pattern chains, apparatus for punching same D03C](#))
- 37/02 . with weft knitting machines
- 37/04 . . for inserting or adjusting pattern pins or like elements in pattern drums or wheels
- 37/06 . with warp knitting machines
- 39/00 Miscellaneous knitting processes, apparatus, or machines, not otherwise provided for**
- 39/02 . with work carrier in screw form
- 39/04 . adapted for combined weft and warp knitting
- 39/06 . adapted for combined knitting and weaving
- 39/08 . Sewing machines modified for knitting