COOPERATIVE PATENT CLASSIFICATION

TEXTILES; PAPER

TEXTILES OR FLEXIBLE MATERIALS NOT OTHERWISE PROVIDED FOR

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

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.
3. In this subclass, further classification in indexing scheme D10B for aspects relating to textiles is required.

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.

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
Weft knitting; Machines therefor

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  
9/22 . with provision for changing the fabric construction, e.g. from plain to rib-loop fabric  
9/24 . with special provision for commencing goods, e.g. with non-run edges  
9/26 . for producing patterned fabrics  
9/28 . with colour patterns  
9/30 . by striping  
9/32 . by wrap striping  
9/34 . by plating  
9/36 . Intarsia work obtained by reciprocatory action  
9/38 . with stitch patterns  
9/40 . with provision for transfer of knitted goods from one machine to another  
9/42 . specially adapted for producing goods of particular configuration  
9/44 . elongated tubular articles of small diameter, e.g. coverings for cables (sheathing electric cables H01B 13/22)  
9/46 . stockings, or portions thereof  
9/48 . non-run stockings  
9/50 . micromesh stockings  
9/52 . surgical stockings  
9/54 . welts, e.g. double or turned welts  
9/56 . heel or toe portions  
9/58 . gloves  

Straight-bar knitting machines with fixed needles (flat-bed machines with independently-movable needles D04B 7/00)

11/02 . with one set of needles  
11/04 . with two sets of needles  
11/06 . with provision for narrowing or widening to produce fully-fashioned goods  
11/08 . with provision for incorporating pile threads  
11/10 . with provision for incorporating internal threads in laid-in fabrics  
11/12 . for producing fabrics from, or incorporating, elastic threads  
11/14 . with provision for changing the fabric construction, e.g. from plain to rib-loop fabric  
11/16 . with special provision for commencing goods, e.g. with non-run edges  
11/18 . for producing patterned fabrics  
11/20 . with colour patterns  
11/22 . with stitch patterns  
11/24 . with provision for transfer of knitted goods from one machine to another  
11/26 . specially adapted for producing goods of particular configuration  
11/28 . stockings, or portions thereof  
11/30 . non-run stockings  
11/32 . welts, e.g. double or turned welts  
11/34 . heel or toe portions  
11/36 . other wearing apparel

Circular knitting machines with fixed spring or bearded needles, e.g. loop-wheel machines (with independently-movable needles D04B 9/00)

13/02 . with horizontal needles

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

15/02 . Loop-transfer points  
15/04 . for straight-bar knitting machines  
15/06 . Sinkers  
15/08 . Needle latch openers; Brushes  
15/10 . Needle beds  
15/12 . Shogging devices therefor  
15/14 . Needle cylinders  
15/16 . Driving devices for reciprocatory action  
15/18 . Dials  
15/20 . Needle bars  
15/22 . Driving devices therefor  
15/24 . Sinker heads; Sinker bars  
15/26 . Slurcocks  
15/28 . Needle pressers  
15/30 . Driving devices for thread-carrier rods  
15/32 . Cam systems or assemblies for operating knitting instruments  
15/322 . [in circular knitting machines with needle cylinder and dial (cam systems specially provided for dials D04B 15/34)]  
15/325 . [in circular knitting machines with two opposed needle cylinders]  
15/327 . [for stitch-length regulation]  
15/34 . for dials  
15/36 . for flat-bed knitting machines  
15/362 . [with two needle beds in V-formation]  
15/365 . [with provision for loop transfer from one needle bed to the other]  
15/367 . [with two opposed needle beds]  
15/38 . Devices for supplying, feeding, or guiding threads to needles  
15/40 . Holders or supports for thread packages  
15/42 . Frames for assemblies of two or more reels  
15/44 . Tensioning devices for individual threads  
15/46 . for elastic threads  
15/48 . Thread-feeding devices
Weft knitting; Machines therefor

10/482 . . . {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}
10/484 . . . {Yarn braking means acting on the drum}
10/486 . . . {Monitoring reserve quantity}
10/488 . . . {in co-operation with stitch-length-regulating mechanism}
10/50 . . . for elastic threads
10/52 . . . for straight-bar knitting machines
10/54 . . . Thread guides
10/56 . . . for flat-bed knitting machines
10/565 . . . {Associated thread-clamping or thread-severing devices}
10/58 . . . for circular knitting machines; Thread-changing devices
10/60 . . . with thread-clamping or -severing devices
10/61 . . . arranged within needle circle
10/62 . . . with thread knoters
10/64 . . . for straight-bar knitting machines
10/66 . . Devices for determining or controlling patterns {; Programme-control arrangements}
10/665 . . . {Driving-gear for programme or pattern devices}
10/68 . . . characterised by the knitting instruments used
10/70 . . . in flat-bed knitting machines
10/72 . . . in straight-bar knitting machines
10/74 . . . Pattern drums {;Driving-gear therefor D04B 15/665}
10/76 . . . Pattern wheels
10/78 . . . Electrical devices
10/80 . . . characterised by the thread guides used
10/82 . . . characterised by the needle cams used
10/84 . . . Jacquard cards or mechanisms (stamping apparatus therefor D03C)
10/86 . . . in flat-bed knitting machines
10/88 . . . Take-up or draw-off devices for knitting products
10/885 . . . {for straight-bar knitting machines
10/90 . . . for flat-bed knitting machines
10/92 . . . pneumatic
10/94 . . . Driving-gear not otherwise provided for
10/96 . . . in flat-bed knitting machines
10/98 . . . in straight-bar knitting machines
10/99 . . . 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)

20/08 . characterised by thread material
20/10 . Open-work fabrics
20/12 . characterised by thread material
20/14 . 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 welfs 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 welf-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 25/00)
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