

## SECTION D — TEXTILES; PAPER

### D05 SEWING; EMBROIDERING; TUFTING

**D05B SEWING** (appliances for the tailoring trade A41H; sewing tables A47B 29/00; sewing in bookbinding B42B 2/00; sewing machines modified for knitting D04B 39/08)

#### Note(s)

In this subclass, the groups designating sewing apparatus or machines cover also sewing processes dependent on their use, and the thread seams produced thereby.

#### Subclass index

#### TYPES OF MACHINES

- General types for making thread seams without lateral movement.....1/00
- Special-purpose or automatic machines
  - with lateral movement of needle or work.....3/00
  - for sewing quilts or mattresses, sacks, leather goods.....11/00, 13/00, 15/00
  - for temporarily connecting articles.....5/00
  - linking machines; hem-stitch machines; for making thread and welded seams.....7/00, 9/00, 17/00
  - programme-controlled.....19/00, 21/00
- Other types of sewing machines.....23/00
- Combination of machines; machines incorporating devices for other purposes than sewing.....25/00, 81/00

#### THE WORK; MACHINE ELEMENTS RELATING THERETO

- For feeding, pressing, holding, supplying, or removing the work.....27/00, 29/00, 31/00, 33/00
- Devices for slitting, grooving, or cutting the work.....37/00
- Work-piece carriers, work- collecting devices.....39/00, 41/00
- Other elements relating to the work.....35/00

#### SEWING-THREAD; MACHINE ELEMENTS RELATING THERETO

- Needle thread
  - spool-pin assemblies.....43/00
  - measuring length of thread used; regulating tension; severing thread.....45/00, 47/00, 65/00
  - take-up, needle-thread guard, break detectors, thread laying; needle holders.....49/00, 51/00, 53/00, 55/00
- Lower thread
  - loop takers; loop manipulators; tension; severing thread.....57/00, 61/00, 63/00, 65/00
  - bobbin winding or changing.....59/00
- Lubricating, waxing, or colouring thread.....67/00

#### OTHER ELEMENTS OF SEWING MACHINES; ACCESSORIES

- Driving or control; lubricating or cooling; lighting equipment.....69/00, 71/00, 79/00
- Accessories
  - guards for operator.....83/00
  - casings; frames or tables; covers or portable enclosures.....73/00, 75/00, 77/00

#### HAND SEWING

- Tools and accessories; stitches or stitch seams.....91/00, 93/00
- Preparatory or finishing operations.....95/00
- Hand-sewing processes and apparatus for other special work, or not otherwise provided for.....97/00

#### NEEDLES; NEEDLE-THREADING DEVICES; SEAM-RIPPING.....85/00, 87/00, 89/00

**1/00 General types of sewing apparatus or machines without mechanism for lateral movement of the needle or the work or both**

- 1/02 • for making single-thread seams
- 1/04 • • Running-stitch seams
- 1/06 • • Single chain-stitch seams
- 1/08 • for making multi-thread seams
- 1/10 • • Double chain-stitch seams

- 1/12 • • Lock-stitch seams
- 1/14 • • Combined or alternative chain-stitch and lock-stitch seams
- 1/16 • • Pseudo-lock-stitch seams in which the thread loops do not positively interlock (shoe or welt sewing machines D05B 15/02)
- 1/18 • • Seams for protecting or securing edges (zig-zag sewing machines D05B 3/02, D05B 3/04)

## D05B

- 1/20 • • • Overedge seams
- 1/22 • • • • combined with joining or securing seams
- 1/24 • for making blind-stitch seams
- 1/26 • for making fluid-tight seams (sewing machines for concurrently making thread and welded seams D05B 17/00)

### Special-purpose or automatic sewing apparatus or machines

- 3/00 Sewing apparatus or machines with mechanism for lateral movement of the needle or the work or both for making ornamental pattern seams, for sewing buttonholes, for reinforcing openings, or for fastening articles, e.g. buttons, by sewing** (programme-controlled sewing machines D05B 19/00; with devices for automatically controlling movement of work-carrier D05B 21/00) [6]
  - 3/02 • with mechanisms for needle-bar movement
  - 3/04 • with mechanisms for work feed
  - 3/06 • for sewing buttonholes (buttonholes A41F 1/02)
  - 3/08 • • for buttonholes with eyelet ends
  - 3/10 • for making piped openings
  - 3/12 • for fastening articles by sewing
  - 3/14 • • perforated or press buttons
  - 3/16 • • shank buttons
  - 3/18 • • hooks or eyelets
  - 3/20 • • labels (labelling fabrics otherwise than by sewing B65C 5/00; labels or securing means therefor, in general G09F 3/00)
  - 3/22 • • Article-, e.g. button-, feed mechanisms therefor
  - 3/24 • formed by general-purpose sewing machines modified by attachments, e.g. by detachable devices
- 5/00 Sewing machines for temporarily connecting articles, e.g. pairs of socks**
- 7/00 Linking machines, e.g. for joining knitted fabrics**
- 9/00 Hem-stitch sewing machines**
- 11/00 Machines for sewing quilts or mattresses** (control of workpiece-holding frames, or of sewing machines, in order to obtain particular seam configuration D05B 21/00)
- 13/00 Machines for sewing sacks**
  - 13/02 • for closing filled bags or sacks (combined with bag- or sack-filling apparatus B65B)
- 15/00 Machines for sewing leather goods** (making pseudo-lock-stitch seams D05B 1/16)
  - 15/02 • Shoe sewing machines
  - 15/04 • • for lock-stitch work (D05B 15/08 takes precedence)
  - 15/06 • • Welt sewing machines
  - 15/08 • • • for lock-stitch work
  - 15/10 • • Lining sewing machines
- 17/00 Sewing machines for concurrently making thread and welded seams** (for making non-welded fluid-tight seams D05B 1/26)
- 19/00 Programme-controlled sewing machines** (with devices for automatically controlling movement of work-carrier D05B 21/00; devices for stopping drive when sewing tools have reached a predetermined position D05B 69/22)

- 19/02 • Sewing machines having electronic memory or micro-processor control unit [6]
- 19/04 • • characterised by memory aspects [6]
- 19/06 • • • Physical exchange of memory [6]
- 19/08 • • • Arrangements for inputting stitch or pattern data to memory [6]
- 19/10 • • • Arrangements for selecting combinations of stitch or pattern data from memory [6]
- 19/12 • • characterised by control of operation of machine [6]
- 19/14 • • • Control of needle movement, e.g. varying amplitude or period of needle movement [6]
- 19/16 • • • Control of workpiece movement, e.g. modulation of travel of feed dog [6]
- 21/00 Sewing machines with devices for automatically controlling movement of work-carrier relative to stitch-forming mechanism in order to obtain particular configuration of seam, e.g. programme-controlled for sewing collars, for attaching pockets**
- 23/00 Sewing apparatus or machines not otherwise provided for** (for making zip closures A44B 19/00)

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- 25/00 Sewing units consisting of combinations of several sewing machines**

### Sewing-machine elements for feeding, positioning, handling, or treating the work

- 27/00 Work-feeding means for sewing machines**
  - 27/02 • with feed dogs having horizontal and vertical movements
  - 27/04 • • arranged above the workpieces
  - 27/06 • • arranged above and below the workpieces
  - 27/08 • • with differential feed motions
  - 27/10 • with rotary circular feed members
  - 27/12 • • rotating continuously
  - 27/14 • • rotating discontinuously
  - 27/16 • • with differential feed motions
  - 27/18 • • Feed cups
  - 27/20 • constituted by sewing needles
  - 27/22 • with means for setting length of stitch
  - 27/24 • Feed-dog lifting and lowering devices
  - 27/26 • in machines for sewing leather
- 29/00 Pressers or presser feet for sewing machines** (for feeding D05B 27/04)
  - 29/02 • Presser-control devices
  - 29/04 • Pressers in machines for sewing leather
  - 29/06 • Presser feet
    - 29/08 • • comprising relatively-movable parts
    - 29/10 • • with rollers
  - 29/12 • Presser-foot attachment
- 31/00 Workpiece holders or hold-downs in machines for sewing leather**
  - 31/02 • Welt guides
- 33/00 Devices incorporated in sewing machines for supplying or removing the work**
  - 33/02 • and connected, for synchronous operation, with the work-feeding devices of the sewing machine

35/00	<b>Work-feeding or work-handling elements for sewing machines, not otherwise provided for</b>	55/06	• Needle guides; Needle protectors (finger-protecting devices D05B 83/00)
35/02	• for facilitating seaming; Hem-turning elements; Hemmers	55/08	• Driving arrangements for curved needles
35/04	• • with movable tools	55/10	• Needle bars for multiple-needle sewing machines
35/06	• for attaching bands, ribbons, strips, or tapes or for binding	55/12	• • with provision for varying the distance between the needles
35/08	• for ruching, gathering, casing, or filling lace, ribbons, or bindings; Pleating devices; Cuttlers; Gathering feet; Crimpers; Curlers; Rufflers	55/14	• Needle-bar drives
35/10	• Edge guides	55/16	• • with provision for disengaging individual needle bars
35/12	• Indicators for positioning work, e.g. with graduated scales		
37/00	<b>Devices incorporated in sewing machines for slitting, grooving, or cutting</b> (severing sewing-threads D05B 65/00)	57/00	<b>Loop takers, e.g. loopers, for sewing machines</b>
37/02	• Slitting or grooving devices	57/02	• for chain-stitch sewing machines, e.g. oscillating
37/04	• Cutting devices	57/04	• • rotary
37/06	• • with oscillating tools	57/06	• for overedge-stitch sewing machines
37/08	• • with rotatable tools	57/08	• for lock-stitch sewing machines
37/10	• • with heated tools	57/10	• • Shuttles
		57/12	• • • oscillating
		57/14	• • • with rotary hooks
		57/16	• • • with bobbin casings guided in tracks
		57/18	• • • with bobbin casings held by removable caps
		57/20	• • • with bobbin casings held by magnetic forces
		57/22	• • with spool-size bobbin for lower thread
		57/24	• • • with lower-thread packages mounted for controlled sliding movements
		57/26	• Bobbin holders or casings; Bobbin holder or case guards; Bobbin discharge devices
		57/28	• Applications of bobbins for storing the lower thread
		57/30	• Driving-gear for loop takers
		57/32	• • in chain-stitch sewing machines
		57/34	• • in overedge-stitch sewing machines
		57/36	• • in lock-stitch sewing machines
		57/38	• • • Shuttle drives
		59/00	<b>Applications of bobbin-winding or -changing devices in sewing machines; Indicating or control devices associated therewith</b>
		59/02	• Devices for determining or indicating the length of thread still on the bobbin
		59/04	• Devices for changing the bobbin
		61/00	<b>Loop holders; Loop spreaders for sewing machines; Stitch-forming fingers for sewing machines</b>
		63/00	<b>Devices associated with the loop-taker thread of sewing machines, e.g. for tensioning</b>
		63/02	• Loop-taker thread take-up levers
		63/04	• Loop-taker thread guards
		65/00	<b>Devices for severing the needle or lower thread in sewing machines</b>
		65/02	• controlled by the sewing mechanisms
		65/04	• controlled by the workpieces
		65/06	• and for disposing of the severed thread end
		67/00	<b>Devices incorporated in sewing machines for lubricating, waxing, or colouring the threads</b>
<b><u>Sewing-machine elements for supplying, handling, or treating thread material</u></b>			
43/00	<b>Spool-pin assemblies incorporated in sewing machines</b>		
45/00	<b>Applications of measuring devices for determining the length of threads used in sewing machines</b> (measuring devices in embroidery machines D05C, in general G01B)		
47/00	<b>Needle-thread tensioning devices for sewing machines; Applications of tensometers in sewing machines</b>		
47/02	• Manually-controlled tensioning devices		
47/04	• Automatically-controlled tensioning devices		
47/06	• Applications of tensometers (application of tension indicators in handling thin or filamentary material B65H 59/40; for embroidery machines D05C 11/08; tensometers in general G01L)		
49/00	<b>Take-up devices, e.g. levers, for the needle thread of sewing machines</b>		
49/02	• operated by cams or linkages		
49/04	• rotary		
49/06	• for machines for sewing leather		
51/00	<b>Applications of needle-thread guards in sewing machines; Thread-break detectors for sewing machines</b> (for embroidery machines D05C 11/00)		
53/00	<b>Thread- or cord-laying mechanisms for sewing machines; Thread fingers for sewing machines</b>		
55/00	<b>Needle holders for sewing machines; Needle bars for sewing machines</b> (needles D05B 85/00)		
55/02	• Devices for fastening needles to needle bars		
55/04	• Devices for inserting needles		
		<b><u>Driving-gear, control, lubricating, or cooling devices for sewing machines</u></b>	
		69/00	<b>Driving-gear or control devices for sewing machines</b>
		69/02	• Mechanical drives
		69/04	• • Manual drives
		69/06	• • Pedal drives
		69/08	• Fluid drives, e.g. pneumatic
		69/10	• Electrical or electromagnetic drives

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- 69/12 • • using rotary electric motors
- 69/14 • Devices for changing speed or for reversing direction of rotation
- 69/16 • • mechanical
- 69/18 • • electric
- 69/20 • Control devices responsive to the number of stitches made
- 69/22 • Devices for stopping drive when sewing tools have reached a predetermined position (electric motor control systems in general H02P)
- 69/24 • • Applications of devices for indicating or ascertaining sewing-tool position
- 69/26 • • with automatic means to reduce speed of drive, e.g. in one or more steps
- 69/28 • Applications of servo devices for tool-positioning purposes
- 69/30 • Details (work-feeding drives D05B 27/00; needle-bar drives D05B 55/14; loop-taker drives D05B 57/30)
- 69/32 • • Vibration-minimising devices
- 69/34 • • Hand-wheel clutches
- 69/36 • Devices for stopping drive when abnormal conditions occur, e.g. thread breakage

### 71/00 Lubricating or cooling devices for sewing machines

- 71/02 • Loop-taker lubricating devices
- 71/04 • Needle cooling devices

### Casings, supports, covers, or accessories for sewing machines: Sewing machines combined with auxiliary devices serving purposes other than sewing

#### 73/00 Casings for sewing machines

- 73/02 • Upper casings
- 73/04 • Lower casings
- 73/06 • • for free-arm sewing machines
- 73/08 • • for column-type sewing machines
- 73/10 • • Devices for converting free-arm sewing machines into flat-bed machines
- 73/12 • • Slides; Needle plates

#### 75/00 Frames, stands, tables, or other furniture adapted to carry sewing machines (furniture aspects A47B, A47C)

- 75/02 • for drop-head sewing machines
- 75/04 • with noise-suppressing devices
- 75/06 • Arrangements, e.g. hinges, for mounting sewing-machine casings to frames, stands, or tables

#### 77/00 Covers, or portable enclosures, for sewing machines

#### 79/00 Incorporations or adaptations of lighting equipment for sewing machines

#### 81/00 Sewing machines incorporating devices serving purposes other than sewing, e.g. for blowing air, for grinding

#### 83/00 Guards or like devices for preventing injury to operator of sewing machines (machine safety devices in general F16P)

### Needles; Needle threaders; Seam-ripping devices

#### 85/00 Needles (surgical needles A61B 17/06; manufacture of needles B21G 1/00)

- 85/02 • with slotted eyes
- 85/04 • Spring or bearded needles
- 85/06 • Curved needles
- 85/08 • Flexible needles
- 85/10 • Hollow needles
- 85/12 • Coated needles
- 85/14 • Latch needles

#### 87/00 Needle-threading devices

- 87/02 • with mechanical means for moving thread through needle eye
- 87/04 • with optical devices to assist threading

#### 89/00 Seam-ripping devices

### Hand sewing

#### 91/00 Tools, implements, or accessories for hand sewing (needles, needle threaders D05B 85/00, D05B 87/00; appliances for the tailoring trade A41H)

- 91/02 • Bodkins
- 91/04 • Thimbles; Finger shields; Palm protectors
- 91/06 • Work holders or supports
- 91/08 • • Mushrooms; Darning eggs
- 91/10 • • Hoops or frames (for embroidery D05C)
- 91/12 • Tool receptacles
- 91/14 • Thread-spool pins
- 91/16 • Thread-spool receptacles

#### 93/00 Stitches; Stitch seams for hand sewing

- 93/02 • strengthened by auxiliary elements, e.g. rivets, staples

#### 95/00 Preparatory or finishing operations in connection with hand sewing

- 95/04 • Softening material prior to sewing
- 95/06 • Flattening, pounding, or pressing stitched seams (in shoemaking A43D 8/44)

#### 97/00 Hand sewing processes or apparatus for special work or not otherwise provided for

- 97/02 • Hand-guided apparatus
- 97/04 • for darning
- 97/06 • • using apparatus with latch or bearded needles
- 97/08 • using special threads or wires
- 97/10 • for attaching buttons or fasteners
- 97/12 • for attaching patches or like small pieces of fabric