A43D MACHINES, TOOLS, EQUIPMENT OR METHODS FOR MANUFACTURING OR REPAIRING FOOTWEAR

NOTE

In this subclass, a method of manufacturing footwear which is dependent on a distinct machine or tool, is classified in the group covering the machine or tool for the manufacture.

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.

Measuring devices: Lasts: Tools

1/00 Foot or last measuring devices; Measuring devices for shoe parts
1/02 . Foot-measuring devices (measuring the shape, pattern or size of the body for diagnostic purposes A61B 5/103, e.g. measuring physical dimensions A61B 5/107)
1/022 . [involving making footprints or permanent moulds of the foot]
1/025 . [comprising optical means, e.g. mirrors, photo-electric cells, for measuring or inspecting feet]
1/027 . [Shoe fit indicating devices]
1/04 . Last-measuring devices
1/06 . Measuring devices for the inside measure of shoes, for the height of heels, or for the arrangement of heels
1/08 . Measuring devices for shoe parts

3/00 Lasts
3/02 . Lasts for making or repairing shoes (making of wooden lasts B27M 3/20)
3/021 . [for orthopaedic footwear]
3/022 . [comprising means, e.g. hooks, for holding, fixing or centering shoe parts on the last]
3/023 . [Hinge constructions for articulated lasts]
3/024 . [Lasts with a fore part and heel section relatively slideable to one another along an inclined line of cut]
3/025 . [Longitudinally expansible lasts]
3/026 . [Lasts for making rubber footwear or for vulcanizing rubber soles to footwear]
3/027 . [Lasts with exchangeable parts, e.g. for changing the form or for remodelling]
3/028 . [Tack retaining means for lasts]
3/029 . [Constructional features of the heel section]
3/04 . Pneumatic lasts; Elastic lasts
3/06 . Wedge locks for lasts
3/08 . Devices for stretching special parts of shoes
3/10 . Devices for removing lasts
3/12 . Devices for inserting or reinserting lasts

3/14 . Stretching or spreading lasts; Boot-trees; Fillers; Devices for maintaining the shape of the shoe (drying of footwear A47L 23/20)
3/1408 . [Devices for heating or drying shoes]
3/1416 . [Boot-trees]
3/1425 . [Devices for sole stretching]
3/1433 . [Shoe-trees]
3/1441 . [spreading the width of a shoe, i.e. laterally expandable]
3/145 . . . [adjustable]
3/1458 . . . . . [by a screw]
3/1466 . . . [stretching the length of a shoe, i.e. longitudinally expandable]
3/1475 . . . [adjustable]
3/1483 . . . . . [by a screw]
3/1491 . . . [with means for sweaty feet, e.g. with disinfecting or deodorant means (cleaning of a footwear A47L 23/20)]

5/00 Hand appliances or hand tools for making or repairing shoes, other than those covered by groups A43D 15/00, A43D 19/00, A43D 95/00, A43D 100/00, A43D 117/00

5/005 . [for heel removing]
5/002 . Stands for making footwear (stands for cleaning shoes A47L 23/16)
5/004 . Knives (knives in general B26B)
5/006 . Tools for cutting off the ends of nails or pegs in shoes
5/008 . Awls (making B21G)
5/10 . Shoe-peg rasps (wood rasps B27G 17/06)
5/12 . Hand nailing apparatus for shoemaking (A43D 19/02 takes precedence; nailing apparatus in general B25C, B27F)
5/14 . Hand pincers for stapling

8/00 Machines for cutting, ornamenting, marking or otherwise working up shoe part blanks (pulling-over or lasting A43D 9/00 - A43D 23/00; making or fastening soles, heels or welts A43D 25/00 - A43D 83/00)
Measuring devices; Lasts; Tools  

8/03 . [specially adapted for forming upper blanks or leggings by stretching]  
8/06 . [for forming shoe stiffeners]  
8/02 . Cutting-out (cutting in general B26D, B26F; of leather articles in general C14B 5/00)  
8/04 . . Stamping-out (A43D 8/10 takes precedence)  
8/06 . . Dies therefor  
8/08 . . Combined stamping-out and bonding, e.g. high frequency electric current being applied between cutting edge and work support  
8/10 . . Cutting-out using pattern grading (for trimming A43D 8/38; pattern grading in making clothes A41H 3/00; pattern copying in general B23Q 3/00, B23Q 35/00)  
8/12 . . . Patterns or templates therefor  
8/14 . . . Applying bindings to pattern edges  
8/16 . Ornamentation (by creasing A43D 8/44; of leather in general C14B 1/56)  
8/18 . . by punching or perforating (punching for eyelet-setting A43D 100/02)  
8/20 . . . Dies therefor  
8/22 . . by embossing or printing (printing per se, stamping per se B41)  
8/24 . . Embossing using heat, e.g. high frequency electric current  
8/26 . . Marking for future work (A43D 8/16 takes precedence; printing per se, stamping per se B41)  
8/265 . . . [Marking buttonhole locations]  
8/28 . . Patterns for drawing cut-outs (in making clothes A41H 3/00)  
8/30 . . Charting sheet material for subsequent cutting  
8/32 . . Working on edges or margins (of leather in general C14B 1/02, C14B 1/10)  
8/34 . . by skiving (A43D 8/48 takes precedence)  
8/36 . . by trimming the margins of sole blanks (trimming as an intermediate operation in shoemaking A43D 8/70), as a finishing operation in shoemaking A43D 8/70)  
8/38 . . . by cutting-out, e.g. using templates  
8/40 . . . by folding, turning in or over, hammering  
8/42 . . . by singeing, contracting, dyeing  
8/44 . . Creasing presses (folding on margins A43D 8/40)  
8/46 . . Splitting (of leather in general C14B 1/02)  
8/48 . . combined with skiving  
8/50 . . Combined splitting and trimming of the heel-seat portions of sole blanks (of soles fixed to shoe bottoms A43D 27/04)  
8/52 . . Flexing (of leather in general C14B)  
8/54 . . . by milling  
8/56 . . . of sole blanks by slitting  

Pulling-over or lasting  

9/00 Devices for binding the uppers upon the lasts (for the toe ends A43D 15/00)  
11/00 Machines for preliminary treatment or assembling of upper-parts, counters, or insoles on their lasts preparatory to the pulling-over or lasting operations; Applying or removing protective coverings  
11/003 . . [Applying or removing protective coverings]  
11/006 . . [Devices for temporarily fixing or aligning insoles on lasts]  
11/01 . Machines for applying reinforcement or ornamental straps to the margins of uppers (to soles or insoles A43D 43/06)  
11/02 . . to the margins thereof  
11/03 . . Coating with thermoplastic materials to stiffen the toe or heel portion  
11/04 . Machines for seam-pressing or flattening shoe parts, quarters, or the like (on lasted shoes A43D 55/00)  
11/06 . Machines for temporary buttoning of shoe parts  
11/08 . Machines for temporary lacing of shoe parts or for cutting-away the lacing strips after lasting  
11/085 . . . [Lacing machines]  
11/10 . Devices for holding the lacing portions in position during lasting  
11/12 . Machines for forming the toe part or heel part of shoes, with or without use of heat  
11/14 . Devices for treating shoe parts, e.g. stiffeners, with steam or liquid (for soled shoes A43D 95/12)  
11/145 . . . [with means, e.g. transport chains, for continuously transferring the shoe parts through the machines]  
13/00 Machines for pulling-over the uppers when loosely laid upon the last and tacking the toe end  
13/02 . . Devices for locating caps or stiffeners on pulling-over machines  
15/00 Pulling-over or lasting machines for binding the toe end with cord, string, or wire; Machines for lasting with clamps; Lasting machines with sewing devices, also for platform shoes (special sewing machines for leather or shoes D05B)  
17/00 Pulling-over or lasting machines with oscillating shoe supports  
19/00 Hand lasting; Lasting pincers  
19/02 . . Tackling or nailing devices for use with lasting pincers  
21/00 Lasting machines  
21/003 . . [with lasting strings, stretching straps or the like, for forming the Shank portions of shoes]  
21/006 . . [with rotating lasting means]  
21/02 . . with one single lasting gripper  
21/04 . . for lasting the opposite sides of the shoe one after another  
21/06 . . for wooden soles (A43D 21/16, A43D 21/18 take precedence)  
21/08 . . with last supports and toe- or heel-embracing wipers movable both horizontally and vertically (A43D 21/16 takes precedence)  
21/10 . . Bed-lasting machines  
21/12 . . with lasting clamps, shoe-shaped clamps, [pincers,] wipers, stretching straps or the like for forming the toe or heel parts of the last (A43D 21/16, A43D 21/18 take precedence)  
21/122 . . . [with pincers and clamps]  
21/125 . . . [with a plurality of pincers (A43D 21/122 takes precedence)]  
21/127 . . . [with wipers (A43D 21/16, A43D 21/18 take precedence)]  
21/14 . . for toe or heel parts, with nailing devices  
21/16 . . with lasting pincers {and} toe- or heel-embracing wipers  
21/163 . . [with heel-embracing wipers]
Pulling-over or lasting

Making or fastening soles, heels or welts, or preparing same for fastening to the shoe; Carrying out other operations subsequent to lasting; Turning

23/00 Single parts for pulling-over or lasting machines (nailing devices A43D 75/00)

23/02 . Wipers; Sole-pressers; Last-supports; Pincers
23/022 . {Sole-pressers}
23/025 . {Last-supports}
23/027 . {Pincers}
23/04 . Last-carriers; Shoe-guides
23/06 . Devices for cutting-off superfluous material on the uppers or linings

Making or fastening soles, heels or welts, or preparing same for fastening to the shoe; Carrying out other operations subsequent to lasting; Turning

25/00 Devices for gluing shoe parts
25/047 . Devices for lasting with adhesives or for gluing together insoles and uppers (A43D 25/18, A43D 25/20 take precedence)
25/053 . with rotating gripping means
25/06 . Devices for gluing soles on shoe bottoms (A43D 25/18, A43D 25/20 take precedence)
25/063 . {Multiple pressing devices in a closed circuit, e.g. rotating multiple pressing devices}
25/066 . {Heel clamps or heel presses for gluing heels to shoe bottoms}
25/07 . using flexible diaphragm pressing devices
25/08 . Welt hold-down devices
25/10 . Press-pads or other supports of shoe-gluing presses
25/12 . Devices for gluing heel-breasts to heels or for gluing coverings on heels (A43D 25/18, A43D 25/20 take precedence)
25/123 . {Devices for gluing heel-breasts to heels}
25/126 . {Devices for gluing coverings on heels}
25/14 . Devices for filling the shoe bottom
25/16 . Devices for making glued platform shoes
25/18 . Devices for applying adhesives to shoe parts (A43D 25/20 takes precedence; applying liquids or other fluent materials to surfaces in general B05)
25/181 . {by rollers}
25/183 . {by nozzles}
25/185 . {by imprinter plates}
25/186 . {by dipping}
25/188 . {by grids}
25/20 . Arrangements for activating or for accelerating setting of adhesives, e.g. by using heat

27/00 Machines for trimming as an intermediate operation (working on edges or margins, e.g. by trimming, of shoe part blanks A43D 8/32; trimming as a finishing operation in shoemaking A43D 8/700)

27/02 . Soles or heels fixed on shoe bottoms (stamps or dies for soles or heel-lifts C14B)
27/04 . Heel-end portions of soles fixed on shoe bottoms {on loose soles A43D 8/46}
27/06 . Heel breast flaps

29/00 Machines for making soles from strips of material

31/00 Machines for making or inserting shank stiffeners
31/02 . Machines for making shank stiffeners

31/04 . Machines for inserting shank stiffeners
33/00 Machines for assembling lifts for heels (cutting-out heel lifts A43D 8/02)
33/02 . {Gauges for heel lifts; Magazines for piling up heel lifts}
33/04 . Nailing machines for building the heels from lifts
33/06 . Machines for sorting heel lifts
35/00 Presses for shaping pre-existing loose soles, shoe bottoms or soles fixed to shoe bottoms (gluing soles on shoe bottoms A43D 25/06)
37/00 Machines for roughening soles or other shoe parts preparatory to gluing
37/005 . {characterised by constructional details of the rotative tools used therewith}

43/00 Machines for making stitch lips, or other preparatory treatment of soles or insoles before fixing same (flexing of soles or insoles A43D 8/52)
43/02 . for making stitch lips by cutting
43/06 . for applying reinforcing materials to insoles; Attachment of ornamental tapes or ribs, e.g. sewing ribs, on soles, or the like

44/00 Machines for attaching welts or rands
47/00 Machines for trimming or butting welts fixed on uppers
49/00 Machines for pounding
51/00 Machines for lip-setting
53/00 Machines for trimming-off surplus material along the inseam
55/00 Machines for flattening, pressing, or rubbing the inseams of lasted shoes
57/00 Machines for attaching the welt ends
59/00 Machines for rasping the lasting-margins of shoes which are sewn through
61/00 Machines for nail-pulling, nail-cutting, or nail-detecting
63/00 Machines for carrying-out other finishing operations
67/00 Machines for fastening soles or heels by means of screws or screwed wire

Shoe-nailing machines (nailing machines in general B27E)

69/00 . {using nails being made from alternative materials, e.g. leather}
69/005 . {using nails being made from alternative materials, e.g. leather}
69/02 . using ready-made nails
69/04 . with apparatus for separating the nails from a wire or from a strip of metal or other material
69/06 . using ready-made staples
69/08 . with apparatus for making staples
69/10 . using ready-made wooden pegs
69/12 . with apparatus for separating the pegs from a strip of wood
Performing finishing operations upon uppers, soles, or heels on soled shoes: Making shoe appurtenances

86/00 Machines for assembling soles or heels onto uppers, not provided for in groups A43D 25/00 - A43D 83/00, e.g. by welding

87/00 Edge or heel cutters; Machines for trimming the heel breast (trimming machines for wooden heels B27M; copying machines B44B)

89/00 Sole-levelling machines with rolls

91/00 Stitch-separating or seam-indenting machines

93/00 Edge-indenting machines

95/00 Shoe-finishing machines
95/02 . Machines for treating or smoothing shoe uppers to remove wrinkles, folds, or the like
95/04 . Machines for laying channel-flaps
95/06 . Machines for colouring or chemical treatment; Ornamenting the sole bottoms (burnishing A43D 95/20)
95/08 . Machines or tools for scouring, abrading, or finishing, with or without dust-separating (suction cleaners for removing dust A47L 5/00; domestic cleaning of footwear A47L 23/00)
95/10 . Drying or heating devices for shoes
95/12 . Devices for conditioning, tempering, or moistening (preparatory to pulling-over or lasting A43D 11/14)
95/125 . . [with means, e.g. transport chains, for continuously transferring shoes through the devices]
95/14 . incorporating marking, printing, or embossing apparatus (ornamentation of shoe part blanks A43D 8/16; printing per se, stamping per se B41)
95/16 . Burnishing tools for shoemaking (in general B24D)
95/18 . . Devices for heating the burnishing tools for shoemaking
95/20 . Machines for burnishing soles or heels
95/22 . Machines for burnishing the edges of soles, with or without devices for edge-indenting
95/24 . Machines for buffing soles
95/26 . Devices for applying wax
95/28 . Machines for attaching protectors to soles or heels

97/00 Machines for making pulling-on pieces
98/00 Machines for making laces (of leather C14B; braiding in general D04C); Applying fibre or celluloid to ends of laces (making tags from metal sheet B21D; from wire B21F)

100/00 Setting or removing eyelets, buttons, lacing-hooks, or elastic gussets in shoes
100/02 . Punching and eyelet-setting machines or tools (for garments in general A41H 37/02)
100/04 . . inserting invisible eyelets
100/06 . . inserting two eyelets simultaneously
100/08 . Setting buttons on footwear (for garments A41H 37/00)
100/10 . Machines or tools for setting lacing-hooks in shoes
100/12 . Machines for inserting elastic gussets in shoes
100/14 . Devices for removing buttons, lacing-hooks, or the like from shoes

Miscellaneous mechanisms for shoemaking

111/00 Shoe machines with conveyors for jacked shoes {or for shoes or shoe parts}
111/003 . [with clamping or gripping mechanism]
111/006 . [with special means to place the shoe or shoe part in the following machine]
113/00 Machines for making shoes with out-turned flanges of the uppers or for making moccasins
115/00 Machines for skiving or removing heel-lifts, heels, or soles, or for removing stitches, preparatory to repair
117/00 Racks for receiving or transporting shoes or shoe parts; Other conveying means
119/00 Driving or controlling mechanisms of shoe machines

220/00 Machines or methods characterised by special features
220/10 . Fully automated machines, i.e. machines working without human intervention
220/20 . Machines including a carousel with different working posts around a turning table
220/30 . Machines including a magazine, e.g. for feeding blanks, pre-forms or sheets
220/40 . Multitool machines, e.g. machines with a plurality of tools or working heads
220/50 . Machines using pneumatic means
220/60 . Computer aided manufacture of footwear, e.g. CAD or CAM

Subject matter not provided for in other groups of this subclass

999/00