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, photoelectric 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)
5/02 Stands for making footwear (stands for cleaning shoes A47L 23/16)
5/04 Knives (knives in general B26B)
5/06 Tools for cutting off the ends of nails or pegs in shoes
5/08 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)
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 45/06)

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)

11/05  Machines for temporary buttoning of shoe parts

11/07  Machines for temporary lacing of shoe parts or for cutting-away the lacing strips after lasting

11/085  [Lacing machines]

11/09  Devices for holding the lacing portions in position during lasting

11/10  Machines for forming the toe part or heel part of shoes, with or without use of heat

11/11  Devices for treating shoe parts, e.g. stiffeners, with steam or liquid (for soled shoes A43D 95/12)

11/145  [with means, e.g. 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  Tacking 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]
Making or fastening soles, heels or welts, or preparing same for fastening to the shoe; Carrying out other operations subsequent to lasting; Turning (sewing D05B)

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 glueing 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 (glueing 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}
39/00 Machines for making foot-supporting pads or instep-raisers for flat feet
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
69/00 Shoe-nailing machines (nailing machines in general B27F)
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

87/00 Edge or heel cutters; Machines for trimming the heel breast (trimming machines for wooden heels B27M; copying machines B44B)
89/00 Sole-leveling 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 burning soles or heels
95/22 Machines for burning 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

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

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; Frames for shoe machines

Machines for making pulling-on pieces

97/00 Machines for making laces (of leather C14B; braiding in general D84C); Applying fibre or celluloid to ends of laces (making tags from metal sheet B21D; from wire B21F)

98/00 Machines for making pulling-on pieces

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