

# CPC COOPERATIVE PATENT CLASSIFICATION

## 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 [D04B 15/327](#))}
- 9/08 . . for interlock goods
- 9/10 . with two needle cylinders for purl work or for links-links loop formation
- 9/12 . with provision for incorporating pile threads
- 9/14 . with provision for incorporating loose fibres, e.g. in high-pile fabrics
- 9/16 . with provision for incorporating internal threads in laid-in fabrics
- 9/18 . with provision for splicing by incorporating reinforcing threads

9/20	• with provision for narrowing or widening; with reciprocatory action, e.g. for knitting of flat portions	15/00	<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>
9/22	• with provision for changing the fabric construction, e.g. from plain to rib-loop fabric	15/02	• Loop-transfer points
9/24	• with special provision for commencing goods, e.g. with non-run edges	15/04	• • for straight-bar knitting machines
9/26	• for producing patterned fabrics	15/06	• Sinkers
9/28	• • with colour patterns	15/08	• Needle latch openers; Brushes
9/30	• • • by striping	15/10	• Needle beds
9/32	• • • • by wrap striping	15/12	• • Shogging devices therefor
9/34	• • • by plating	15/14	• Needle cylinders
9/36	• • • Intarsia work obtained by reciprocatory action	15/16	• • Driving devices for reciprocatory action
9/38	• • with stitch patterns	15/18	• Dials
9/40	• with provision for transfer of knitted goods from one machine to another	15/20	• Needle bars
9/42	• specially adapted for producing goods of particular configuration	15/22	• • Driving devices therefor
9/44	• • elongated tubular articles of small diameter, e.g. coverings for cables ( <a href="#">sheathing electric cables H01B 13/22</a> )	15/24	• Sinker heads; Sinker bars
9/46	• • stockings, or portions thereof	15/26	• Slurcocks
9/48	• • • non-run stockings	15/28	• Needle pressers
9/50	• • • • micromesh stockings	15/30	• Driving devices for thread-carrier rods
9/52	• • • surgical stockings	15/32	• Cam systems or assemblies for operating knitting instruments
9/54	• • • welts, e.g. double or turned welts	15/322	• • {in circular knitting machines with needle cylinder and dial (cam systems specially provided for dials <a href="#">D04B 15/34</a> )}
9/56	• • • heel or toe portions	15/325	• • {in circular knitting machines with two opposed needle cylinders}
9/58	• • gloves	15/327	• • {for stitch-length regulation}
<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>	15/34	• • for dials
11/02	• with one set of needles	15/36	• • for flat-bed knitting machines
11/025	• • {with stitch-length-regulating mechanism}	15/362	• • • {with two needle beds in V-formation}
11/04	• with two sets of needles	15/365	• • • • {with provision for loop transfer from one needle bed to the other}
11/06	• with provision for narrowing or widening to produce fully-fashioned goods	15/367	• • • {with two opposed needle beds}
11/08	• with provision for incorporating pile threads	15/38	• Devices for supplying, feeding, or guiding threads to needles
11/10	• with provision for incorporating internal threads in laid-in fabrics	15/40	• • Holders or supports for thread packages
11/12	• for producing fabrics from, or incorporating, elastic threads	15/42	• • • Frames for assemblies of two or more reels
11/14	• with provision for changing the fabric construction, e.g. from plain to rib-loop fabric	15/44	• • Tensioning devices for individual threads
11/16	• with special provision for commencing goods, e.g. with non-run edges	15/46	• • • for elastic threads
11/18	• for producing patterned fabrics	15/48	• • Thread-feeding devices
11/20	• • with colour 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}
11/22	• • with stitch patterns	15/484	• • • • {Yarn braking means acting on the drum}
11/24	• with provision for transfer of knitted goods from one machine to another	15/486	• • • • {Monitoring reserve quantity}
11/26	• specially adapted for producing goods of particular configuration	15/488	• • • {in co-operation with stitch-length-regulating mechanism}
11/28	• • stockings, or portions thereof	15/50	• • • for elastic threads
11/30	• • • non-run stockings	15/52	• • • for straight-bar knitting machines
11/32	• • • welts, e.g. double or turned welts	15/54	• • Thread guides
11/34	• • • heel or toe portions	15/56	• • • for flat-bed knitting machines
11/36	• • other wearing apparel	15/565	• • • • {Associated thread-clamping or thread-severing devices}
<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>	15/58	• • • for circular knitting machines; Thread-changing devices
13/02	• with horizontal needles	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 <a href="#">D04B 15/665</a> )}
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 <a href="#">D03C</a> )
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}

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**Flat warp knitting machines**

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

**Warp knitting machines not otherwise provided for**

- . Tubular machines
- . Milanese machines
- . Galloon crocheting machines
- . . for producing pile fabrics
- . . for producing patterned fabrics
- . . . with independently-movable weft-thread guides controlled by jacquard mechanisms
- . . specially adapted for producing articles of particular configuration

**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](#))**

- . Warp-thread guides
- . Sinkers
- . Needle bars; Sinker bars
- . . Driving devices therefor
- . Devices for supplying, feeding, or guiding threads to needles
- . . Tensioning devices for individual threads
- . . Thread tensioning rod arrangements
- . . Warp beams; Bearings therefor
- . . . Warp beam braking devices for thread tensioning
- . . . Warp beam driving devices
- . . . . electrically controlled
- . . Thread guide bar assemblies
- . . . Shogging devices therefor
- . . . . with arrangements to reduce the number of members of pattern chains
- . . . . with driving-gear comprising force-multiplication devices
- . . . with independently-movable thread guides controlled by jacquard mechanisms
- . Take-up or draw-off devices for knitted products
- . . 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