CLASS 12, BOOT AND SHOE MAKING

SECTION I - CLASS DEFINITION

This class is the generic locus for the manufacture and repair of foot coverings, and parts thereof.

This class is the generic locus of apparatus, processes of and tools used in the making, assembling and repairing of shoe parts, such as heels, soles, etc.

This class includes machines, hand manipulable tools and processes directed to the inserting of fillers, either of bulk material or shaped members on soles. (See Subclass References to this Class, below)

This class includes apparatus for and methods of buttoning or unbuttoning, and lacing or unlacing shoe uppers. (See Subclass References to this Class, below)

SECTION II - LINES WITH OTHER CLASSES AND WITHIN THIS CLASS

The generic locus for foot coverings is Class 36, Boots, Shoes, and Leggings, and in that class (36) will be found the articles produced by the machines and processes of Class 12. (Also see References to Other Classes below.)

SECTION III - SUBCLASS REFERENCES TO THE CURRENT CLASS

SEE OR SEARCH THIS CLASS, SUBCLASS:

18.1+, for machines, hand manipulable tools and processes directed to the inserting of fillers, either of bulk material or shaped members on soles.

58.3, 58.5, 142, for apparatus for and methods of buttoning or unbuttoning, and lacing or unlacing shoe uppers.

SECTION IV - REFERENCES TO OTHER CLASSES

SEE OR SEARCH CLASS:

2, Apparel, appropriate subclasses for devices such as socks and stockings.

15, Brushing, Scrubbing, and General Cleaning, appropriate subclasses for machines and hand manipulable tools for polishing boots and shoes.

29, Metal Working, subclasses 432+ for a residual method of assembling parts including a step of piercing one by the other.

30, Cutlery, appropriate subclasses for hand manipulated tools having a pure cutting function, adapted for use in the manufacture of shoes but capable of more general use, particularly subclass 281, 287 and 288 where a large number of hand manipulated channeling tools may be found.

33, Geometrical Instruments, subclasses 3+ for apparatus for and processes of laying out footwear.

34, Drying and Gas or Vapor Contact With Solids, for apparatus for and processes of drying shoes and parts thereof. However, mere heated shoe forms, which may be used for drying, are found in this class (12), subclass 129.4.

36, Boots, Shoes, and Leggings, for boots and shoes, and Lines With Other Classes, above.

69, Leather Manufactures, subclasses 9+ for machines for beveling unattached shoe parts such as soles, except where the operation of the machine is predeterminately controlled for the entire beveling operation which are classified in appropriate subclasses in this class (12).

72, Metal Deforming, subclasses 324+ for a method of or means for cutting and shaping a metal shank stiffener.

73, Measuring and Testing, appropriate subclasses for apparatus for testing, for example, the abrasion resistance of shoe parts.

83, Cutting, appropriate subclasses; and see especially subclasses 531+ for clicker die press structures.

112, Sewing, subclasses 28+ for leather sewing machines including those for use in the manufacture of shoes.

118, Coating Apparatus, appropriate subclasses for apparatus for applying and generally including devices for inking the edges of soles and applying cement to shoes and shoe parts. However, machines for applying water to leather parts of shoes to temporarily make them flexible are in this class (12), appropriate subclasses.

142, Wood Turning, appropriate subclasses for machines for contouring lasts.

144, Woodworking, for a machine for forming a wooden heel from a wood block. However, in this class 12 will be found a machine for breasting a heel including a wood heel, a machine for concaving a heel seat including a wood heel, and a machine for grooving, for example, the breast of the heel to receive a heel

covering member even though it be a wood heel. Class 144 does not include a process of making a wooden last, last blank or wooden heel or heel blank, such process being classified in this Class 12.

156, Adhesive Bonding and Miscellaneous Chemical Manufacture, for processes and apparatus for forming laminated articles including shoe parts or elements. That class (156) does not provide, however, for laminating when combined with any operation given final shape or form to the shoe.

164, Metal Founding, appropriate subclasses for apparatus for and processes of casting metal shoe parts such as heels.

193, Conveyors, Chutes, Skids, Guides, and Ways, for conveyors generally including those for use in shoemaking operations.

198, Conveyors: Power-Driven, appropriate subclasses for conveyor with work holder, particularly subclasses 803.01+.

211, Supports: Racks, appropriate subclasses for devices for merely holding shoes or shoe forms during manufacture and repair of shoes.

223, Apparel Apparatus, appropriate subclasses for shoe horns and boot removing devices, known as “boot jacks”.

227, Elongated-Member-Driving Apparatus, appropriate subclasses for apparatus of general utility for applying a member (e.g., staple, nail, etc.) to shoe parts.

264, Plastic and Nonmetallic Article Shaping or Treating: Processes, appropriate subclasses for processes of molding plastic articles including shoe parts, see particularly subclass 244, uniting shoe part to upper. However, the mere nominal recitation in a process claim that the parts are connected by a plastic uniting step (e.g., vulcanization) will not exclude the patent from this class (12).

361, Electricity: Electrical Systems and Devices, subclasses 223+ for footwear combined with means to conduct electricity from or bypass it around the body.

408, Cutting by Use of Rotating Axially Moving Tool, appropriate subclasses for apparatus designed to form holes in shoe parts by drills.

425, Plastic Article or Earthenware Shaping or Treating: Apparatus, subclass 119 for apparatus to make a composite article including a shoe last-type support, subclass 124 for composite article making including means to support washer-type preforms in a show heel mold and subclasses 383+ for apparatus comprising a preform reshaping or resizing means or a preform support. Class 425 provides for means to mold a shoe heel or sole, per se, or as a composite into a disclosed diverse shoe part. Class 12, subclasses 128+, provides for a shoe form either of the last type or a reshaping or resizing mandrel.

427, Coating Processes, appropriate subclasses for processes of coating generally, including coating leather.

451, Abrading, for a process or apparatus for treating boots, shoes, or parts thereof with a natural abrasive such as sand paper or emery cloth.

520, Synthetic Resins or Natural Rubbers, appropriate subclasses, particularly Class 523, subclass 167 for a composition containing a synthetic resin or natural rubber having utility in the manufacturing or repairing of shoes or to processes of preparing said composition.

607, Surgery: Light, Thermal, and Electrical Application, subclass 144 for footwear combined with means for applying to the body any one or combination of light or analogous rays, electricity, or thermo treatments which are limited by structure to therapeutic use.

SECTION V - GLOSSARY

ASSEMBLED SHOE

includes within its scope the upper and sole when they are secured together. In shoe making, the upper including various parts thereof, such as the vamp, toe tip, quarters, linings, etc., are assembled and secured. The thus assembled upper is generally conformed to shoe shape by a lasting operation and attached to a sole. When the upper and sole are attached the product is known as a shoe in the trade. It will be noted that this term includes within its scope, (1) partially completed shoes, (2) shoes having outsoles and heels which are ready for wear, and (3) shoes being worn by their wearers.

SUBCLASSES

1 Boot and shoe apparatus which do not fall in the more specific subclasses of this class.

(1) Note. This subclass includes devices for assembling rubber shoes including those which merely wrap a tacky rubber member around a last.

SEE OR SEARCH CLASS:

34, Drying and Gas or Vapor Contact With Solids, particularly subclass 202 .

4.1 This subclass is indented under the class definition. Machines provided with means for performing an upper treating operation on the upper of a shoe and with means to perform a sole treating operation, other than the attachment of a sole to another shoe part, on the sole of a shoe.

(1) Note. The mere attachment of the sole, mentioned in the above definition, may be accomplished by any convenient means, as by sewing, nailing or cementing.

SEE OR SEARCH THIS CLASS, SUBCLASS:

7+, for lasting machines including means for conforming an upper to a foot shaped form and for attaching the upper to a sole mounted on the form.

33+, for machines for cementing a sole to an upper.

SEE OR SEARCH CLASS:

112, Sewing, subclasses 28+ for means for sewing soles to uppers.

227, Elongated-Member-Driving Apparatus, appropriate subclasses, for apparatus for applying a member, e.g., nail to a shoe part.

4.2 This subclass is indented under subclass 4.1. Machines provided with means for stretching an upper over a last and securing the upper to an insole on the last combined with means for (1) placing an outsole on the insole to which the upper is lasted, or (2) placing, with or without securing, such outsole on such insole and applying forces to conform (level) it to shape, or (3) applying forces on such outsole after its securement to the insole to conform (level) it to shape.

SEE OR SEARCH THIS CLASS, SUBCLASS:

7+, for machines for lasting uppers.

33+, for laying and/or leveling machines, particularly subclass 33.1 for laying and/or leveling machines provided with fastener inserting means for connecting the laid or positioned sole to the shoe.

4.3 This subclass is indented under subclass 4.1. Machines provided with means for severing the upper and a portion of a sole of a shoe near the seam which connects the upper to the sole.

SEE OR SEARCH THIS CLASS, SUBCLASS:

7.1+, for lasting machines provided with means for trimming and/or incising the upper.

4.4 This subclass is indented under subclass 4.3. Machines which are additionally provided with means to hammer the welt into a planar condition so that it may be more easily attached to an outer sole.

4.5 This subclass is indented under subclass 4.3. Machines in which the severing means is a knife mounted in a work supporting member which is inserted in the shoe.

4.6 This subclass is indented under subclass 4.1. Machines for evaginating an assembled shoe.

(1) Note. In turning the shoe both the sole and upper are flexed during the operation of turning the shoe inside out.

7 This subclass is indented under the class definition. Machines provided with means for operating on a shoe upper mounted on a foot-shaped form to shape the upper to said form and having means, (1) acting on the sole attaching edge of the upper to conform that edge to the sole supporting surface of the form so that a sole may be attached to such conformed edge while the upper is mounted on the form, or (2) acting on the sole attaching edge to conform it to a sole supported on the form, or (3) acting on the sole attaching edge to conform it to a sole supported on the form and securing the sole and upper together.

(1) Note. The term “end lasting” as employed in the titles of subclasses indented hereunder is limited to such lasting of the upper as does not extend rearward of the tip and forwardly of the

breast lines respectively. A machine provided with means to last more than those portions, e.g., the heel portion and the shank, will not be included under the subclasses entitled "end lasting only". End lasting machines not specifically provided for in the end lasting subclasses will be found in this subclass. For subclasses specifically directed to end lasting only, see the SEARCH THIS CLASS, SUBCLASS notes below.

SEE OR SEARCH THIS CLASS, SUBCLASS:

1+, for machines for assembling rubber uppers with soles which are provided with means for merely wrapping a tacky rubber upper around the form without applying pulling stress thereto to conform it to the form.

4.1+, for machines for lasting shoes provided with means to perform a separate sole operation.

7.4, for machines for end lasting a prewelted upper (specifically directed to end lasting only).

7.8, for machines for end lasting an upper so that an out-turned flange is formed for engagement with the sole (specifically directed to end lasting only.

8.7, for machines for end lasting an upper provided with fastener inserting means for attaching the last upper to the sole and having a nipper which also acts as a wiper (specifically directed to end lasting only.

8.8, for machines for end lasting an upper provided with a nipper which also acts as a wiper (specifically directed to end lasting only).

10.5, for machines for end lasting an upper provided with plural nippers and having a wiper or wipers acting in conjunction with said nippers in the lasting operation (specifically directed to end lasting only).

10.8, for machines for end lasting an upper provided with a single nipper and having a wiper or wipers acting in conjunction with said nipper in the lasting operation (specifically directed to end lasting only).

11.3, for machines for end lasting an upper provided with a nipper which has no wiping function (specifically directed to end lasting only).

12.2, for machines for end lasting the toe portion of an upper and having wiping means for forcing the upper into lasted position and fastener inserting means for securing the upper thus lasted (specifically directed to end lasting only).

12.3, for machines for end lasting the heel portion of an upper and having wiping means for forcing the upper into lasted position and fastener inserting means for securing the upper thus lasted (specifically directed to end lasting only).

12.4, for machines for end lasting the toe portion of an upper and provided with wiping means for forcing the upper into lasted position (specifically directed to end lasting only).

12.5, for machines for end lasting the heel portion of an upper and provided with wiping means for forcing the upper into lasted position (specifically directed to end lasting only).

53.1+, for machines shaping shoe uppers after their attachment to soles.

54.1+, for machines for operating on loose uppers to prepare them for lasting, particularly subclass 54.1 through 54.3 for machines for preshaping the upper to the shape of the last.

107+, for hand manipulable lasting tools.

128+, for forms on which the shoes areassembled.

145, for methods of lasting.

7.1 This subclass is indented under subclass 7. Machines which are provided with means to incise or sever the upper being lasted.

SEE OR SEARCH THIS CLASS, SUBCLASS:

55.1, for upper edge folding machines provided with slitting or notching means.

57.5+, for machines for trimming uppers, particularly subclass 57.6 for those which trim the sole attaching edge and remove the excess upper material before or after the lasting operation.

7.2 This subclass is indented under subclass 7.1. Machines in which the cutting means is constructed to form incisions in the edge of the upper in the form of slits or notches.

7.3 This subclass is indented under subclass 7. Machines for lasting an upper having a welt previously attached thereto.

7.4 This subclass is indented under subclass 7.3. Machines which last only an end of the upper as defined in (1) Note to subclass 7.

7.5 This subclass is indented under subclass 7. Machines for lasting an upper so that the edge thereof is flanged outwardly for attachment to the marginal portion of a sole.

7.6 This subclass is indented under subclass 7.5. Machines having devices for attaching the out-turned upper flange to the sole by driven fasteners.

SEE OR SEARCH THIS CLASS, SUBCLASS:

13.1, and see the Notes thereto, for other lasting machines having fastener inserting means for attaching the upper in lasted position.

7.7 This subclass is indented under subclass 7.5. Machines having devices which attach the sole to the out-turned upper flange by means of a thread inserted by a needle.

SEE OR SEARCH THIS CLASS, SUBCLASS:

13.2, and see the Notes thereto, for other lasting machines having sewing devices.

7.8 This subclass is indented under subclass 7.5. Machines which last only an end of the upper as defined in (1) Note to subclass 7.

7.9 This subclass is indented under subclass 7. Machines which have means for tightening a metal strand or strap, applied to the edge of the upper along at least the sides thereof and around one end portion, to draw the upper in conformity with the last.

(1) Note. For other lasting machines employing flexible means for conforming the upper to the last, see the SEARCH THIS CLASS, SUBCLASS note below.

SEE OR SEARCH THIS CLASS, SUBCLASS:

8.1+, for other lasting machines employing flexible means for conforming the upper to the last

14.4, for end bands employed as upper clamps.

8.1 This subclass is indented under subclass 7. Machines which conform the upper to the last by flaccid means engaging the upper.

(1) Note. This and the indented subclass include all machines having girth stretchers and other flexible means for conforming the upper to the last other than those of the draw wire type which are to be found in subclass 7.9.

SEE OR SEARCH THIS CLASS, SUBCLASS:

7.9, and see (1) Note above.

8.2 This subclass is indented under subclass 8.1. Machines which in addition to having flexible conforming means are provided with wiper folders (as defined in subclass 12) which rub or carry the upper into lasted position.

SEE OR SEARCH THIS CLASS, SUBCLASS:

12+, and see Notes to subclass 12 for other lasting employing wipers.

8.3 This subclass is indented under subclass 7. Machines provided with driven rotating means for (1) grasping and pulling the upper into lasted position or (2) rubbing or carrying the upper by frictional contact in conformity with the last.

SEE OR SEARCH THIS CLASS, SUBCLASS:

9+, and see Notes to subclass 9 for other lasting machines employing nippers.

12+, and see Notes to subclass 12 for other lasting machines employing wipers.

8.4 This subclass is indented under subclass 7. Machines provided with a wiper having at least one pointed member which catches the upper and forces the upper into conformity with the last.

SEE OR SEARCH THIS CLASS, SUBCLASS:

12+, and see Notes to subclass 12 for other lasting machines employing wipers.

8.5 This subclass is indented under subclass 7. Machines provided with means for grasping the upper and forcing it over the last and in which one of the grasping means also acts as a wiper folder (as defined in subclass 12) and rubs the upper into shape by frictional contact.

SEE OR SEARCH THIS CLASS, SUBCLASS:

9+, and see the Notes to subclass 9 for lasting machines employing nippers.

12+, and see the Notes to subclass 12 for lasting machines employing wipers.

8.6 This subclass is indented under subclass 8.5. Machines having devices which attach the lasted upper to the sole by driven fasteners.

SEE OR SEARCH THIS CLASS, SUBCLASS:

13.1, and see the Notes thereto, for other lasting machines having fastener inserting means for attaching the upper in lasted position.

8.7 This subclass is indented under subclass 8.6. Machine which last only an end of the upper as defined in (1) Note to subclass 7.

8.71 This subclass is indented under subclass 8.7. Machines provided with means for applying retaining means in the form of a metal strand or band about the wiped-over toe portion to hold it in shape.

8.8 This subclass is indented under subclass 8.5. Machines which last only an end of the upper as defined in (1) Note to subclass 7.

8.81 This subclass is indented under subclass 8.8. Machines provided with means for applying retaining means in the form of a metal strand or band about the wiped-over toe portion to hold it in shape.

9 This subclass is indented under subclass 7. Machines in which grasping means engage the upper and pull it into conformity with the last.

SEE OR SEARCH THIS CLASS, SUBCLASS:

8.3, for lasting machines employing driven rotating means for grasping the upper and pulling it into conformity with the last.

8.5+, for lasting machines employing a nipper and in which the nipper also acts as a wiper.

14.5, for nipper for lasting machines.

9.1 This subclass is indented under subclass 9. Machines provided with devices for securing the upper to the sole by means of a thread inserted by a needle.

SEE OR SEARCH THIS CLASS, SUBCLASS:

13.2, and see the Notes thereto, for other lasting machines joining the upper to the sole by sewing.

10 This subclass is indented under subclass 9. Machines provided with wiper folders (as defined in subclass 12) which rub or carry the upper into lasted position by frictional contact.

SEE OR SEARCH THIS CLASS, SUBCLASS:

12+, and see the Notes to subclass 12 for other lasting machines employing wipers.

10.1 This subclass is indented under subclass 10. Machines which are provided with a plurality of nippers which grasp the upper and pull it into conformity with the last.

10.2 This subclass is indented under subclass 10.1. Machines having devices which attach the upper to the sole by driven fasteners.

SEE OR SEARCH THIS CLASS, SUBCLASS:

13.1, and see the Notes thereto, for other lasting machines having fastener

inserting means for attaching the upper in lasted position.

10.21 This subclass is indented under subclass 10.2. Machines provided with means for applying retaining means in the form of a wire or band about the wiped-over toe portion to hold it in shape.

10.3 This subclass is indented under subclass 10.2. Machines provided with means to move the last relative to the fastener driving devices during the operation of attaching the upper to the sole.

10.4 This subclass is indented under subclass 10.2. Machines having downwardly moving nippers which are actuated to pull the upper on the last.

10.5 This subclass is indented under subclass 10.1. Machines which last only an end of the upper as defined in (1) Note to subclass 7.

10.6 This subclass is indented under subclass 10. Machines in which the grasping means comprises a single nipper and in which means are provided for driving fasteners for securing the upper to the sole.

SEE OR SEARCH THIS CLASS, SUBCLASS:

13.1, and see the Notes thereto for other lasting machines having fastener inserting means for attaching the upper in lasted position.

10.7 This subclass is indented under subclass 10.6. Machines which have a horizontal cam shaft and a rod which is caused, by a cam on such shaft, to reciprocate parallel to the cam shaft and which moves the nipper outwardly to effect the overdraw.

10.71 This subclass is indented under subclass 10.7. Machines provided with means for applying retaining means in the form of a metal strand or band about the wiped-over toe portion to hold it in shape.

10.8 This subclass is indented under subclass 10. Means having a single nipper and which last only an end of the upper as defined in (1) Note to subclass 7.

11.2 This subclass is indented under subclass 9. Machines having devices for attaching the lasted upper to the sole by driven fasteners.

SEE OR SEARCH THIS CLASS, SUBCLASS:

13.1, and see the Notes thereto for other lasting machines having fastener inserting means for attaching the upper in lasted postion.

11.3 This subclass is indented under subclass 9. Machines having a nipper and which last only an end of the upper as defined in (1) Note to subclass 7.

12 This subclass is indented under subclass 7. Machines in which the upper is forced into conformity with the last by sliding members frictionally engaging the upper to cause the sole attaching edge thereof to be forced into conformity with the upper surface of a last or a sole thereon.

SEE OR SEARCH THIS CLASS, SUBCLASS:

8.2, for lasting machines employing a wiper folder in conjunction with flexible means for conforming the upper to the last.

8.3, for lasting machines employing a driven rotating means for rubbing the upper by frictional contact into conformity with the last.

8.4, for lasting machines employing a pronged wiper for forcing the upper into conformity with the last.

8.5+, for lasting machines employing a grasping means which also acts as a wiper to conform the upper to the last.

10+, for lasting machines employing nippers and wipers in conjunction for conforming the upper to the last.

12.1 This subclass is indented under subclass 12. Machines having devices for attaching the lasted upper to the sole by driven fasteners.

SEE OR SEARCH THIS CLASS, SUBCLASS:

13.1, and see the Notes thereto for other lasting machines having fastener

inserting means for attaching the upper in lasted postion.

12.2 This subclass is indented under subclass 12.1. Machines which last the toe end only of the upper as defined in (1) Note to subclass 7.

12.21 This subclass is indented under subclass 12.2. Machines provided with means for applying retaining means in the form of a metal strand or band about the wiped-over toe portion to hold it in shape.

12.3 This subclass is indented under subclass 12.1. Machines which last the heel end only of the upper as defined in (1) Note to subclass 7.

12.4 This subclass is indented under subclass 12. Machines which last the toe end only of the upper as defined in (1) Note to subclass 7.

SEE OR SEARCH THIS CLASS, SUBCLASS:

12.2+, for lasting machines which wipe the toe end of the upper into lasted postion and fasten it by driven fasteners.

12.41 This subclass is indented under subclass 12.4. Machines provided with means for applying retaining means in the form of a metal strand or band about the wiped-over toe portion to hold it in shape.

12.5 This subclass is indented under subclass 12. Machines which last the heel end only of the upper as defined in (1) Note to subclass 7.

SEE OR SEARCH THIS CLASS, SUBCLASS:

12.3, for lasting machines which wipe the heel end of the upper into lasted position and fasten it by driven fasteners.

13.1 This subclass is indented under subclass 7. Machines having devices which attach the upper to the sole by driven fasteners.

SEE OR SEARCH THIS CLASS, SUBCLASS:

7.6, for lasting machines for flanging the upper outwardly and attaching the outturned flange by driven fasteners.

8.6+, for lasting machines having a nipper wiper and fastener inserting means.

10.2+, for lasting machines employing multiple nipper stretchers in conjunction with a wiper folder and fastener inserting means.

10.6+, for lasting machines employing a single nipper stretcher in conjunction with a wiper folder and fastener inserting means.

11.2, for lasting machines employing a single nipper stretcher and fastener inserting means.

12.1+, for lasting machines employing a wiper folder and fastener inserting means

SEE OR SEARCH CLASS:

227, Elongated-Member-Driving Apparatus, appropriate subclasses for apparatus of general utility for driving a member, e.g., nail, into a shoe part.

13.2 This subclass is indented under subclass 7. Machines provided with devices for securing the upper to the sole by means of a thread inserted by a needle.

SEE OR SEARCH THIS CLASS, SUBCLASS:

7.7, for machines for lasting an upper so that the edge thereof is flanged outwardly and attaching this flange to a sole by means of a thread inserted by a needle.

9.1, for nipper stretcher lasting machines with devices for sewing the upper to the sole.

SEE OR SEARCH CLASS:

112, Sewing, subclasses 28+ for leather sewing machines including ancillary operations.

14.2 This subclass is indented under subclass 7. Devices forming part of lasting apparatus for engaging the sole to hold it in position on the last during the lasting operation.

14.3 This subclass is indented under subclass 7. Devices forming part of lasting apparatus for clamping the upper against the last to hold it in position while being lasted.

14.4 This subclass is indented under subclass 14.3. Upper clamps in which the clamp is in the form of a band engaging only an end portion of the upper.

SEE OR SEARCH THIS CLASS, SUBCLASS:

7.9, for lasting apparatus in which a wire or strap applied to the edges of the upper along at least the sides thereof and extending partially around the sole portion of the last is tightened to draw the upper into conformity with the last.

14.5 This subclass is indented under subclass 7. Nippers for use in lasting apparatus for grasping the upper.

SEE OR SEARCH THIS CLASS, SUBCLASS:

8.5+, for nippers having a surface employed as a wiper.

9+, and see the notes thereto for lasting machines employing the devices of this subclass.

15 This subclass is indented under the class definition. Machines for forcing lasts into completed or partially completed boots or shoes.

15.1 This subclass is indented under the class definition. Machines for separating lasts from completed or partially completed boots or shoes.

16 This subclass is indented under the class definition. Machines for removing the lasting fasteners used for temporarily securing the upper to the sole or the sole to the last.

SEE OR SEARCH CLASS:

112, Sewing, subclass 30 for shoe sewing machines including means to pull out lasting tacks from a lasted shoe.

227, Elongated-Member-Driving Apparatus, subclass 63 for combined apparatus for applying and withdrawing a member, e.g., nail.

254, Implements or Apparatus for Applying Pushing or Pulling Force, subclasses 18+ for implements of the nail extractor type.

16.1 This subclass is indented under the class definition. Machines employed in providing the breast of a heel with a covering forming a portion of the tread sole of the shoe.

(1) Note. The machines included have means for preparing the flap, attaching it to the heel breast and trimming the flap to the outline of the heel either in combination with other shoe making operations or as single or plural operations.

(2) Note. Methods of like scope are classified in this class, subclasses 142+.

SEE OR SEARCH THIS CLASS, SUBCLASS:

49.1, for heel covering generally.

142+, see (2) Note above.

SEE OR SEARCH CLASS:

451, Abrading, for finishing or shaping, generally, by abrading.

16.2 This subclass is indented under subclass 16.1. Machines , (1) provided with means for performing other shoe making operations, or (2) performing a plurality of operations in providing the heel breast with a covering flap.

(2) Note. Cross-reference is made to the single operation subclasses coordinate herewith where appropriate.

(1) Note. This subclass includes, for example, splitting the sole and applying cement to the flap, molding the flap and cutting the sole to provide a heel seat.

16.3 This subclass is indented under subclass 16.2. Machines provided with means for laying the flap on the heel breast and for applying pressure to the bottom (tread) surface of the heel to press the heel on the heel seat of the shoe.

(1) Note. The heel clamping pressure may be employed in the adhesive attaching of the heel to the heel seat or in the holding of the heel for the application of a fastener to secure the heel to the shoe.

SEE OR SEARCH THIS CLASS, SUBCLASS:
125, for heel clamping work supports, per se.

16.4 This subclass is indented under subclass 16.1. Machines for pressing cemented flaps against the heel breast.

(1) Note. Cross-reference is made to the shoe sole laying and leveling machine structural subclasses of this class, subclasses 33+ where appropriate.

SEE OR SEARCH THIS CLASS, SUBCLASS:
16.3, for the operation of this class combined with pressing the heel on the heel seat.
33+, see (1) Note above.
42+, for heel attaching in general.
49.1, for the cementing of covers to heels in general.
103+, for tools for pressing cemented sole flaps against the heel breast.

16.5 This subclass is indented under subclass 16.1. Machines for cutting a sole edgewise from the heel for a part of the length of the sole to form a flap portion of nonuniform thickness.

(1) Note. Machines for splitting in like manner but to uniform thickness are to be found in Class 69, Leather Manufactures, subclasses 9+. The machines here (Class 12, subclass 16.5) classified include structure for producing a varying thickness of flap.

(2) Note. The operation of this subclass is usually performed on the sole prior to the attachment of the sole to the shoe.

(3) Note. Cross-reference is made to the skiving and splitting machine structural subclasses of Class 69, Leather Manufactures, subclasses 9+ where appropriate.

SEE OR SEARCH THIS CLASS, SUBCLASS:
17+, for general sole splitting to form layers of nonuniform thickness.

SEE OR SEARCH CLASS:
69, Leather Manufactures, see (1) Note and (2) Note above.

16.6 This subclass is indented under subclass 16.1. Machines for cutting off the marginal portion of the sole attached flap to bring the flap to the profile of the edge of the breast surface.

(1) Note. The cutting included is performed subsequent to the formation of the flap by splitting the sole.

(2) Note. Machines for die cutting the flap portion of the sole to heel breast outline after the sole is attached to the shoe but before the flap is attached to the breast of the heel are here included where such machines have means for supporting and positioning the shoe relative to the cutting dies. Cutting dies and die cutting machines, per se, though employed to trim the heel breast flap portion of a sole are classified in Class 83, Cutting.

SEE OR SEARCH THIS CLASS, SUBCLASS:
85+, for sole edge trimmers generally and see the notes thereto for other trimming by cutting.

SEE OR SEARCH CLASS:
83, Cutting, and see (2) Note above.

16.7 This subclass is indented under subclass 16.6. Machines which are provided with means to contact the heel and limit the motion of the cutter relative thereto.

(1) Note. The flap trimming of this subclass is usually performed after the flap is attached to the heel.

(2) Note. Cross-references are made from this subclass to the sole and heel edge trimmer structural subclasses of this class, subclasses 85+ where appropriate.

SEE OR SEARCH THIS CLASS, SUBCLASS:
85+, see (2) Note above.

17 This subclass is indented under the class definition. Machines for operating on those members which form the plantar support for the foot of the wearer, either loose, or attached to other shoe parts.

(1) Note. The line between this subclass and Class 112, Sewing, is as follows: This subclass includes sewing operations broadly or nominally recited combined with a bodily moved work support as defined in Class 12 (this class), subclass 17.2, whereas Class 112, subclasses 29 to 40, take sewing machines generally for fastening sole parts together or soles to other shoe parts.

SEE OR SEARCH THIS CLASS, SUBCLASS:

16.1+, for machines employed in providing a heel breast with a covering forming a portion of the sole of the shoe.

70+, for sole burnishing machines.

79.5, for sole wax polishing machines.

85+, for sole edge trimming machines.

SEE OR SEARCH CLASS:

112, Sewing, subclasses 29 through 40 for shoe sole sewing machines generally and see this class (12), subclasses 17+, (2) Note, for the line.

227, Elongated-Member-Driving Apparatus, appropriate subclasses for machines for merely nailing sole parts together and/or for nailing soles to other shoe parts.

17.2 This subclass is indented under subclass 17. Machines in which peripheral operations are performed on the soles of shoes, and the supports for the shoes being operated upon are bodily translatable and are automatically controlled to present the shoes for the particular operations being performed.

(1) Note. In this subclass are found machines in which the shoe is supported on “an iron man”. The support for the shoe is thus termed because its movements are so controlled automatically that the operation performed by the machine is designed to be independent of the skill of the operator.

SEE OR SEARCH CLASS:

112, Sewing, subclasses 29 through 40 for shoe sole sewing machines generally and see this class (12), subclasses 17+, (2) Note, for the line.

18.1 This subclass is indented under subclass 17. Machines for assembling sole members to form a composite sole structure or such members with other shoe parts.

SEE OR SEARCH THIS CLASS, SUBCLASS:

7+, for machines for conforming an upper to a foot shaped form and attaching the upper to a sole placed on the form.

33+, for machines for associating an outsole with an assembled shoe and attaching the outsole thereto.

18.2 This subclass is indented under subclass 18.1. Machines wherein the sole member associated is a filler which is deposited as a mass.

(1) Note. These machines may be provided with means functioning to keep the filler material in a proper plastic condition, as by heating.

SEE OR SEARCH CLASS:

264, Plastic and Nonmetallic Article Shaping or Treating: Processes, for molding methods in general.

425, Plastic Article or Earthenware Shaping or Treating: Apparatus, subclass 124 for means to mold a shoe heel or sole as a composite subcombination with a diverse shoe part.

18.3 This subclass is indented under subclass 18.1. Machines in which the sole member associated is a reinforcing member for supporting the longitudinal arch of the foot of the wearer of a shoe in which the sole member is incorporated.

18.5 This subclass is indented under subclass 17. Machines , (1) for performing an operation on a sole and, in addition, an operation on another shoe part, or (2) for performing a plurality of different operations on a sole.

SEE OR SEARCH THIS CLASS, SUBCLASS:

4.1+, for combined sole and upper machines provided with means to perform a sole operation and an upper operation on a shoe.

33+, for sole laying and/or leveling machines.

70.5+, for machines performing diverse operations including sole burnishing.

85.1+, for machines performing diverse operations including sole edge trimming.

SEE OR SEARCH CLASS:

112, Sewing, subclass 29 for machines for fastening a sole to a shoe by stitches and provided with means to form indentations between the stitches, and subclass 45 for machines for cutting a channel in a sole being operated upon in advance of the needle of the sewing mechanism.

18.7 This subclass is indented under subclass 18.5. Machines including means for forming a slit or groove in a sole, extending along the edge contour thereof, and located either in or adjacent the sole edge.

SEE OR SEARCH THIS CLASS, SUBCLASS:

18.9, for combined sole machines including means for producing an incision in a sole without substantial removal of material.

27+, for sole peripheral channeling machines, per se.

85.2+, for machines for trimming a sole edge combined with means for also peripherally channeling the sole operated upon.

SEE OR SEARCH CLASS:

112, Sewing, subclass 45 for combined sewing and channeling machines.

18.9 This subclass is indented under subclass 18.5. Machines including means for producing an incision in a sole solely by a knife or other sharp instrument and without substantial removal of material.

SEE OR SEARCH THIS CLASS, SUBCLASS:

18.7, for combined sole machines including means for forming a slit in a sole, extending along the edge contour thereof, and located either in or adjacent the sole edge.

40, for sole slitting machines, per se.

20 This subclass is indented under subclass 17. Machines for either (1) integrating a separate flange, known as a rib, to a sole and along the periphery thereof, or (2) strengthening such flange already integrated to a sole by adding a flat strip thereto.

(1) Note. A shoe upper subsequently may be attached to the rib.

SEE OR SEARCH THIS CLASS, SUBCLASS:

27+, for machines for forming a rib from sole material by slitting or grooving the sole.

20.2 This subclass is indented under subclass 20. Machines for applying a flat strip of material, usually of woven fabric, of at least sufficient width to extend between portions of the rib at opposite sides of the sole at the ball line, over the sole and against the rib to form a reinforcement for the rib.

21 This subclass is indented under subclass 17. Machines for shaping a sole by pressure prior to its attachment to an upper.

SEE OR SEARCH CLASS:

100, Presses, appropriate subclasses for presses not elsewhere provided for.

22 This subclass is indented under subclass 21. Machines provided with means for upsetting, flanging or otherwise shaping the peripheral rim of a sole.

(1) Note. The shaping means usually comprise interacting rollers between which the rim of a sole is passed.

SEE OR SEARCH THIS CLASS, SUBCLASS:

30, for machines for raising channel flaps formed by slitting (channeling) a sole and setting them in raised position.

24.5 This subclass is indented under subclass 17. Machines for applying to at least a portion of the perimeter of the sole a piece of material, generally for the purpose of providing an ornamental effect on insoles or midsoles to be used in platform shoes.

27 This subclass is indented under subclass 17. Machines for forming a slit or groove in a sole, extending along the edge contour thereof, and located either in or adjacent the sole edge.

(1) Note. The slit or groove may be for the purpose of (1) receiving stitches or driven fasteners used to attach a sole to a shoe, (2) forming a rib to which an upper may be subsequently attached, or (3) providing a portion which may be raised subsequently to form a rib to which an upper may be attached.

SEE OR SEARCH THIS CLASS, SUBCLASS:

20+, for machines for applying a separate peripheral rib to a sole.

40, for machines for producing an incision in a sole without substantial removal of material.

41.05, for machines for forming a recess in a sole by gouging or impressing the sole material.

85.2+, for machines for channeling a sole combined with means to trim the sole edge including feathering or beveling the edge to reduce the thickness of the edge.

SEE OR SEARCH CLASS:

30, Cutlery, appropriate subclasses, especially subclass 287 and 288, for hand tools for channeling soles.

28 This subclass is indented under subclass 27. Machines provided with relatively movable means to hold a sole while the channeling tool moves therearound, or which continuously grip a sole and feed it to the channeling tool.

SEE OR SEARCH THIS CLASS, SUBCLASS:

85.3, for combined channeling and trimming machines in which the work is clamped to present it to the cutters.

86+, for machines for trimming the edges of soles and heels in which the work is clamped to a work support to present it to a cutter.

29 This subclass is indented under subclass 17. Machines for pressing or smoothing an outstanding wall (flap) of a groove (channel) in a sole against an opposite wall to close the groove and thereby hide a fastening means.

(1) Note. The work operated on by this machine generally includes a sole and upper secured together by means of stitches or driven fasteners located in an open channel extending peripherally of the sole and with one wall of the channel forming a flange (flap).

30 This subclass is indented under subclass 17. Machines for operating on a sole having a slit (channel) extending peripherally of the sole wherein means are provided for bending and setting a wall portion (flap) of the slit in a raised position to prepare the sole for attachment to an upper.

SEE OR SEARCH CLASS:

112, Sewing, subclasses 29 through 40 for devices for raising channel flaps, which form part of, or which are designed to be associated with, sewing machines.

31.5 This subclass is indented under subclass 17. Machines provided with means to shape that portion of a sole against which a heel is to be abutted.

31.6 This subclass is indented under subclass 31.5. Machines in which means are provided to prepare a sole to receive a spring heel.

(1) Note. A spring heel is a heel inserted between two soles, one of which, usually the tread or outermost sole, is bent (sprung) to provide a recess for the heel between the two soles.

32 This subclass is indented under subclass 17. Machines for pressing a series of grooves at an angle to the sole edge and around the edge contour of the sole.

SEE OR SEARCH THIS CLASS, SUBCLASS:

41.05, for machines for forming a recess in a sole by gouging or impressing the sole material.

74.5+, for combined machines for forming an imitation stitch on the upper surface of a sole or a welt thereon and burnishing an edge of the sole.

32.1 This subclass is indented under subclass 32. Machines provided with means to position the indentations at the stitch points.

(1) Note. The machines may be provided with means to vary the feed to cause the indentations to occur at the stitches or the indenting tool may be so mounted that it can vary its position to the stitches.

33 This subclass is indented under subclass 17. Machines provided with means for (1) placing an outsole on an insole which has an upper lasted thereto, (2) placing, with or without securing, such outsole on such insole and applying forces to conform (level) it to shape, or (3) applying forces on such outsole after its securement to the insole to conform (level) it to shape.

(1) Note. The machines generally apply force by reciprocating the pressing mechanism. However, the force may be applied progressively over the outsole or by percussive means. Where the force is applied progressively over the shoe bottom (a) see this class, subclass 34 where the force applying means is a rotating roll, (b) subclasses 33.7 and 33.8 where the force applying means is an oscillatable former which has a rolling contact with the outsole and (c) subclass 35.5 where the force applying means is a tool which conforms the outsole by a wiping action. Where the force is applied by a percussive action see this class, subclass 35.5.

SEE OR SEARCH THIS CLASS, SUBCLASS:

4.2, for machines adapted to conform an upper to a foot shaped form or last and to attach an insole thereto and, additionally, to lay or level an outsole on the lasted upper.

7+, for machines adapted to conform an upper to a foot shaped form or last and to attach thereto a sole which may be an outsole.

16.4, for machines for laying a portion of an outsole on a heel breast.

33.7, for oscillating formers and see (1) Note above.

33.8, for oscillating shoe supports and formers and see (1) Note above.

34, for rotating rollers for applying laying and leveling pressure, and see (1) Note above.

35.5, for percussive tools and wipers used in laying and leveling and see (1) Note above.

36+, for multiple laying or leveling devices of the type which would be classifiable, per se, in Class 12, subclass 33.

SEE OR SEARCH CLASS:

100, Presses, appropriate subclasses for presses not elsewhere provided for.

33.1 This subclass is indented under subclass 33. Machines provided with means to insert individual elements for securing an outsole laid or positioned in proper relation on the shoe to which it is being attached.

33.2 This subclass is indented under subclass 33. Machines which are provided with means to raise the temperature of all or a portion of the outsole being attached and/or the contacting portions of the shoe to which the outsole is to be attached.

(1) Note. The heating is generally for the purpose of drying or setting the cement used in attaching the outsole to the shoe.

33.4 This subclass is indented under subclass 33. Machines which are provided with means to support the welt of a welted shoe being treated against movement by forces applied to the

opposite face of the outsole during laying and leveling.

(1) Note. The term "welt" as used in the above definition is limited to a strip of material lying above the outsole and extending substantially to the edge of the outsole and located outside the upper of the shoe.

33.6 This subclass is indented under subclass 33. Machines with means to orient, guide and/or place the outsole of a shoe relative to the upper to which it is to be attached.

(1) Note. The means to position the outsole is usually, but not necessarily, a guide or gauge to facilitate manual alignment of the sole with a shoe supported on a form.

33.7 This subclass is indented under subclass 33. Machines in which the former is oscillated over the bottom of a shoe held upon a work support in rolling contact therewith, the former having a surface design or configuration to apply pressure to or to conform the outsole, the former being so related to or indexed with respect to the work support that the design or configuration, retraces the same path of contact for each cycle of operation.

33.8 This subclass is indented under subclass 33.7. Machines in which a support holding the shoe being treated is pivotally supported and cooperates with a former pivotally mounted on an axis parallel thereto, both the support and former being oscillated and coacting in rolling contact as do gear wheels.

(1) Note. The term "former" as employed in subclasses 33.7, 33.8 and 38 is used to denote a member which is shaped, or adapted to be shaped to conform to the desired shape of the shoe bottom exterior. See (1) Note to subclass 38 of this class.

34 This subclass is indented under subclass 33. Machines in which the shoe is usually held on a support and the sole is subjected to pressure by a rotating roller, the roller or shoe or both being relatively moved along the length of the sole to present the whole shoe bottom to the roller.

(1) Note. The shoe support is usually termed a "jack" in the art.

SEE OR SEARCH THIS CLASS, SUBCLASS:

33.7, and 33.8, for laying and leveling machines in which a configured former which may be shaped somewhat like a roll is oscillated over the shoe being treated in indexed rolling contact therewith.

SEE OR SEARCH CLASS:

100, Presses, subclass 156 for concurrent pressing and conveying presses of the roll type in which a roll coacts with a nonrotary press element, and subclass 210 for roll and platen presses, and not elsewhere provided for.

34.5 This subclass is indented under subclass 34. Machines having power means to tilt or rock the roll transversely in a plane generally perpendicular both to the surface of the sole and to the path of movement of a translated roll.

SEE OR SEARCH THIS CLASS, SUBCLASS:

34+, for roller which may roll along the length of the sole in rolling contact therewith and are free to tilt transversely in response to undulations in the shoe bottom surface or to forces manually applied by an operator.

35.5 This subclass is indented under subclass 33. Machines in which the laying and leveling operation is produced by a tool adapted (1) to give a series of percussive blows upon the outsole being treated and/or (2) to conform the outsole to shape by a wiping movement of the tool over the outsole being operated upon.

(1) Note. The machines in this subclass may, by movement of their tools, perform a burnishing or polishing action on the sole but this result is considered incidental to their functions of conforming the sole to the desired shape.

(2) Note. Machines employing rotating rollers whose periphery slides with respect to the sole have not been considered

"slicking" or wiping and such patents have been classified in subclasses 34+ of this class.

SEE OR SEARCH THIS CLASS, SUBCLASS:

70+, for sole burnishing machines which condense and polish the edge and tread surfaces of shoe soles which are not designed to force the soles to a desired shape.

36 This subclass is indented under subclass 33. Machines which are provided with a plurality of supports for the shoes being operated upon so that the operator may have one or more shoes in pressing relation while he is changing the shoe on another support.

(1) Note. Each support may be provided with its own sole former or pad or a single former or pad may contact a number of work supports alternately or successively.

SEE OR SEARCH CLASS:

100, Presses, subclasses 193+ for plural presses not otherwise provided for, and subclasses 221+ for reciprocating platen presses with plural or indexing material supports or receptacles not otherwise provided for.

36.5 This subclass is indented under subclass 36. Machines in which the work support travels past a loading position or zone and a pressure applying position or zone in a closed path and in which a fluid actuated pressure applying device is carried along the path with the work support.

(1) Note. The work supports in this subclass are, for the most part, supported on endless belts.

(2) Note. Patents claiming multiple traveling work supports but no traveling fluid actuated pressure means will be classified in Class 12, subclass 36 except for work supports mounted on rotatable carriers which are classified in subclass 37 of this class.

36.8 This subclass is indented under subclass 36.5. Machines in which the work supports are held on a turret or wheel rotating about a single fixed axis and which is progressively rotated to move the work supports past loading and pressure applying stations or zones.

(1) Note. Many of the patents in subclasses 36.5 and 36.8 claim the means for conducting or controlling the fluid which actuates the traveling pressure applying means.

SEE OR SEARCH THIS CLASS, SUBCLASS:

37, for work supports held on a rotary carrier in which pressure is applied at a pressure station by means other than a traveling fluid pressure actuated means such as, for example, a pressure means in a fixed location which engages traveling work supports in succession.

37 This subclass is indented under subclass 36. Machines in which the work supports are held on a turret or wheel rotating about a single fixed axis and which is progressively rotated to move the work support past loading and pressure applying stations or zones.

SEE OR SEARCH THIS CLASS, SUBCLASS:

36.8, for similar rotary work supports in which a fluid actuated pressure applying means is carried in a circular path with the work supports.

SEE OR SEARCH CLASS:

100, Presses, subclass 223 for reciprocating platen presses having plural or indexing material supports or receptacles which are mounted to rotate successively to a reciprocating platen station and are not otherwise provided for.

38 This subclass is indented under subclass 33. Sole engaging members of laying and leveling machines which are adapted to contact the sole and conform it to shape.

(1) Note. Such sole engaging members, generally called “pads” or formers in the art, may consist of platens or blocks shaped to impart the desired form to the work and may be rigid, resilient, inflatable or deformable (such as a flexible bag filled with a liquid).

(2) Note. A patent is placed in this subclass even though a work support and/or a means to relatively move the pad or former and work support is nominally claimed.

SEE OR SEARCH CLASS:

100, Presses, subclasses 211+ for presses with a flexible sheet or spring pressure surface not otherwise provided for, and subclasses 295+ for platens or pressure surfaces for presses, not otherwise provided for.

39 This subclass is indented under subclass 17. Machines for inserting a covering (sock-liner), also known as a slipsole, into an assembled shoe and against the inside upper sole surface or a portion thereof.

39.3 This subclass is indented under subclass 17. Machines for severing the stitches which secure the outer or wear sole to the shoe and/or provided with means to engage such stitches and exert a force thereon to remove them.

39.5 This subclass is indented under subclass 17. Machines provided with means for preparing a wear or outer sole of a shoe to have a forepart sole end connected thereto, or means to support or hold the end of the wear sole and the forepart sole in abutted relation while they are secured together.

40 This subclass is indented under subclass 17. Machines for producing an incision in a sole solely by a knife or other sharp instrument and without substantial removal of material.

(1) Note. The incision may be made for the purpose of rendering the sole pliable.

SEE OR SEARCH THIS CLASS, SUBCLASS:

27+, for machines for forming a slit in a sole, extending along the edge contour thereof, and located either in or adjacent the sole edge.

41.05, for machines for forming a recess in a sole removing sole material or impressing the sole.

40.5 This subclass is indented under subclass 17. Machines provided with means for operating on reinforcing members adapted to extend between the heel and ball portions of a shoe for supporting the longitudinal arch of the foot.

41.05 This subclass is indented under subclass 17. Machines for forming a recess in a sole by gouging or impressing the sole material.

(1) Note. The recess may be made for the purpose of rendering the sole pliable or to receive a shoe part, such as a shank stiffener.

SEE OR SEARCH THIS CLASS, SUBCLASS:

32+, for machines for indenting a sole to simulate a sewed seam.

40, for machines for producing an incision in a sole by a sharp instrument and without substantial removal of material.

41.1 This subclass is indented under subclass 17. Machines for flexing the sole of an assembled shoe to make the sole more supple.

41.2 This subclass is indented under subclass 17. Machines for flexing a loose (unattached) sole to make it more supple.

41.3 This subclass is indented under subclass 41.2. Machines , provided with means for applying a liquid to the sole to promote pliability.

SEE OR SEARCH CLASS:

118, Coating Apparatus, subclass 44 for coating apparatus combined with means to deform the work, and subclass 427 for immersion coating apparatus having opposed relatively movable members acting on the work.

41.5 This subclass is indented under subclass 17. Machines for applying to sole members a conditioning agent, generally water, to cause them to become flexible.

SEE OR SEARCH CLASS:

118, Coating Apparatus, appropriate subclasses for machines for applying permanent coatings to soles as ink, cement, etc.

41.7 This subclass is indented under subclass 17. Machines for severing the ends of fasteners extending through the inner sole to the inside of a shoe.

SEE OR SEARCH THIS CLASS, SUBCLASS:

104, for hand manipulable tools for the same purpose.

42 This subclass is indented under the class definition. Machines for operating on a shoe heel, heel part, or heel lift, loose or attached to other shoe parts.

SEE OR SEARCH THIS CLASS, SUBCLASS:

16.1+, for machines providing the front (breast) of a heel with a covering forming a portion of the tread sole of the shoe, and especially 16.3 for machines including means for laying the sole flap on the heel breast and for pressing the heel on the heel seat of the shoe.

70+, for heel burnishing machines.

79.5, for heel wax polishing machines.

85+, for heel edge trimming machines.

SEE OR SEARCH CLASS:

227, Elongated-Member-Driving Apparatus, appropriate subclasses for apparatus of general utility for applying a member, e.g., nail, to shoe parts, and particularly subclasses 28+ for combined apparatus for sequentially assembling a plurality of layers (e.g., heel parts) and driving a member, e.g., nail into the layers.

42.5 This subclass is indented under subclass 42. Machines , (1) for performing an operation on a heel and, in addition, an operation on another shoe part, or (2) for performing a plurality of different operations on a heel.

SEE OR SEARCH THIS CLASS, SUBCLASS:

18.5+, for sole machines having means for performing operations on a heel.

70.5+, for machines performing diverse operations including heel burnishing.

85.1+, for machines performing diverse operations including heel edge trimming.

43 This subclass is indented under subclass 42.5. Machines , including both (1) means to insert individual elements for securing a heel to a shoe, and (2) means for trimming the front (breast) surface of the heel being secured.

SEE OR SEARCH THIS CLASS, SUBCLASS:

47+, for heel breasting machines, per se.

50.2, for machines for die cutting heel lifts from stock material combined with fastener inserting means.

85.4+, for means for removing material from the periphery of a heel, other than the breast surface of a heel, combined with means for inserting individual elements for securing the heel to a shoe.

SEE OR SEARCH CLASS:

29, Metal Working, appropriate subclasses under 428+ for a method of inserting a fastener, and for a combined process for making and applying the same.

227, Elongated-Member-Driving Apparatus, appropriate subclasses for apparatus of general utility for applying a member, e.g., nail, to shoe parts.

43.5 This subclass is indented under subclass 42.5. Machines including both means to conform a heel by a molding pressure to a predetermined peripheral contour and means to insert individual fastening elements into the heel.

SEE OR SEARCH CLASS:
227, Elongated-Member-Driving Apparatus, appropriate subclasses for apparatus of general utility for applying a member, e.g., nail, to shoe parts.

46 This subclass is indented under subclass 42. Machines provided with cutting means to form a recess in the top surface of a heel or a lift to receive the mating heel portion of the sole when the heel or lift is attached thereto.

46.5 This subclass is indented under subclass 42. Machines provided with means for cutting a sloping surface on the front edge of a spring heel.

(1) Note. A spring heel is a heel inserted between two soles, one of which, usually the tread or outermost sole, is bent (sprung) to provide a recess for the heel between the two soles.

47 This subclass is indented under subclass 42. Machines for trimming the front (breast) surface of a heel or heel lift, which surface becomes the front portion of the heel when attached to a shoe.

SEE OR SEARCH THIS CLASS, SUBCLASS:
43, for combined machines which attach the heel to the shoe by driven fasteners and also trim the front (breast) of the heel.

SEE OR SEARCH CLASS:
69, Leather Manufactures, subclasses 9+ for machines for skiving or beveling leather.

47.1 This subclass is indented under subclass 47. Machines in which the trimming means is a tool which has a sharpened portion continuously moving in a closed path.

48 This subclass is indented under subclass 42. Machines for shaping heel blanks by pressure, usually by direct press action.

(1) Note. For machines for molding the shell about a core and shell heel, see this class, subclass 49.1.

SEE OR SEARCH THIS CLASS, SUBCLASS:
43.5, for machines for inserting fastenings and molding the heel to a definite peripheral contour.
50+, for machines for assembling heel lifts successively and holding or clamping them for formation into a heel or heel log.

SEE OR SEARCH CLASS:
100, Presses, appropriate subclasses for presses not elsewhere provided for.

49 This subclass is indented under subclass 42. Machines for indenting a heel surface, or the surface of a member carried between the heel and the upper, to form ornamental markings thereon which operation is known as either milling or beading.

SEE OR SEARCH THIS CLASS, SUBCLASS:
75.5, for combined machines for beading and burnishing an edge of a heel.

49.1 This subclass is indented under subclass 42. Machines for preparing heels to receive covers and/or attaching covers to heels.

(1) Note. This subclass includes trimmers for heel covers. Search this class, subclass 16.6 for heel breast flap trimmers and subclass 85 for machines for trimming the edges of sole and heel generally.

SEE OR SEARCH THIS CLASS, SUBCLASS:
16.1+, for machines for covering heel breasts with a portion of the tread sole and see (1) Note above.
85+, see (1) Note above.

50 This subclass is indented under subclass 42. Machines provided with means for receiving or collecting heel lifts or miscellaneous pieces of material successively and to hold or clamp them as a unit for formation into either a heel or heel log.

(1) Note. A heel log is an elongated member having the peripheral contour of a

heel and from an end of which heels may be severed successively.

SEE OR SEARCH THIS CLASS, SUBCLASS:
48, for devices for merely clamping or pressing heel lifts, already built up or assembled as a heel.

50.1 This subclass is indented under subclass 50. Machines provided with a member having an endless sharpened edge of heel contour for severing heel lifts from stock material.

SEE OR SEARCH CLASS:
83, Cutting, appropriate subclasses for machines for die cutting heel lifts, per se.

50.2 This subclass is indented under subclass 50.1. Machines provided with means to insert individual elements for securing the heel lifts or pieces in assembled relation.

SEE OR SEARCH CLASS:
227, Elongated-Member-Driving Apparatus, appropriate subclasses.

50.3 This subclass is indented under subclass 50. Machines provided with means to provide the lifts or pieces being assembled with an adhering medium, such as paste or cement.

SEE OR SEARCH THIS CLASS, SUBCLASS:
48, for devices for merely clamping or pressing heel lifts, already cemented and assembled as a unit.

SEE OR SEARCH CLASS:
156, Adhesive Bonding and Miscellaneous Chemical Manufacture, appropriate subclasses for processes and apparatus for adhesive laminating in general.

50.4 This subclass is indented under subclass 50. Machines for assembling heel lifts or other pieces of material to form an elongated member having the peripheral contour of a heel, termed a log, and from an end of which heels may be severed successively.

50.5 This subclass is indented under subclass 42. Machines for severing a heel or part of a heel from a shoe, generally by a rotary cutter, so that a new heel or heel part may be attached.

51 This subclass is indented under the class definition. Machines for operating on, (1) those portions of the shoe above the sole after their attachment to a sole, or (2) operating on such portions prior to their attachment to a sole.

52 This subclass is indented under subclass 51. Machines provided with means for positioning the various elements of a shoe upper for attachment.

(1) Note. The elements may be tips, quarters, counter portions, etc.

SEE OR SEARCH CLASS:
112, Sewing, appropriate subclasses for similar gauging structures forming part of sewing machines designed for use in attaching the various elements of an upper together.

52.5 This subclass is indented under subclass 51. Machines for performing a plurality of different operations on a shoe upper.

SEE OR SEARCH THIS CLASS, SUBCLASS:
4.1, for machines for performing both an operation on a sole and an operation on an upper of a shoe.

53.1 This subclass is indented under subclass 51. Machines for conforming uppers after their attachment to soles.

(1) Note. See the Glossary of the class definition for a definition of the term “Assembled Shoe”.

SEE OR SEARCH THIS CLASS, SUBCLASS:
114.2+, for hand manipulable shoe stretchers adapted to be inserted in shoes.

53.2 This subclass is indented under subclass 53.1. Machines provided with an enlargeable form for supporting and imparting a stretching action to the upper combined with means for

burnishing condensing, or polishing the upper to shape it to its support.

53.3 This subclass is indented under subclass 53.1. Machines provided with a rotatable cylindrical member which shapes the upper.

53.4 This subclass is indented under subclass 53.1. Machines provided with reciprocating members which shape the uppers by a beating or hammering action.

53.5 This subclass is indented under subclass 53.1. Machines provided with means inserted in a shoe and contacting means engaging the outside of the upper to force the upper to shape therebetween.

53.6 This subclass is indented under subclass 53.1. Machines which are provided with enlargeable means adapted to be inserted in a shoe and to conform the upper solely by enlargement of the inserted means.

SEE OR SEARCH THIS CLASS, SUBCLASS:

114.2+, for hand manipulable shoe stretchers adapted to be inserted in shoes.

124, for work supports, per se, inserted in shoes and expanded for supporting the sole of a shoe while an operation is performed on the sole.

53.7 This subclass is indented under subclass 53.6. Machines provided with mounting means for attachment to a vertical surface.

53.8 This subclass is indented under subclass 53.6. Machines in which the expanding means is operated by a reciprocating member extending therein.

54.1 This subclass is indented under subclass 51. Machines provided with means for applying pressure to unattached shoe uppers to shape them preparatory to their incorporation in shoes.

SEE OR SEARCH THIS CLASS, SUBCLASS:

7+, for machines for conforming uppers to lasts so that they may be associated with sole members while on the lasts.

54.2 This subclass is indented under subclass 54.1. Machines in which the conforming operation is confined to the forward or tip portion of the upper.

54.3 This subclass is indented under subclass 54.1. Machines in which the conforming operation is confined to the rear or counter portion of the upper.

54.4 This subclass is indented under subclass 54.1. Machines provided with a plurality of mold members, at least one of which is movable, which cooperate to form a fold or crease in the upper.

54.5 This subclass is indented under subclass 54.4. Machines in which one of the mold members is supported on an endless carrier.

54.6 This subclass is indented under subclass 54.4. Machines in which one of the mold members is mounted for arcuate movement about an axis into operative position.

55 This subclass is indented under subclass 54.1. Machines for turning over the edge of the upper, or a binding attached to such edge, in order to provide a finished edge on the upper.

SEE OR SEARCH THIS CLASS, SUBCLASS:

52, and 55.1

55.1 This subclass is indented under subclass 55. Machines provided with slitting or notching means.

SEE OR SEARCH THIS CLASS, SUBCLASS:

57.5+, for machines for removing excess material from uppers.

SEE OR SEARCH CLASS:

83, Cutting, appropriate subclasses for machines for performing the slitting or notching, per se, especially subclasses 861+ for cutting other than completely through work thicknesswise.

57 This subclass is indented under subclass 51. Machines having means for turning an upper or upper part to bring the right side out.

(1) Note. In this subclass for example, are machines for turning tubular boot uppers, and for turning the seam of lined upper parts.

SEE OR SEARCH CLASS:
223, Apparel Apparatus, subclasses 39+ for apparatus for turning inside out garments, bags, and tubular fabrics.

57.1 This subclass is indented under subclass 57. Machines having also means to smooth or press a turned seam as by hammering or flattening by any means.

SEE OR SEARCH THIS CLASS, SUBCLASS:
15, for machines of this type combined with means for relasting.

SEE OR SEARCH CLASS:
38, Textiles: Ironing or Smoothing, for pressing in general.
69, Leather Manufactures, subclass 7 for seam pressing, per se.

57.5 This subclass is indented under subclass 51. Machines for removing surplus material from uppers either prior to or after assembly with sole members.

SEE OR SEARCH CLASS:
83, Cutting, appropriate subclasses for machines for cutting uppers from blank material.

57.6 This subclass is indented under subclass 57.5. Machine for removing surplus material from the sole attaching edge of the upper.

SEE OR SEARCH THIS CLASS, SUBCLASS:
4.3+, for inseam trimming machines which remove a portion of the sole as well as excess upper material from the lower edge of a lasted shoe.
7.1+, for lasting machines provided with upper trimming and/or slitting means.

58 This subclass is indented under subclass 57.5. Machines for beveling the edges of uppers wherein the operation of the machine is predeterminedly controlled for the entire beveling operation.

(1) Note. Usually the machine is pattern-controlled.

SEE OR SEARCH CLASS:
69, Leather Manufactures, subclasses 9+ for skiving machines of general utility.

58.3 This subclass is indented under subclass 51. Machines for inserting relatively small rounded fastening means on shoe uppers through apertures intended to receive the rounded head of such fastening means, for closing the uppers for lasting, or for releasing such fastening means from said apertures to open the uppers after lasting.

58.5 This subclass is indented under subclass 51. Machines for threading filaments through the eyelets of shoe uppers to close them for lasting, or removing such filaments after a lasting operation.

SEE OR SEARCH THIS CLASS, SUBCLASS:
113, for devices to be attached to the flies of shoe uppers to hold them in closed position for lasting.
142+, for methods of applying laces to shoe uppers.

SEE OR SEARCH CLASS:
112, Sewing, appropriate subclasses for sewing machines of structure similar to lacing machines.
289, Knots and Knot Tying, appropriate subclasses for knot tying machines.

59 This subclass is indented under subclass 51. Machines for covering bootstraps with paper or other material to prevent soiling of the strap in the manufacture of the boot or shoe.

SEE OR SEARCH CLASS:
118, Coating Apparatus, subclass 45 for coating apparatus combined with

means to protect a freshly coated surface.

59.5 This subclass is indented under subclass 51. Machines for applying tape to members disclosed as shoe uppers.

(1) Note. This is the generic subclass for machines for securing tape to shoe uppers by any means but see Class 112, Sewing, appropriate subclasses for such machines which secure the tape to the shoe upper by sewing operations.

SEE OR SEARCH CLASS:
112, Sewing, (see (1) Note above).
156, Adhesive Bonding and Miscellaneous Chemical Manufacture, appropriate subclasses for apparatus of general utility for applying tape to articles other than shoe uppers.

59.7 This subclass is indented under subclass 51. Machines for applying to uppers a conditioning agent, generally water, to cause them to become flexible.

SEE OR SEARCH CLASS:
118, Coating Apparatus, appropriate subclasses for machines for applying permanent coatings to uppers as ink, cement, etc.

61 Machines, generally cutting or molding machines, peculiarly adapted to the manufacture of heel or counter stiffeners, box-toes, or toe-tips.

62 Machines for skiving or beveling the edges of toe or heel stiffener blanks.

63 The toe and heel stiffener blanks are presented to the skiving-knife by recessed carries, into which the blanks are pressed, or by recessed feed-rolls, the depth of the depression in the carrier or roll determining the thickness of the skived blank.

64 Machines for shaping toe and heel stiffener blanks by pressure.

SEE OR SEARCH CLASS:
100, Presses, appropriate subclasses for presses not elsewhere provided for.

65 The toe or heel stiffener blank is molded by being forced between rolls or between a roll and fixed form the roll being rotated to feed the blank through.

SEE OR SEARCH CLASS:
100, Presses, subclasses 155+ for concurrent pressing and conveying presses of the roll type, particularly subclass 156 for roll type presses in which a roll co-acts with a nonrotary press element.

66 The matrix of form into which the counter is forced is made in sections, which separate to allow the insertion or withdrawal of the stiffener-carrying plunger or former.

SEE OR SEARCH CLASS:
100, Presses, subclasses 246+ for reciprocating platen presses of the box and piston type not elsewhere provided for, having a movable or removable box section.

67 Miscellaneous machines for preparing and operating on welts and rands.

SEE OR SEARCH CLASS:
69, Leather Manufactures, subclass 9.3 for devices for skiving and trimming leather strips to be used as welts.

67.1 Machines for crimping or molding welts and rands.

67.2 Machines for beating out the welt after attachment to the upper and insole.

70 This subclass is indented under the class definition. Machines provided with tools provided with rigid surfaces, which may be heated, designed to produce a rubbing action on the edge and/or tread surfaces of soles and/or heels to condense and polish the surfaces.

(1) Note. Class 29, Metal Working, subclass 90.01, is the generic place for machines or processes for burnishing the surface of metallic or nonmetallic articles. See notes thereto for burnishing elsewhere classified.

SEE OR SEARCH THIS CLASS, SUBCLASS:

85, for sole and heel trimmers of analogous structure.

104, for hand tools for burnishing soles and heels.

SEE OR SEARCH CLASS:

15, Brushing, Scrubbing, and General Cleaning, subclasses 36+ for machines for boot cleaning and polishing by brushing.

29, Metal Working, subclasses 90.01+, see (1) Note above.

451, Abrading, for a process or apparatus for abrading boots or shoes.

70.5 This subclass is indented under subclass 70. Machines , (1) for performing a burnishing operation on a sole and/or heel and, in addition, another operation on a sole and/or heel, or (2) having at least two burnishing tools of different types.

SEE OR SEARCH THIS CLASS, SUBCLASS:

77, for machines having merely plural rotary burnishing tools.

78+, for machines having merely plural reciprocating burnishing tools.

73.5 This subclass is indented under subclass 70.5. Machines in which the burnishing machine is combined with means for applying a coating to the sole and/or heel.

SEE OR SEARCH THIS CLASS, SUBCLASS:

79.5, for machines for waxing and polishing boots and shoes in which the applying means is not a burnishing tool.

74.5 This subclass is indented under subclass 70.5. Machines in which the burnishing machine is combined with (1) means for embossing or indenting a sole to simulate a sewed seam or (2) means for indenting a heel surface or the surface of a member carried between a heel and an upper, to form ornamental markings thereon, which operation is known as either milling or beading.

SEE OR SEARCH THIS CLASS, SUBCLASS:

32+, for machines for merely embossing or indenting a sole to simulate a sewed seam.

75.5 This subclass is indented under subclass 74.5. Machines in which the burnishing machine is combined with means for indenting only a heel surface or the surface of a member carried between a heel and an upper.

SEE OR SEARCH THIS CLASS, SUBCLASS:

49, for machines for merely milling or beading a heel.

76.5 This subclass is indented under subclass 70.5. Machines in which the burnishing machine is combined with means for (1) removing material from the periphery of a sole and/or heel, other than the breast surface of a heel, either loose or attached to other shoe parts, to reduce the area encompassed by the sole and/or heel periphery, or (2) beveling the periphery of a sole and/or heel, other than the breast surface of a heel, attached to other shoe parts.

SEE OR SEARCH THIS CLASS, SUBCLASS:

85+, for sole and/or heel edge trimming machines, per se.

77 This subclass is indented under subclass 70. Machines in which the burnishing tool rotates.

SEE OR SEARCH THIS CLASS, SUBCLASS:

88, for rotary sole and heel edge trimmers.

SEE OR SEARCH CLASS:

15, Brushing, Scrubbing, and General Cleaning, subclasses 34+ for rotary brush machines for boot cleaning, blacking and polishing.

451, Abrading, subclasses 119+ for an abrading machine with a rotary reciprocating tool and subclasses 177+ for an abrading machine in which the tool has rotary motion only.

77.5 This subclass is indented under subclass 79.2. Subcombinations comprising revolving burnishing tools, per se, and/or revolving shaft-mounted burnishing units for use with burnishing machines as defined in subclass 77.

78 This subclass is indented under subclass 70. Machines in which the burnishing tool moves back and forth along a fixed path.

(1) Note. The path followed is usually a straight line or an arc of a circle.

SEE OR SEARCH CLASS:

15, Brushing, Scrubbing, and General Cleaning, subclass 33 for boot cleaning, blacking and polishing, and subclass 37 for boot cleaners and polishers employing a reciprocating brush.

451, Abrading, subclasses 162+ for an abrading machine employing a reciprocating abrading tool.

78.5 This subclass is indented under subclass 78. Machines in which the reciprocating movement of the tool is around the curved surface of the heel from one breast corner to the other.

79 This subclass is indented under subclass 78. Machines in which the reciprocating burnishing tool is flexibly connected to a power source and is guided by the hand of the operator.

SEE OR SEARCH THIS CLASS, SUBCLASS:

77, for burnishing machines having rotary tools flexibly connected to a power source and guided by the hand of an operator.

79.2 This subclass is indented under subclass 70. Subcombinations comprising burnishing tools, per se, and/or burnishing units for use with burnishing machines as defined in subclass 77 or 78.

79.3 This subclass is indented under subclass 70. Machines in which the work piece is moved relative to a fixed burnishing tool during the burnishing.

79.5 This subclass is indented under the class definition. Machines for applying friction to a coating on the edges and/or tread surface of soles and/or heels to form a high finish on the coating.

(1) Note. These machines may include means for applying the coating.

SEE OR SEARCH THIS CLASS, SUBCLASS:

73.5, for burnishing machines having means to apply wax to the work or to the burnishing tool or to retain wax on the burnishing tool.

85 This subclass is indented under the class definition. Machines for (1) removing material from the periphery of a sole and/or heel, other than the breast surface of a heel, either loose or attached to other shoe parts, to reduce the area encompassed by the sole and/or heel periphery, (2) beveling the periphery of a sole and/or heel, other than the breast surface of a heel, or (3) cutting a sole or heel from a larger piece of material, other than wooden stock material, progressively in a peripheral pattern-controlled path to form a sole or heel of predetermined contour.

(1) Note. This subclass (85) includes machines for cutting out or rough cutting sole blanks except die cutting machines which are found in Class 83, Cutting.

(2) Note. See SEARCH THIS CLASS, SUBCLASS, below, for trimmers for heel covers.

SEE OR SEARCH THIS CLASS, SUBCLASS:

16.6+, for trimmers for a portion of the sole forming a heel breast covering.

27+, for machines which cut channels and bevel soles.

46.5, for machines provided with means for cutting a sloping surface on the front (breast) edge of a spring heel.

47, for machines for trimming the front (breast) surface of a heel.

49.1, for trimmers for heel covers.

SEE OR SEARCH CLASS:

30, Cutlery, appropriate subclasses, especially 281, 287 and 288 for hand tools for trimming the edge of soles or heels.

69, Leather Manufactures, subclasses 9+ for machines designed to bevel the whole periphery of unattached soles or heels.

83, Cutting, appropriate subclasses and see (1) Note above.

144, Woodworking, subclasses 137 through 145.4 inclusive for a machine for producing wooden work of predetermined shape.

85.1 This subclass is indented under subclass 85. Machines , (1) in which the trimming machine is combined with means, other than the trimming head, for performing another operation on a sole and/or heel, or (2) having at least two trimming tools or different types.

SEE OR SEARCH THIS CLASS, SUBCLASS:

76.5, for sole and/or heel edge trimming machines combined with burnishing means.

89, for sole and/or heel edge trimming machines having merely plural rotary trimming heads.

93, for rotary cutter heads, per se, having a sole and/or heel edge trimming cutter and in addition, a cutter for trimming the upper face of the sole and/or heel.

85.2 This subclass is indented under subclass 85.1. Machines in which the trimming machine is combined with means for forming a slit or groove in a sole, extending along the edge contour thereof, and located in or adjacent the sole edge.

SEE OR SEARCH THIS CLASS, SUBCLASS:

27+, for sole peripheral channeling machines, per se.

85.3 This subclass is indented under subclass 85.2. Machines provided with relatively movable means to hold a sole while the channeling tool moves therearound, or which continuously grip a sole and feed it to a channeling tool.

SEE OR SEARCH THIS CLASS, SUBCLASS:

28, for sole peripheral channeling machines, per se, provided with work clamping means of the type here classified.

85.4 This subclass is indented under subclass 85.1. Machines in which the trimming machine is combined with means for inserting individual elements for securing a sole and/or heel to a shoe.

SEE OR SEARCH THIS CLASS, SUBCLASS:

33.1, for means for inserting individual elements for securing a sole to a shoe combined with laying and/or leveling the sole.

43, for means for inserting individual elements for securing a heel to a shoe combined with means for trimming the breast of the heel.

50.2, for means for inserting individual elements for securing heel lifts in assembled relation combined with die cutting and assembling heel lifts.

SEE OR SEARCH CLASS:

227, Elongated-Member-Driving Apparatus, appropriate subclasses for apparatus of general utility used for applying a member, e.g., nail to shoe parts.

85.5 This subclass is indented under subclass 85.4. Machines for operating on a heel only.

85.9 This subclass is indented under subclass 85. Machines which operate on that portion only of a sole which lies between the breast line and the ball line of a shoe to (1) bevel the side edges of the sole, or (2) remove excess marginal material from the sole so that the contour of the sole forms a continuation of the contour of an attached heel, which operation is termed joining.

(1) Note. The beveling may be for the purpose of (1) forming a space for receiving upper materials or (2) making the sole appear thinner at the shank by beveling

the lower corners to produce a shank shape known as a cottage shank.

86 This subclass is indented under subclass 85. Machines provided with relatively movable means to (1) hold a sole and/or heel stationary while the edge trimming means move therearound, or (2) continuously grip a sole and/or heel and feed it to the edge trimming means.

SEE OR SEARCH THIS CLASS, SUBCLASS:

28, for sole channeling machines in which the work is clamped to a work support to present it to channeling cutters.

85.3, for combined sole channeling and trimming machines in which the work is clamped to present the work to the cutters.

85.5, for combined machines which nail heels to shoes and then trim them.

86.5 This subclass is indented under subclass 86. Machines designed to trim only the edge of a shoe sole.

SEE OR SEARCH CLASS:

83, Cutting, appropriate subclasses, and especially subclass 270 for machines operating on or adjacent the edge of a sole.

86.6 This subclass is indented under subclass 86.5. Machines which have means for moving a cutting means around an edge portion of a shoe sole.

86.65 This subclass is indented under subclass 86.6. Machines in which the cutter is mounted on a platform which revolves about a stationarily-positioned sole-supporting member.

86.7 This subclass is indented under subclass 86.5. Machines which are provided with rotary cutters.

SEE OR SEARCH THIS CLASS, SUBCLASS:

88, for machines employing a rotary cutter head for trimming the edges of soles and heels and see the notes thereto for other rotary cutter sole trimming machines.

87 This subclass is indented under subclass 86. Machines in which the edge trimming means is a tool which has a sharpened portion continuously moving in a closed path.

SEE OR SEARCH THIS CLASS, SUBCLASS:

88+, for machines employing a rotary cutter head for trimming the edges of soles and heels and see the notes thereto for other rotary cutter sole trimming machines.

88 This subclass is indented under subclass 85. Machines in which the edge trimming means is a tool which has a sharpened portion continuously moving in a closed path.

SEE OR SEARCH THIS CLASS, SUBCLASS:

86.7, for machines for trimming only the edge of a shoe sole while it is clamped to a work holder to present it to a rotary cutter.

87, for machines for trimming the edges of soles and heels in which the work is clamped to a support to present it to the action of a rotary cutter.

91+, for rotary cutter heads, per se, for use with rotary cutter machines as defined in this subclass (88).

SEE OR SEARCH CLASS:

30, Cutlery, subclass 347 for cutting blades for use with hand manipulated implements which blades are so constructed as to be rotated during the cutting operation and see the notes thereto for rotary blade implements and machines in Class 30, Cutlery, and elsewhere.

89 This subclass is indented under subclass 88. Machines wherein a plurality of edge trimming tools are independently revolvably mounted on separate axis.

SEE OR SEARCH THIS CLASS, SUBCLASS:

93, for rotary cutter heads, per se, having two tools mounted adjacent one another for rotation on the same axis.

90 This subclass is indented under subclass 88. Machines which are provided with a member which may be moved from one fixed operative position to another fixed operative position, which is inserted between the upper heel surface (or rand) and the upper of a shoe, to (1) provide an edge for directing the work along a predetermined path and/or (2) protect the cutter or work.

(1) Note. A rand is a peripheral strip on the heel surface adjacent the upper and forms the marginal portion of the heel seat.

91 This subclass is indented under subclass 85. Subcombinations comprising revolving edge-trimming shaft-mounted units for use with rotary cutter machines as defined in subclass 88.

SEE OR SEARCH CLASS:
144, Woodworking, for a similar cutter head for use with a woodworking machine.

92 This subclass is indented under subclass 91. Rotary cutter heads provided with means movable along the axis of rotation of the head to vary the area of exposure of the sharpened portions so as to trim and/or heel edges of varying thickness.

93 This subclass is indented under subclass 91. Rotary cutter heads provided with additional means having a sharpened edge for trimming the upper face of the sole and/or heel at the same time that the main cutter trims the edge.

94 This subclass is indented under subclass 91. Rotary cutter heads in which the sharpened members are blades not integral with the head but insertable therein.

SEE OR SEARCH CLASS:
407, Cutters, for Shaping, subclasses 33+ for a miscellaneous rotary cutter built up from a body in which are secured separate teeth, and see the Notes therein for like cutters elsewhere classified.

95 This subclass is indented under subclass 94. Rotary cutter heads in which the blades are pivotally mounted so as to be turned from one fixed operative position to another in the plane of revolution of the cutter head.

103 This subclass is indented under the class definition. Hand manipulable devices for operating on boots or shoes, or on parts thereof; or for securing such parts either temporarily or permanently to boots or shoes, or to other shoe parts.

SEE OR SEARCH CLASS:
30, Cutlery, especially subclass 281, 287 and 288 for hand tools adapted for use in the manufacture of shoes, having a pure cutting function.

104 This subclass is indented under subclass 103. Devices provided with rigid surfaces, which may be heated and be manipulated to produce a rubbing action on the edge or tread surfaces of soles and/or heels to condense and polish these surfaces.

SEE OR SEARCH THIS CLASS, SUBCLASS:
77.5, for rotary burnishing tools for use with rotary burnishing machines.
79, for reciprocating burnishing tools flexibly connected to a power source and manually guided.
79.2, for reciprocating burnishing tools for use with reciprocating burnishing machines.

104.5 This subclass is indented under subclass 103. Devices for severing the ends of fasteners projecting through the inner soles of shoes.

SEE OR SEARCH THIS CLASS, SUBCLASS:
41.7, for machines for the same purpose.

107 This subclass is indented under subclass 103. Devices for operating on shoe uppers mounted on foot-shaped forms for conforming them thereto and having means (1) acting on the sole attaching edge of the upper to conform this edge to the sole supporting surface of the form so that a sole may be attached to such edge while the upper is mounted on the form, or (2)

acting on the sole attaching edge to conform it to a sole supported on the form; with or without means for securing the conformed sole attaching edge and sole together.

108 This subclass is indented under subclass 107. Devices provided with gripping means for engaging the upper to draw it into lasted position, combined with means to both position and drive fasteners for securing the upper in lasted position.

SEE OR SEARCH THIS CLASS, SUBCLASS:
13.1, and see the notes thereto for lasting machines employing nailing.

SEE OR SEARCH CLASS:
227, Elongated-Member-Driving Apparatus, appropriate subclasses for apparatus for driving a member, e.g., a nail, and particularly subclasses 12+ and 64 for combined apparatus for stretching flaccid work and applying a member, e.g, nail, thereto.

109 This subclass is indented under subclass 107. Devices provided with (1) gripping means to engage the upper to draw it into lasted position, and (2) an impact head, designed to drive a fastener for securing the upper in lasted position.

110 This subclass is indented under subclass 107. Devices provided with gripping means to engage the upper to draw it into lasted position.

111 This subclass is indented under subclass 110. Devices provided with multiple gripping means designed to engage the upper at the opposite sides of the last.

112 This subclass is indented under subclass 110. Devices provided with means to engage the upper around the toe portion and draw it into lasted position.

113 This subclass is indented under subclass 103. Devices provided with means for engaging the opposite sides of the vamp opening in a shoe upper to maintain the sides together during lasting.

(1) Note. The portions of an upper adjacent the lacing slit are known as flies.

114.2 This subclass is indented under subclass 103. Devices for insertion within a shoe which exerts a force upon the upper thereof for shaping the upper, or a portion thereof.

(1) Note. The devices in this and the indented subclasses are generally known as “shoe formers”.

(2) Note. The devices in this subclass are generally extended along a straight line while those in the indented subclasses may be provided with means to exert a variable expansion on the shoe.

SEE OR SEARCH THIS CLASS, SUBCLASS:
53.6+, for machines for shaping shoes including an expansible form which is inserted in a shoe and expanded.
124, for work supports, per se, inserted in shoes and expanded for supporting the sole of a shoe while an operation is performed on the sole.

114.4 This subclass is indented under subclass 114.2. Shoe stretchers in which the expanding action is exerted by a fluid medium.

114.6 This subclass is indented under subclass 114.2. Shoe stretchers provided with means for engaging the upper portion of the uppers, usually those of boots or high shoes.

114.8 This subclass is indented under subclass 114.6. Shoe stretchers which are additionally provided with means for engaging the top portions of the uppers.

115.2 This subclass is indented under subclass 114.2. Shoe stretchers provided with means for engaging only a restricted portion of the upper being shaped.

(1) Note. The devices in this and the indented subclass are usually designed to stretch a portion of the upper to provide for a bunion or to ease the vamp over the instep.

SEE OR SEARCH THIS CLASS, SUBCLASS:

115.6+, for shoe stretchers which engage the toe cap and exert pressure on this portion of the shoe.

115.4 This subclass is indented under subclass 115.2. Shoe stretchers provided with shaping members engaging both the inside and outside portion of the shoe at the point being treated.

115.6 This subclass is indented under subclass 114.2. Shoe stretcher provided with means for changing the amount of the stretching action or the size of the base from which the stretching action takes place.

(1) Note. The variable stretching action may be permitted by a spring which acts to give the stretching part its movement or by an adjustable connection which would permit the stretcher to be used in shoes of varying sizes.

115.8 This subclass is indented under subclass 115.6. Shoe stretchers in which the stretcher is adjustable both lengthwise and widthwise.

116.2 This subclass is indented under subclass 115.8. Shoe stretchers in which means are provided to secure the stretcher in both its lengthwise and widthwise adjustments.

116.4 This subclass is indented under subclass 115.8. Shoe stretchers in which means are provided to secure the stretcher in its widthwise adjustment.

116.6 This subclass is indented under subclass 115.8. Shoe stretchers in which means are provided to secure the stretcher in its lengthwise adjustment.

116.8 This subclass is indented under subclass 115.6. Shoe stretchers in which the stretcher is provided with only width wise adjustment.

117.2 This subclass is indented under subclass 116.8. Shoe stretchers provided with means to secure the stretcher in its widthwise adjustment.

117.4 This subclass is indented under subclass 115.6. Shoe stretchers provided with means to give only a lengthwise adjustment and with means to secure the stretcher in its lengthwise adjusted position.

119.5 This subclass is indented under subclass 103. Devices adapted to conform shoe uppers before their attachment to soles.

120.5 This subclass is indented under subclass 103. Devices for engaging the soles of shoes to hold or to conform the soles to a flat condition.

(1) Note. In the devices in this subclass any shaping of the upper is incidental to the change in conformation of the sole because of the straightening action thereon.

122 This subclass is indented under the class definition. Devices comprising work tables for shoemakers' use having means for supporting a shoe to be worked upon.

123 This subclass is indented under the class definition. Devices for sustaining boots and shoes, or parts thereof, during manufacture and repair.

(1) Note. Shoemakers' repair lasts are found in this subclass (123) and in- dented subclasses 124 and 125.

SEE OR SEARCH THIS CLASS, SUBCLASS:

103+, for hand clamps for holding shoe parts, or parts of shoes to shoes.

SEE OR SEARCH CLASS:

269, Work Holders, appropriate subclasses. Class 269 is the residual locus for patents to a device for clamping, supporting and/or holding an article (or articles) in position to be operated on or treated. See notes thereunder for other related loci.

123.3 This subclass is indented under subclass 123. Devices for supporting unattached heels for operation thereon.

123.5 This subclass is indented under subclass 123. Devices for removably supporting an expander while a conforming operation on the upper of the shoe is performed.

(1) Note. In these devices the expander is usually first placed in the shoe and the assembly is mounted on the support.

124 This subclass is indented under subclass 123. Devices in which the sustaining devices may be expanded to fit various sizes of shoes.

SEE OR SEARCH THIS CLASS, SUBCLASS:
53.6+, for machines for shaping shoes having expansible forms.
114.2+, for shoe stretching implements inserted in shoes.

125 This subclass is indented under subclass 123. Devices having means for simultaneously engaging the inner surface of a shoe at the heel region and the outer surface of a heel to hold a shoe or a heel thereto.

SEE OR SEARCH THIS CLASS, SUBCLASS:
16.3, for machines for laying sole flaps against heel breasts provided with heel clamping means.
86+, for machines for trimming the edges of soles and heels in which the work is clamped to a work support to present it to a cutter and see the notes thereto for other shoe making machines in which the work is clamped to present it to a cutter.

126 This subclass is indented under subclass 123. Devices for supporting a shoe with a last therein and including pin means for insertion in a hole or holes in the last, said supporting device being termed a jack.

127 This subclass is indented under subclass 126. Devices which are additionally provided with a cradle-like support on which the toe or instep portion of the shoe rests.

128 This subclass is indented under the class definition. Hand manipulable devices provided with contoured surfaces about which a shoe or shoe part may be conformed, and which surfaces are not expansible to produce a stretching action on an assembled shoe.

(1) Note. The devices under this subclass may be provided with means so as to permit them to “break” or decrease their length.

(2) Note. The devices under this subclass may include merely foot shaped articles which are inserted in shoes to hold their shape.

SEE OR SEARCH THIS CLASS, SUBCLASS:
114.2+, for shoe stretching implements which are inserted in shoes and are expansible to produce a shaping action on the shoes.

129.4 This subclass is indented under subclass 128. Forms provided with means for modifying the temperature of the form.

133 This subclass is indented under subclass 128. Forms having foot shaped contours, and particularly designed to have boots and shoes formed thereover.

134 This subclass is indented under subclass 133. Lasts which are provided with adjusting means to vary the size of form before insertion of the form into a shoe.

SEE OR SEARCH THIS CLASS, SUBCLASS:
114.2+, for shoe stretching implements which are inserted in shoes and are expansible to produce a shaping action on the shoes.

135 This subclass is indented under subclass 133. Lasts in which the heel block is separate from the forepart so that the heel block may be removed first when the last is taken out of the shoe.

136 This subclass is indented under subclass 135. Lasts in which the heel block is hingedly connected to the forepart.

137 This subclass is indented under subclass 133. Lasts provided with removable instep blocks.

138 This subclass is indented under subclass 137. Lasts in which the removable connection between the instep block and the other last parts is a bolt which must be moved to disengage the instep block.

139 This subclass is indented under subclass 133. Lasts provided with reinforcements in the heel portion so that they may be mounted on spindle-jacks and withstand heavy operations, such as sole-leveling.

140 This subclass is indented under subclass 133. Lasts provided with inserts for receiving the points of the fasteners used for securing the upper and sole together.

(1) Note. The inserts are generally of rubber-like material which does not splinter as would a wooden surface of the last when the fastener is inserted therein.

141 This subclass is indented under subclass 133. Lasts provided with means for securing the uppers and soles on the lasts.

142 Processes of making boots and shoes except such as by their steps merely define the structure of the article made, such being found in Class 36, Boots, Shoes, and Leggings.

SEE OR SEARCH CLASS:
112, Sewing, subclasses 475.01+ for a method of sewing in general.

145 Processes of lasting.

SEE OR SEARCH THIS CLASS, SUBCLASS:
7+, for apparatus for lasting.

146 Processes for making various separate parts of shoes, as soles, counterstiffeners, etc.

(1) Note. Included here are processes for making wooden lasts and last blanks.

147 Processes of making and attaching heels.

(1) Note. Included here are processes for making wooden heels and heel blanks.

148 Processes of filling shoes by the incorporation therein of shoe-filling materials.

END