

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**D04B 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

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

D04B 1/265 {Surgical stockings (of unspecified knit construction and reinforced [A41B 11/02](#); of unspecified knit construction and elastic [A61F 13/08](#))}

D04B 1/28 . . . gloves

D04B 3/00 Hand tools or implements

D04B 3/02 . Needles

D04B 3/04 . Finger protectors; Thread tensioners

D04B 3/06 . Ball holders or receptacles

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

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

D04B 7/02 . with one set of needles

D04B 7/025 . . {with stitch-length regulation (cam systems for stitch-length regulation [D04B 15/327](#))}

D04B 7/04 . with two sets of needles

D04B 7/045 . . {with stitch-length regulation (cam systems for stitch-length regulation [D04B 15/327](#))}

D04B 7/06 . . for purl work or links-links loop formation

D04B 7/08 . for domestic use

D04B 7/10 . with provision for narrowing or widening to produce fully-fashioned goods

D04B 7/12 . with provision for incorporating pile threads

D04B 7/14 . with provision for incorporating internal threads in laid-in fabrics

D04B 7/16 . for producing fabrics consisting of, or incorporating, elastic threads

D04B 7/18 . . incorporated as weft or inlaid threads

D04B 7/20 . with provision for changing the fabric construction, e.g. from plain to rib-loop fabric

D04B 7/22 . with special provision for commencing goods, e.g. with non-run edges

D04B 7/24 . for producing patterned fabrics

D04B 7/26 . . with colour patterns

D04B 7/28 . . with stitch patterns

D04B 7/30 . specially adapted for knitting goods of particular configuration

D04B 7/32 . . tubular goods

D04B 7/34 . . . gloves

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

D04B 9/02 . with one set of needles

D04B 9/025 . . {with stitch-length regulation (cam systems for stitch-length regulation [D04B 15/327](#))}

D04B 9/04 . . with spring or bearded needles

D04B 9/06 . with needle cylinder and dial for ribbed goods

- D04B 9/065 . . {with stitch-length regulation (cam systems for stitch-length regulation [D04B 15/327](#))}
- D04B 9/08 . . for interlock goods
- D04B 9/10 . with two needle cylinders for purl work or for links-links loop formation
- D04B 9/12 . with provision for incorporating pile threads
- D04B 9/14 . with provision for incorporating loose fibres, e.g. in high-pile fabrics
- D04B 9/16 . with provision for incorporating internal threads in laid-in fabrics
- D04B 9/18 . with provision for splicing by incorporating reinforcing threads
- D04B 9/20 . with provision for narrowing or widening; with reciprocatory action, e.g. for knitting of flat portions
- D04B 9/22 . with provision for changing the fabric construction, e.g. from plain to rib-loop fabric
- D04B 9/24 . with special provision for commencing goods, e.g. with non-run edges
- D04B 9/26 . for producing patterned fabrics
- D04B 9/28 . . with colour patterns
- D04B 9/30 . . . by striping
- D04B 9/32 by wrap striping
- D04B 9/34 . . . by plating
- D04B 9/36 . . . Intarsia work obtained by reciprocatory action
- D04B 9/38 . . with stitch patterns
- D04B 9/40 . with provision for transfer of knitted goods from one machine to another
- D04B 9/42 . specially adapted for producing goods of particular configuration
- D04B 9/44 . . elongated tubular articles of small diameter, e.g. coverings for cables ([sheathing electric cables H01B 13/22](#))
- D04B 9/46 . . stockings, or portions thereof
- D04B 9/48 . . . non-run stockings
- D04B 9/50 micromesh stockings
- D04B 9/52 . . . surgical stockings
- D04B 9/54 . . . welts, e.g. double or turned welts
- D04B 9/56 . . . heel or toe portions
- D04B 9/58 . . gloves
- D04B 11/00** **Straight-bar knitting machines with fixed needles** (flat-bed machines with [independently-movable needles D04B 7/00](#))
- D04B 11/02 . with one set of needles
- D04B 11/025 . . {with stitch-length-regulating mechanism}
- D04B 11/04 . with two sets of needles
- D04B 11/06 . with provision for narrowing or widening to produce fully-fashioned goods
- D04B 11/08 . with provision for incorporating pile threads
- D04B 11/10 . with provision for incorporating internal threads in laid-in fabrics
- D04B 11/12 . for producing fabrics from, or incorporating, elastic threads

- D04B 11/14
 - with provision for changing the fabric construction, e.g. from plain to rib-loop fabric
- D04B 11/16
 - with special provision for commencing goods, e.g. with non-run edges
- D04B 11/18
 - for producing patterned fabrics
- D04B 11/20
 - . with colour patterns
- D04B 11/22
 - . with stitch patterns
- D04B 11/24
 - with provision for transfer of knitted goods from one machine to another
- D04B 11/26
 - specially adapted for producing goods of particular configuration
- D04B 11/28
 - . stockings, or portions thereof
- D04B 11/30
 - . . non-run stockings
- D04B 11/32
 - . . welts, e.g. double or turned welts
- D04B 11/34
 - . . heel or toe portions
- D04B 11/36
 - . other wearing apparel

- D04B 13/00**
Circular knitting machines with fixed spring or bearded needles, e.g. loop-wheel machines (with independently-movable needles [D04B 9/00](#))
- D04B 13/02
 - with horizontal needles

- D04B 15/00**
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](#))
- D04B 15/02
 - Loop-transfer points
- D04B 15/04
 - . for straight-bar knitting machines
- D04B 15/06
 - Sinkers
- D04B 15/08
 - Needle latch openers; Brushes
- D04B 15/10
 - Needle beds
- D04B 15/12
 - . Shogging devices therefor
- D04B 15/14
 - Needle cylinders
- D04B 15/16
 - . Driving devices for reciprocatory action
- D04B 15/18
 - Dials
- D04B 15/20
 - Needle bars
- D04B 15/22
 - . Driving devices therefor
- D04B 15/24
 - Sinker heads; Sinker bars
- D04B 15/26
 - Slurcocks
- D04B 15/28
 - Needle pressers
- D04B 15/30
 - Driving devices for thread-carrier rods
- D04B 15/32
 - Cam systems or assemblies for operating knitting instruments
- D04B 15/322
 - . {in circular knitting machines with needle cylinder and dial (cam systems specially provided for dials [D04B 15/34](#))}
- D04B 15/325
 - . {in circular knitting machines with two opposed needle cylinders}
- D04B 15/327
 - . {for stitch-length regulation}
- D04B 15/34
 - . for dials

- D04B 15/36 . . for flat-bed knitting machines
- D04B 15/362 . . . {with two needle beds in V-formation}
- D04B 15/365 {with provision for loop transfer from one needle bed to the other}
- D04B 15/367 . . . {with two opposed needle beds}
- D04B 15/38 . Devices for supplying, feeding, or guiding threads to needles
- D04B 15/40 . . Holders or supports for thread packages
- D04B 15/42 . . . Frames for assemblies of two or more reels
- D04B 15/44 . . Tensioning devices for individual threads
- D04B 15/46 . . . for elastic threads
- D04B 15/48 . . Thread-feeding devices
- D04B 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}
- D04B 15/484 {Yarn braking means acting on the drum}
- D04B 15/486 {Monitoring reserve quantity}
- D04B 15/488 . . . {in co-operation with stitch-length-regulating mechanism}
- D04B 15/50 . . . for elastic threads
- D04B 15/52 . . . for straight-bar knitting machines
- D04B 15/54 . . Thread guides
- D04B 15/56 . . . for flat-bed knitting machines
- D04B 15/565 {Associated thread-clamping or thread-severing devices}
- D04B 15/58 . . . for circular knitting machines; Thread-changing devices
- D04B 15/60 with thread-clamping or -severing devices
- D04B 15/61 arranged within needle circle
- D04B 15/62 with thread knotters
- D04B 15/64 . . . for straight-bar knitting machines
- D04B 15/66 . Devices for determining or controlling patterns; {Programme-control arrangements}
- D04B 15/665 . . {Driving-gear for programme or pattern devices}
- D04B 15/68 . . characterised by the knitting instruments used
- D04B 15/70 . . . in flat-bed knitting machines
- D04B 15/72 . . . in straight-bar knitting machines
- D04B 15/74 . . . Pattern drums {(driving-gear therefor [D04B 15/665](#))}
- D04B 15/76 . . . Pattern wheels
- D04B 15/78 . . . Electrical devices
- D04B 15/80 . . characterised by the thread guides used
- D04B 15/82 . . characterised by the needle cams used
- D04B 15/84 . . Jacquard cards or mechanisms ([stamping apparatus therefor D03C](#))
- D04B 15/86 . . . in flat-bed knitting machines
- D04B 15/88 . Take-up or draw-off devices for knitting products
- D04B 15/885 . . {for straight-bar knitting machines}

- D04B 15/90 . . for flat-bed knitting machines
- D04B 15/92 . . pneumatic
- D04B 15/94 . Driving-gear not otherwise provided for
- D04B 15/96 . . in flat-bed knitting machines
- D04B 15/98 . . in straight-bar knitting machines
- D04B 15/99 . . electrically controlled

Repairing or unravelling knitted fabrics

D04B 17/00 Repairing knitted fabrics by knitting operations

- D04B 17/02 . by darning
- D04B 17/04 . by picking-up dropped stitches

D04B 19/00 Unravelling knitted fabrics

Warp knitting; Machines therefor

D04B 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

- D04B 21/02 . Pile fabrics or articles having similar surface features
 - D04B 21/04 . . characterised by thread material
 - D04B 21/06 . Patterned fabrics or articles ([open-work fabrics D04B 21/10](#))
 - D04B 21/08 . . characterised by thread material
 - D04B 21/10 . Open-work fabrics
 - D04B 21/12 . . characterised by thread material
 - D04B 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](#))
 - D04B 21/145 . . {with stitches drawn from loose fibres, e.g. web-knitted fabrics}
 - D04B 21/16 . . incorporating synthetic threads
 - D04B 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](#))}
 - D04B 21/18 . . incorporating elastic threads
 - D04B 21/20 . specially adapted for knitting articles of particular configuration
 - D04B 21/202 . . {warp knitted yarns}
 - D04B 21/205 . . {Elongated tubular articles of small diameter, e.g. coverings or reinforcements for cables or hoses}
 - D04B 21/207 . . {Wearing apparel or garment blanks}
- #### **D04B 23/00 Flat warp knitting machines**
- D04B 23/02 . with two sets of needles

- D04B 23/04 . with independently-movable knitting needles
- D04B 23/06 . for producing fabrics consisting of, or incorporating, elastic threads
- D04B 23/08 . with provision for incorporating pile threads
- D04B 23/10 . for knitting through thread, fleece, or fabric layers, or around elongated core material
- D04B 23/12 . with provision for incorporating unlooped wefts extending from selvage to selvage
- D04B 23/14 . with provision for incorporating small auxiliary elements, e.g. for decorative purposes
- D04B 23/16 . specially adapted for producing fabrics, or article blanks, of particular form or configuration
- D04B 23/18 . . with provision for narrowing or widening
- D04B 23/20 . . for producing stocking blanks
- D04B 23/22 . with special thread-guiding means
- D04B 23/24 . with cut needle presser arrangements to produce patterns

D04B 25/00 Warp knitting machines not otherwise provided for

- D04B 25/02 . Tubular machines
- D04B 25/04 . Milanese machines
- D04B 25/06 . Galloon crocheting machines
- D04B 25/08 . . for producing pile fabrics
- D04B 25/10 . . for producing patterned fabrics
- D04B 25/12 . . . with independently-movable weft-thread guides controlled by jacquard mechanisms
- D04B 25/14 . . specially adapted for producing articles of particular configuration

D04B 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](#))

- D04B 27/02 . Warp-thread guides
- D04B 27/04 . Sinkers
- D04B 27/06 . Needle bars; Sinker bars
- D04B 27/08 . . Driving devices therefor
- D04B 27/10 . Devices for supplying, feeding, or guiding threads to needles
- D04B 27/12 . . Tensioning devices for individual threads
- D04B 27/14 . . Thread tensioning rod arrangements
- D04B 27/16 . . Warp beams; Bearings therefor
- D04B 27/18 . . . Warp beam braking devices for thread tensioning
- D04B 27/20 . . . Warp beam driving devices
- D04B 27/22 electrically controlled
- D04B 27/24 . . Thread guide bar assemblies
- D04B 27/26 . . . Shogging devices therefor

- D04B 27/28 with arrangements to reduce the number of members of pattern chains
- D04B 27/30 with driving-gear comprising force-multiplication devices
- D04B 27/32 . . . with independently-movable thread guides controlled by jacquard mechanisms
- D04B 27/34 . Take-up or draw-off devices for knitted products
- D04B 27/36 . . with temples

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

D04B 31/00 Crocheting processes for the production of fabrics or articles

- D04B 31/02 . Crocheted strips or threads

D04B 33/00 Crocheting tools or apparatus

D04B 35/00 Details of, or auxiliary devices incorporated in, knitting machines, not otherwise provided for

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

D04B 37/06 . with warp knitting machines

D04B 39/00 **Miscellaneous knitting processes, apparatus, or machines, not otherwise provided for**

D04B 39/02 . with work carrier in screw form

D04B 39/04 . adapted for combined weft and warp knitting

D04B 39/06 . adapted for combined knitting and weaving

D04B 39/08 . Sewing machines modified for knitting