Aug. 18, 1942. M. L. DODGE 2,293,282

METHOD OF AND MACHINE FOR SHAPING THE HEEL PORTIONS OF SHOES

Filed May 29, 1940 4 Sheets-Sheet 1

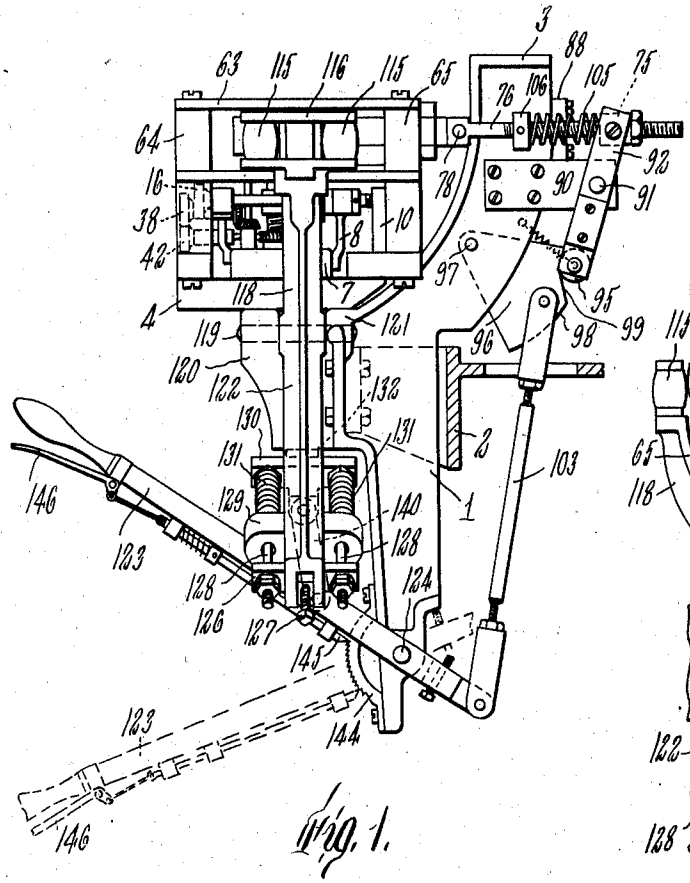


Fig. 1.

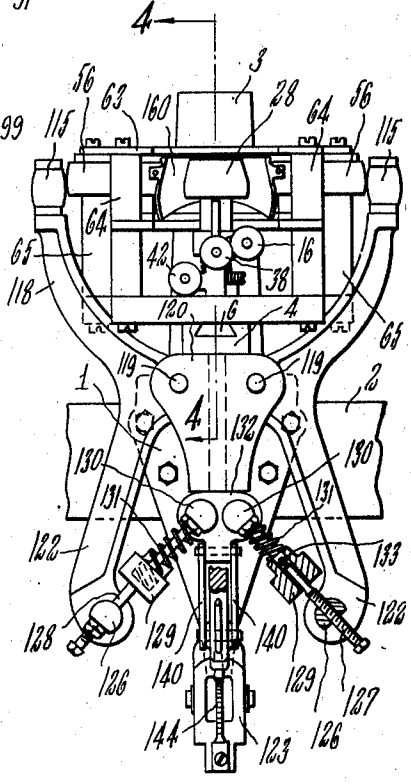


Fig. 2.

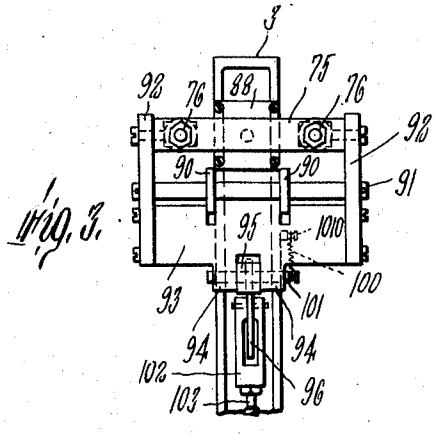


Fig. 3.

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METHOD OF AND MACHINE FOR SHAPING THE HEEL PORTIONS OF SHOES

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Fig. 4.

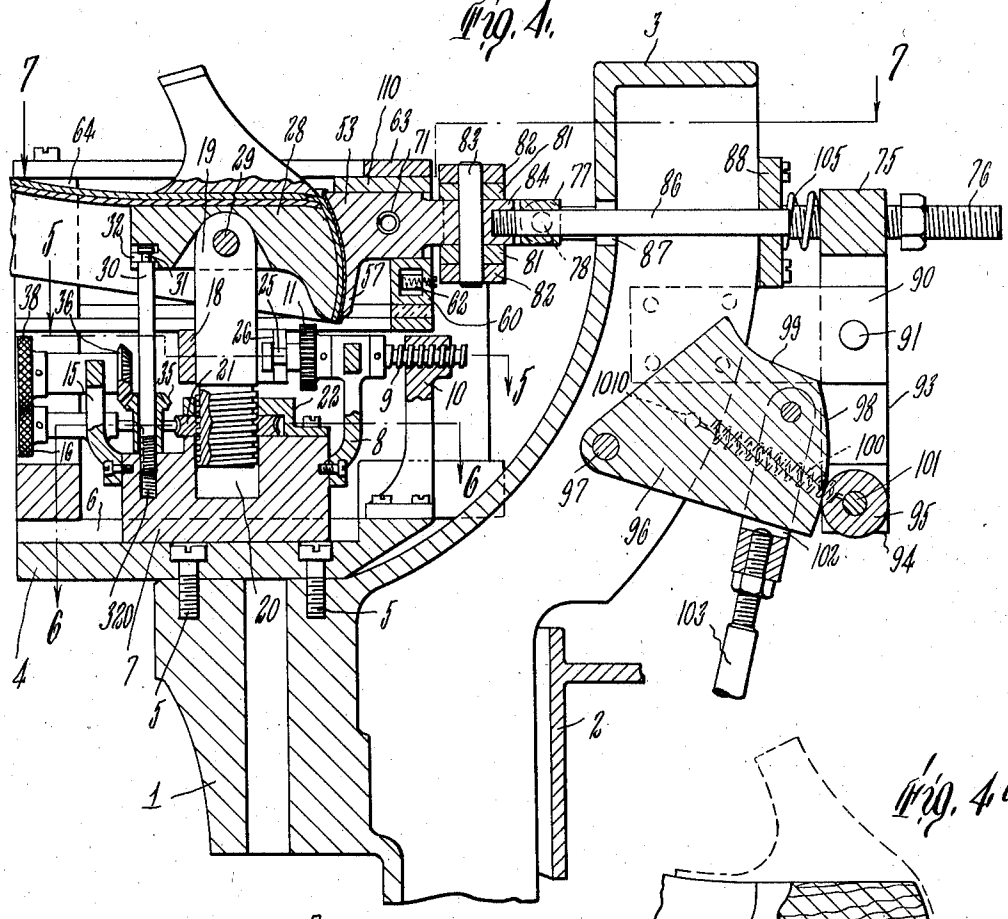


Fig. 4a

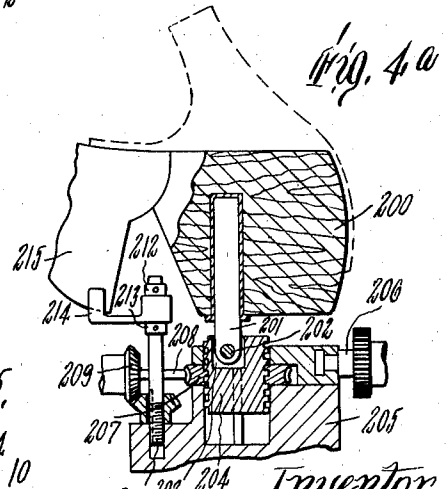


Fig. 5.

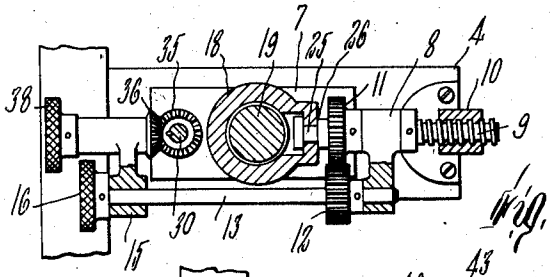
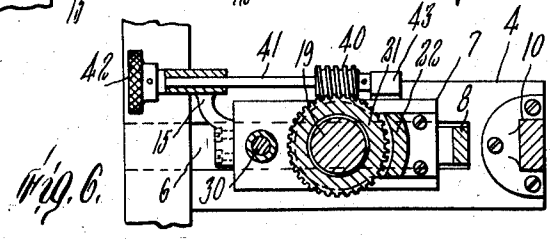


Fig. 6.



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METHOD OF AND MACHINE FOR SHAPING THE HEEL PORTIONS OF SHOES

Filed May 29, 1940 4 Sheets-Sheet 3

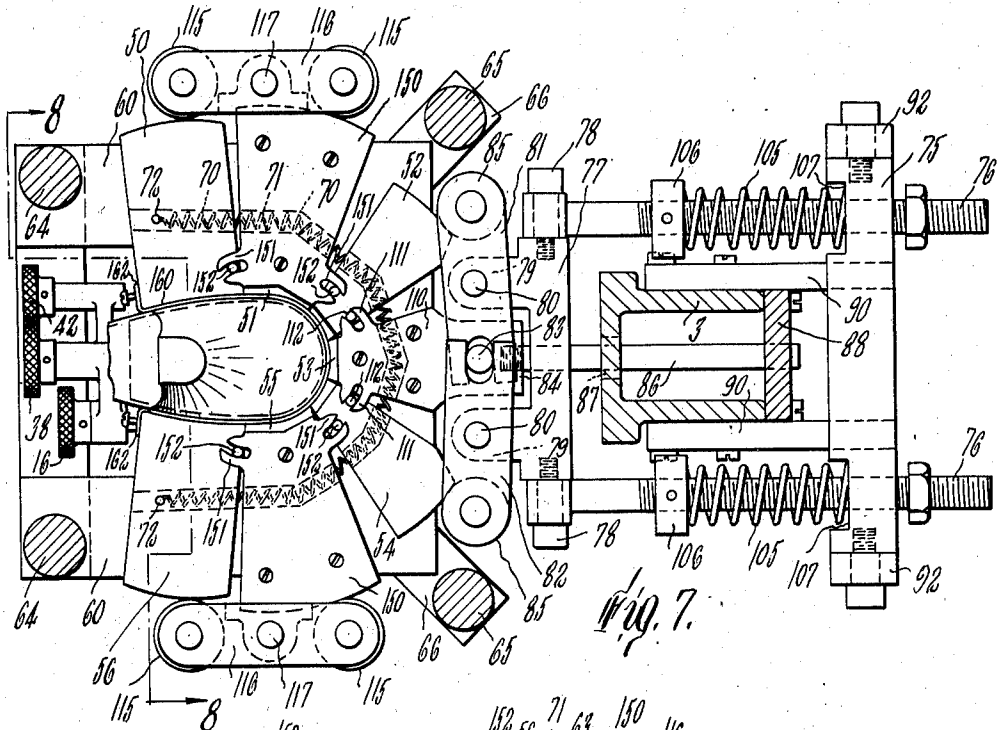


Fig. 7.

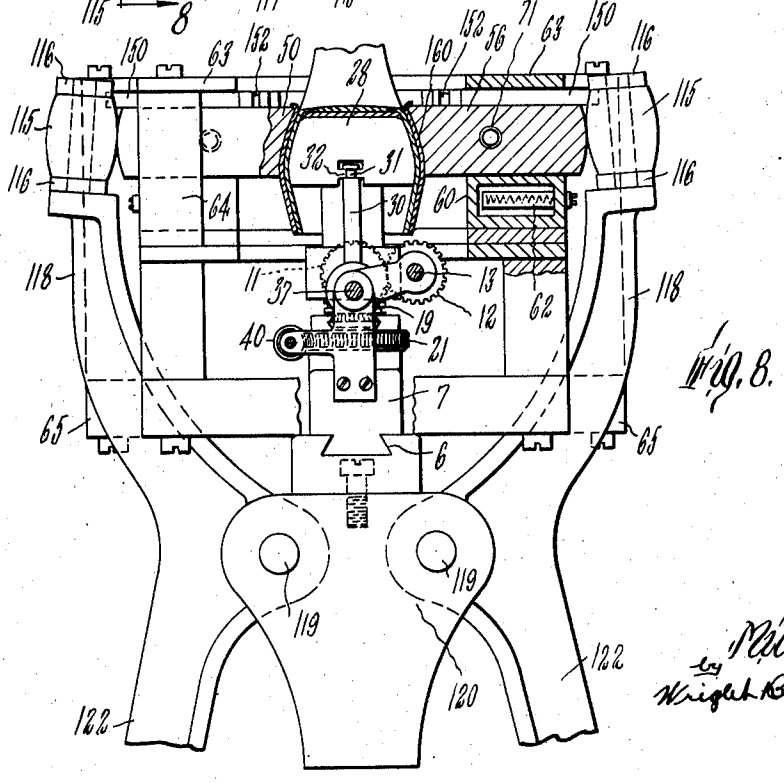


Fig. 8.

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METHOD OF AND MACHINE FOR SHAPING THE HEEL PORTIONS OF SHOES

Filed May 29, 1940 4 Sheets-Sheet 4

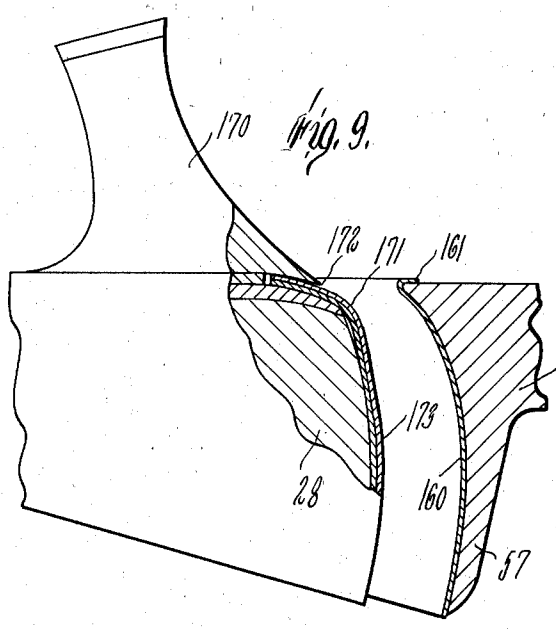


Fig. 9.

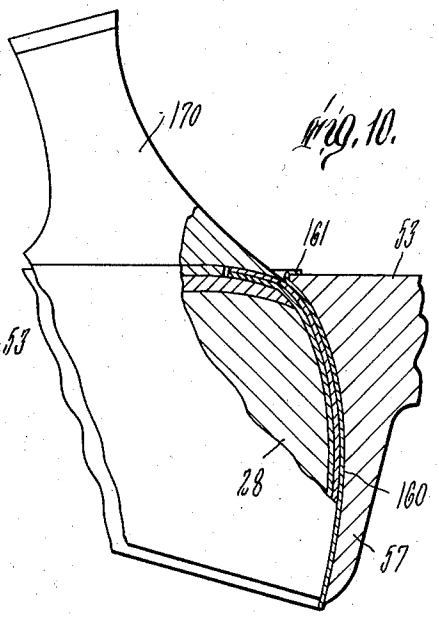


Fig. 10.

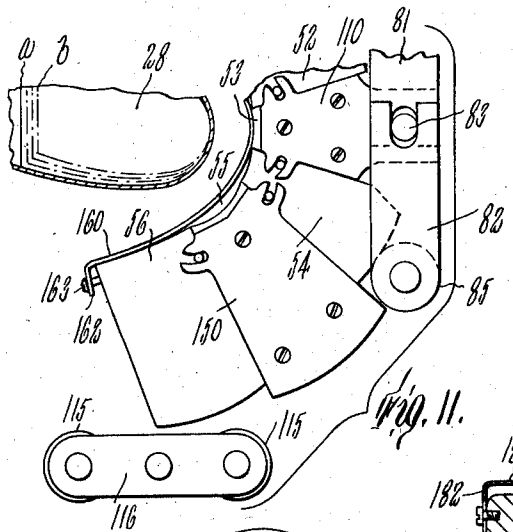


Fig. 11.

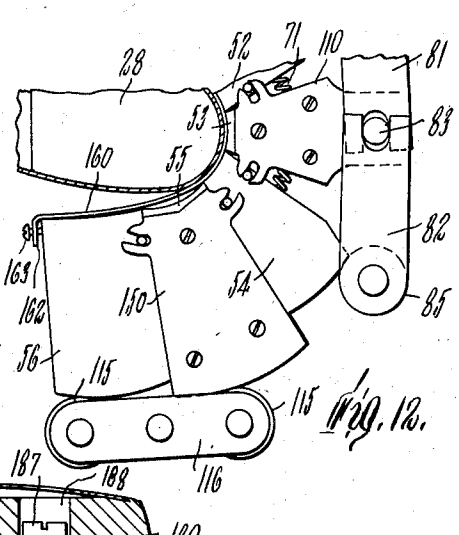


Fig. 12.

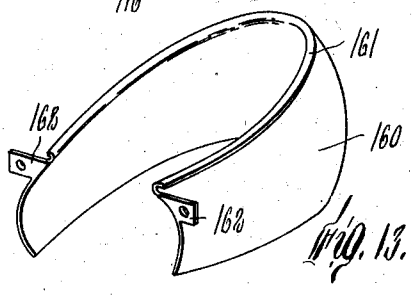


Fig. 13.

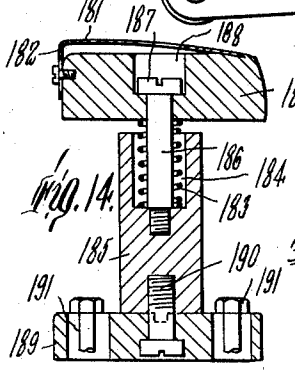


Fig. 14.

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UNITED STATES PATENT OFFICE

2,293,282

METHOD OF AND MACHINE FOR SHAPING THE HEEL PORTIONS OF SHOES

Milton L. Dodge, Newburyport, Mass.

Application May 29, 1940, Serial No. 337,784

30 Claims. (Cl. 12—51)

This invention relates to the shaping of the heel end portion of a shoe, and more particularly around the margin of the heel seat, so as to conform the margin of the heel seat to the heel, and it also has for an object to press the heel seam of the shoe, thereby flattening it and removing wrinkles and irregularities therefrom.

Heretofore it has been customary to attempt to remove irregularities, bunches, and wrinkles while conforming the margin of the heel seat of the shoe to the heel, by pounding with a hand hammer and ironing with a hand iron, this method also having been used in treating the heel seam of the shoe after assembling of the upper and counter. While attempts have been made to shape up the margin of the heel seat before the attachment of the heel, yet owing to variations in thicknesses of material, faulty workmanship, variations in the assembling of the assembled counter and upper portion on the innersole of the shoe, and the operation of securing the heel to the shoe, satisfactory results have not been obtained, and it has been found necessary to further pound and iron the heel seat margin after a heel of the wood heel type has been attached to properly line up the parts and fill in the juncture where the heel and heel seat should contact about their outer margins. While there are various machines which rub down and flatten the heel seams of shoes in the upper fitting room before they are assembled with the counter and placed over the innersole on the last, because of variations in thicknesses of materials and inaccuracies of workmanship the material is more or less bunched along the heel seam line where contact is made with the assembled counter stiffener. This often necessitates a further pounding and ironing in order to flatten and smooth the parts against the counter stiffener at the back portion of the shoe throughout its entire height.

An object of this invention, therefore, is to provide a method and mechanism which in one operation and with one set of forms will press the heel portion of the shoe upper adjacent to its heel seat and over its back seam regardless of size, width, style, and height of heel, thereby conforming the margin of the heel seat to the heel and removing wrinkles and irregularities in the surface of the heel portion of the shoe adjacent to and somewhat above the heel seat.

It has been found in practice that the curve of the heels of shoes where they contact with the upper, regardless of style and height, are substantially the same in the same sizes. It has been further found that for different sizes, the curves change and that therefore a two-sided jaw hinged at the back could not be made to conform to all sizes of heels.

In accordance with this invention, therefore, the pressing jaws are made in sections so related that they can be conformed very closely to the range of contours required for the various sizes of shoe heels.

A further object is to provide such a machine in which the shoe is so supported that it can be presented to the forming and pressing mechanism adjustable in such a manner that the pressing mechanism will operate at the outside portion of the shoe and more particularly along the margin of the heel.

For a more complete understanding of this invention, reference may be had to the accompanying drawings, in which

Figures 1 and 2 are side and front elevations, respectively, of a machine embodying this invention.

Figure 3 is a rear elevation of the upper portion of the machine.

Figure 4 is a detail section on line 4—4 of Figure 2.

Figure 4a is a view similar to a portion of Figure 4 but showing a modification in which a last instead of a special shoe form is employed.

Figures 5, 6 and 7 are detail sections on the correspondingly numbered section lines of Figure 4.

Figure 8 is a detail section on line 8—8 of Figure 7.

Figures 9 and 10 are diagrammatic views partly in section showing the shoe before and after treatment by the machine.

Figures 11 and 12 are fragmentary diagrammatic views showing the shoe pressing members in different relative positions.

Figure 13 is a perspective view of a liner for the pressing members.

Figure 14 is a vertical section through a modified construction of shoe supporting form.

Referring to the drawings, the mechanism is supported on a machine head 1 which may be carried on a bench (Figure 1), this head being provided with an upstanding arm 3 at its rearward end. Forwardly of this arm 3 there is secured to the head a slideway 4, Figure 4 showing screws 5 for securing this slideway in position. This slideway is provided with a dovetail groove 6 extending backwardly toward the arm 3 for slidably guiding a sliding block 7. In the ma-

chine shown in Figures 1 to 6, inclusive, this block 7 has a bracket portion 8 within which is journaled the forward end of a shaft 9, the rear end of which is threaded through a bracket 10 secured to the top face of the member 4 so that by rotation of the shaft 9 the position of the sliding block along its guideway may be adjusted. For producing such adjustment the shaft 9 carries a gear 11 which meshes with a gear 12 on the shaft 13 (Figures 5 and 8). This shaft 13 is journaled at its rear end in the bracket 8 and at its forward end in a bracket 15 secured to the forward face of the slide 7 and on the forward end of the shaft 13 is secured a knurled wheel 16 or other suitable means by which the shaft 13 may be turned. The forward end of the shaft 9 is journaled in a collar 18 surrounding a spindle 19, the lower end of which is slidable up and down within the socket 20 of the block 7 and has threaded thereon a worm wheel 21 held against the upper face of the block 7 by the retaining plate 22. The shaft 9 has a reduced diameter portion at 25 which engages in a slot 26 in the collar 18, so that the axial motion of the shaft 9 as it is turned, acting on the collar 18, moves the spindle 19 forwardly or rearwardly and thus moves the slide 7 correspondingly. At the upper end of the spindle 19 there is pivoted transversely thereto a shoe supporting form 28 (Figure 4), the pivot being transverse as shown at 29. The angular position of the form 28 about this axis 29 is determined by the axial adjustment of a rod 30 having a neck portion 31 engaging in a slot 32 in the forward face of the form 28, the lower end of this rod 30 being threaded into a socket 320 in the block 7. Above the block 7 this rod 30 has keyed thereto the hub of a bevel gear 35 which meshes with a gear 36 on a shaft 37 journaled horizontally in the bracket 15 and having means such as a knurled hand wheel 38 at its forward end, by the turning of which the angular position of the form 28 on its transverse pivot 29 may be determined.

The vertical adjustment of the form which is produced by rotation of the worm wheel 21 is produced by rotation of the worm 40 (see Figure 6) carried by a shaft 41 journaled in the brackets 15 and 43 and having turning means such as a knurled wheel 42 at its forward end.

These adjustments make possible the lining up of the heel seat face of the shoe supported thereon with pressing mechanism for engaging and shaping the counter portion of the shoe, particularly adjacent to the heel seat and to the heel seat margin of the heel and along the back seam. As shown best in Figure 4, the shoe is adjusted so that the upper face of the pressing means lies along the edge of the shoe heel and as shown is positioned slightly above the margin of the shoe heel so that the pressing face bridges over the juncture between the heel and the upper. All the adjustments for the correct positioning of the shoe form are accessible from the forward end of the machine, so that the operator can readily line up the heel seat of the shoe correctly to the pressing mechanism.

Instead of employing a special form for supporting the shoe off the last, the last itself may be used as shown in Figure 4*a*. This last shown at 200 is carried on a last pin 201 pivoted for forward and back tilting on a pivot 202 within a socket 203 in a support 204. The support 204 is keyed in a socket in the slide 205 which takes the place of the slide 7 shown in Figures 4, 5, 6 and 8. The slide 205 may be adjusted forwardly or rearwardly by rotation of the shaft 206 mounted for actuation similarly to the shaft 9 of Figures 4 and 5. The support 204 is threaded through the worm wheel 207 rotated by a worm on the shaft 208 whereby the height of the shoe may be adjusted. The angular position of the shoe about the pivot 202 is adjustable by the turning of a bevel gear 209. This gear 209 meshes with a bevel gear 210 keyed to the upright screw shaft 211 threaded in the slide 205, this shaft supporting between collars 212 and 213 adjustably fixed thereon a forked arm 214 which engages on opposite sides of the portion 215 of the last. All of these adjustments of the last may be made by turning suitable hand wheels secured to the actuating shafts for such adjustments, similar to the corresponding adjustments shown for the shoe supporting form 28 in Figures 2, 4, 8, etc.

The pressing mechanism, as shown, comprises a plurality of pressing blocks, seven of which are shown, at 50, 51, 52, 53, 54, 55 and 56. The block 53 is contoured to engage the heel seam portion of the shoe, and as shown in Figure 4, it may be extended as at 57 to engage along the heel seam for a considerable distance from the heel seat. The other blocks may be narrower, if desired, since ordinarily a relatively narrow portion of the counter portion of the shoe needs to be pressed in order to properly shape the counter portion to cause the heel seat of the shoe to engage the upper edge of a heel of the wood heel type throughout substantially its entire length on both sides and at the back, and to provide a smooth contour to the heel portion of the shoe across and adjacent to the juncture between the heel and the shoe upper, eliminating all "grins" about the top margin of the heel and ironing and pressing out bunches and irregularities in the shoe heel seat, such as heretofore have been removed as much as possible by a hand pounding and ironing operation and smoothing the shoe lining to the contour of the form or last. These other blocks may, however, be wider if it is desired to extend the shaping operation to a greater distance from the heel. Means are provided for moving the blocks into pressing engagement with the shoe carried by the form 28. The central rear block 53 and the adjacent intermediate blocks 52 and 54 are arranged to be moved by a mechanism at the back of the machine, while the front blocks 50 and 56 and their next adjacent blocks 51 and 55 are operated by side pressure mechanisms as will later appear.

All these blocks are supported on the top face of a generally U shaped platform 60 which passes about the sides and rear of the form 28 but out of contact therewith. This platform 60 may be provided with suitable sockets for the reception of heating units such as the electrical units shown at 62, the heating of this platform acting to heat the pressure blocks 50 to 56, inclusive. A generally U-shaped cover plate 63 extends over the top faces of the pressure blocks and may be spaced from the platform 60 by the posts 64 at the forward end of the machine and by posts 65 at the rear end of the machine. The posts 65 extend between extensions 66 of the platform 60 and similar extensions of the top plate 63. The pressure blocks are provided with perforations therethrough between their top and bottom faces as at 70 for the reception of a coil spring 71, the ends of which are secured as at 72 within the forward blocks 50 and 56. This spring tends to press the forward blocks 50 and 56 outwardly so as to open up the pressing mech-

anism. The central block 53 and its adjacent blocks 52 and 54 are moved forwardly and inwardly to engage the heel portion of a shoe on the form 28, and for this purpose an actuating bar 75 has opposite end portions perforated for the reception of a pair of eye bolts 76 which are pivoted to opposite ends of a yoke member 77 as by the pivot screws 78. The yoke 77 has a pair of forwardly extending spaced ears 79 which are connected by pivots 80 to pairs of links 81 and 82. The inner ends of these links are slotted to take over a pin 83 which extends through a rearwardly extending shank portion 84 of the central pressure block 53. The outer ends of the links 81 and 82 carry between them rollers 85 which bear against the rear extremities of the blocks 52 and 54. The shank 84 of the central block 53 has threaded thereinto the rear end of a guide rod 86 which extends through a hole 87 in the forward face of the frame portion 3 and is slidably guided through a hole in a plate 88 screwed to the back face of the portion 3. Beneath this plate 88 the portion 3 has secured thereto a pair of spaced plates 90 which extend rearwardly thereof and support a pivot pin 91 on which side plates 92, pivoted to the ends of the member 75, are fulcrumed. The lower ends of the side members 92 are connected together by a member 93 (see Figure 3), having a pair of spaced downwardly extending ears 94 between which is journaled a cam follower 95. Cooperating with this cam follower 95 is a cam plate 96 fulcrumed at 97 between the sides of the frame member 3 and provided with a cam face 98 struck about the axis of the pivot 97 and a cam face 99 forming a continuation of the face 98, but sweeping inwardly from the adjacent end of the face 98. A spring 100 fixed at one end to the fulcrum pin 101 on which the follower roll 95 is journaled and at its other end at 101 to a part of the frame member 3 acts to hold the follower roll 95 against the edge of the cam 96. The cam 96 is connected through a forked link 102 to the upper end of a thrust bar 103 by the lifting of which the member 75 is rocked from the position shown in Figure 1 to that of Figure 4, this motion acting through the coil springs 105, surrounding the eye bolt 76, and each bearing at one end on a collar 106 threaded on its eye bolt and at the other on the base 107 of a seat in the member 75 (Figure 7), forces the yoke member 77 forwardly and brings the pressure blocks 52, 53 and 54 toward the shoe on the form under equalized pressure during the initial upward motion of the bar 103, further upward motion while the roller 95 rides on the edge 98 being idle.

In order that the blocks 52, 53 and 54 may be maintained in proper relationship, the block 53 is connected to the blocks 52 and 54 through pin and slot cam connections. Thus the block 53 is overlaid by a cam plate 110 having slotted ears at 111 which engage pins 112 projecting from the blocks 52 and 54. The cam plate 110, together with the block 53, substantially fill the space between the heated platform 60 and the cover plate 63, allowing, however, for a free sliding motion of the block 53 toward and from a shoe on the form. The pressure being applied to the pairs of links 81 and 82 first causes the block 53 to engage the shoe on the form, whereupon further pressure rocks the links 81 and 82 and presses their cam rollers 85 against the blocks 52 and 54. By this arrangement the inner corners of the blocks 52, 53 and 54 are maintained in contact and the pressing faces of these blocks define a substantially unbroken contour line for the rear portion of the shoe which is suitable for all the various sizes and shapes of heels.

The side blocks 50, 51 and 55, 56 have bearing on their outer cam face peripheries the cam rollers 115 pivoted between the pairs of pressure distributing links 116 which are fulcrumed on pins 117 carried by a pair of side presser arms 118. These side presser arms are fulcrumed at 119 between lugs 120 and 121 on this head. Below the pivotal connections at 119 these arms extend outwardly and have forked extremities 122 connected through a spring toggle mechanism to a hand actuated lever 123. This lever 123 is fulcrumed at 124 to the machine frame and at its rear end it is connected to the thrust bar 103.

As shown each toggle mechanism comprises a perforated cross member 126 through which is adjustably positioned a central screw 127 and a pair of side screws 128. The inner end of this screw 127 extends into a double spring seat bar 129 between which and a double spring seat bar 130 are positioned coil springs 131 surrounding the side screws 128. The spring seat bars 130 are pivotally carried by the plate 132. The central screw 127 bears against a cross pin 133.

The lever 123 is connected through a pair of links 140 to the plate 132 so that by depressing the forward end of the lever 140, this plate 132 is depressed, thus rocking the lower ends of the arms 122 outwardly and bringing in the cam rollers 115 into pressing relation to the blocks 50, 51, 55 and 56 through the yielding connections afforded by the springs 131. The lever 123 is provided with a ratchet detent mechanism of well known type comprising a ratchet member 144 fixed to the machine frame and a releasable detent 145 controlled by a lever 146 carried by the handle lever 123. This provides for tightening up the pressure blocks to the desired point, depending upon the size of the heel portion of the shoe being treated and the pressure which it is desired to apply thereto.

In order to insure the maintenance of the adjacent corners of the pressing faces of these blocks in proper relation to each other, each of the blocks 51 and 55 is provided with a cam plate 150 similar to the cam plate 110 and provided with slotted ears 151 which take over pins 152 in the blocks 50, 52 and 54, 56. These cam plates 150 also fill up the space between the upper faces of the blocks which carry them and the top cover plate 63.

While it is found that by the use of seven blocks which are maintained with the edges of their contact faces in contact with the edges of the contact faces of the next adjacent blocks, all the size variations met with commercially may be properly taken care of, a further refinement comprises a continuous facing for all of these blocks. Such a facing is shown detached in Figure 13 and may comprise a single piece of sheet material 160 which preferably has an out-turned rim 161 at its upper edge for engagement over the upper faces of the various presser blocks and perforated laterally extended ears 162 at the forward ends which may be secured as by screws 163 to the forward side edges of the end blocks 50 and 56. Where the blocks are intended to be heated as herein shown, this member 160 is preferably of sheet metal, though should it be desired not to heat the pressing means, a facing

material such as leather, or the like, will be found suitable. Such a facing material wholly prevents formation of any marks on the shoe upper at the junctures between the pressing blocks and also insures a continuously smooth curved contour for the treated shoe counter portion. The term "operative engagement" in certain of the claims herein as applied to the action of the pressing blocks on the shoe upper is intended to denote this action where the blocks directly engage the shoe upper or act indirectly as through a facing thereon.

The range of curvatures for shoe heels of different size and style is shown by the various dot and dash lines of Figure 11, the maximum size being indicated by line *a* and the minimum by line *b*, and there being shown two intermediate sizes.

In Figures 9 and 10 is illustrated the action of the machine, a heel of the wood heel type being shown at **170**. The untreated shoe usually presents a bulge at **171** and the shoe upper may not contact fully with the margin of the heel, leaving a "grin" as shown at **172**. Likewise, the heel seam portion may be more or less irregular, this seam being shown at **173**. The shoe to be treated is placed on the form and the pressure members are then brought into pressing relation thereto, the shoe support having been adjusted so that the edge of the pressing mechanism follows the line of the heel seat of the heel from side to side and around the back of the shoe so that the upper portion of the pressing mechanism when in position engages the shoe upper closely adjacent to the juncture of the heel with the heel seat of the shoe. This pressure mechanism acts to first press against the back of the shoe, including the heel seam, further downward motion of the handle bringing the side pressure blocks into action, the extent of motions of these latter blocks depending on the shape and size of the heel seat portion of the shoe and the pressure which it is desired to exert on the shoe. After pressure has been exerted for the desired time the hand lever is released and lifted so as to free the shoe for removal from the form. By the action of the machine the bulge at **171** is eliminated, the upper materials plumped out so as to engage closely with the outer margin of the heel, and the whole contour of the counter brought into a substantially continuous curvature with the outer face of the heel both at the extreme rear end of the shoe and around the sides of the counter.

In order that the upper pressing blocks may properly line up with the margin of the heel seat of the heel, it is desirable that the various adjustments for the heel form hereinbefore described be employed and with the machine so constructed there is some inherent tendency for the pressure blocks to produce a wiping action on the shoe toward the heel seat. This wiping action may be considerably increased by the use of a shoe support such as shown in Figure 14. Referring to this figure, the form **180** is provided with a cover portion **181** having a flanged front end at **182** which may be adjustably secured as by a screw and slot with the forward face of the form **180**. This provides for some adjustment of the angular relation of the shoe lengthwise of the pressing mechanism. This form may be spring supported as on the spring **183** seated in a socket **184** in a post **185**, this spring surrounding a screw **186** threaded at its lower end into the base of the spring socket and having a head **187** seated in a recess **188** in the top face of the form **180**. The post **185** is shown as secured to a block **189** as by the screw **190**, and this block may be adjustably fixed to the slide **7** as by the bolt and slot arrangement shown at **191**. The spring **183** tends to hold the shoe elevated, but permits the shoe to be crowded down by the pressure exerted thereon by the pressure blocks which produce a downward pressure component, this downward motion of the shoe producing the desired wiping action. This spring also acts as a limited automatic heightwise adjustment for the shoe support.

It will be noted that the rear faces of the pressure blocks **50**, **51**, **53** and **54**, **55** and **56** are convex cam faces where their operating rollers contact therewith. The curvatures of these faces as well as the relative lever arms of their respective actuating levers have an effect in determining the pressure exerted by these several blocks on the shoe, and should be so chosen as to obtain the desired pressure distribution.

From the foregoing description of certain embodiments of this invention, it should be evident to those skilled in the art that various changes and modifications might be made without departing from the spirit or scope of this invention as defined by the appended claims.

I claim:

1. In a machine of the class described, mechanism for pressing the upper of a heeled shoe around its heel end including means engaging the shoe upper closely adjacent to the juncture of the heel with the heel seat of the shoe, and means for actuating said mechanism to press the shoe upper into a contour merging with the contour of the outer heel surface.

2. A machine of the class described, comprising means for supporting a shoe having a heel, mechanism for pressing the outside of the counter portion of said shoe into substantial continuity with the adjacent face of said heel including a plurality of more than two shoe engaging members together defining a substantially continuous shoe engaging surface for the sides and back of the counter portion to the edge of said heel, and means for closing said members against said shoe.

3. A machine of the class described, comprising means for supporting a shoe having a heel, mechanism for pressing the outside of the counter portion of said shoe into substantial continuity with the adjacent face of said heel comprising a plurality of shoe engaging means together defining a substantially continuous shoe engaging surface for the sides and back of the counter portion to the edge of said heel, and means for closing said members against said shoe, adjacent members having interengaging portions for holding said members in relative positions for wrapping engagement around the side and back of the heel with shoes of different sizes and styles.

4. In a machine of the class described, mechanism for pressing a shoe upper around its heel end about the margin of its heel seat into substantial continuity with the adjacent face of the heel of the shoe which comprises a series of pressing members each having a face portion for operating engagement with the shoe upper to the edge of said heel, means for holding said members with said face portions at their edges in registry with the edges of adjacent pressing members, and means for actuating said mechanism.

5. In a machine of the class described, means for pressing the upper of a shoe around its heel end about the margin of its heel seat and against the top margin of the heel, which comprises a series of compressing members each having a face portion for operative engagement with the shoe upper, a flexible lining for said face portions bridging over adjacent members, and means for engaging said lining about the shoe upper following the line of the heel seat of the heel of the shoe.

6. In a machine of the class described, means for pressing the upper of a shoe around its heel end about the margin of its heel seat and against the top margin of the heel which comprises a series of pressing members each having a face portion for operative engagement with the shoe upper, a flexible lining for said face portions secured at its ends to the end members of said series, and means for engaging said lining about the shoe upper following the line of the heel seat of the heel of said shoe.

7. In a machine of the class described, means for pressing the upper of a shoe around its heel end about the margin of its heel seat and against the top margin of the heel which comprises a series of pressing members each having a face portion for operating engagement with the shoe upper, means for holding said members with said face portions at their edges in registry with the edges of adjacent pressing members, a flexible lining for said face portions, and means for engaging said lining about the shoe upper following the line of the heel seat of the heel of said shoe.

8. A machine of the class described, comprising a support, means supporting a shoe provided with a heel and with its heel end extending into said support, a series of shoe pressing blocks slidably mounted on said support to close about the heel end of a shoe placed therebetween following the line of the heel seat of the shoe heel, and means for moving said blocks.

9. A machine of the class described, comprising a generally U-shaped support, means supporting a shoe provided with a heel and with its heel end extending into said support, a series of shoe pressing blocks slidably mounted on said support to close about the heel end of a shoe placed therebetween following the line of the heel seat of the shoe heel, means for moving said blocks, and means for heating said blocks.

10. A machine of the class described, comprising a generally U shaped support, means supporting a shoe provided with a heel and with its heel end extending into said support, a series of shoe pressing blocks slidably mounted on said support to close about the heel end of a shoe placed therebetween following the line of the heel seat of the shoe heel, means for moving said blocks, and interconnecting means between adjacent blocks for maintaining their faces confronting the shoe in substantial continuity.

11. A machine of the class described, comprising a generally U shaped support, means supporting a shoe with its heel end extending into said support, a series of shoe pressing blocks slidably mounted on said support to close about the heel end of a shoe placed therebetween, and means for moving said blocks, certain of said blocks being provided with projecting pins and the adjacent blocks being provided with slotted ears for the reception of said pins for maintaining their shoe confronting faces in continuity.

12. A machine of the class described, comprising a plurality of members for pressing the upper of a shoe about the heel end and adjacent to the heel seat, said members being arranged in a series extending from one side of the shoe around the heel end and forwardly on the opposite side of the shoe, an intermediate one of said members being arranged to engage the heel seam portion of the shoe, links operatively connecting said one member to members on either side thereof, and means engaging intermediate points of said links for moving said one member and said link connected members toward a shoe presented thereto.

13. A machine of the class described, comprising a plurality of members for pressing the upper of a shoe about the heel end and adjacent to the heel seat, said members being arranged in a series extending from one side of the shoe around the heel end and forwardly on the opposite side of the shoe, an intermediate one of said members being arranged to engage the heel seam portion of the shoe, links operatively connecting said one member to members on either side thereof, means engaging intermediate points of said links for moving said one member and said link connected members toward a shoe presented thereto, said series also including side shoe presser members forwardly of said link connected members, and means for moving said side members toward said shoe.

14. A machine of the class described, comprising a plurality of members for pressing the upper of a shoe about the heel end and adjacent to the heel seat, said members being arranged in a series extending from one side of the shoe around the heel end and forwardly on the opposite side of the shoe, an intermediate one of said members being arranged to engage the heel seam portion of the shoe, links operatively connecting said one member to members on either side thereof, means engaging intermediate points of said links for moving said one member and said link connected members toward a shoe presented thereto, said series also including side shoe presser members forwardly of said link connected members, means for moving said side members toward said shoe, and common actuating means for said member moving means.

15. A machine of the class described, comprising a plurality of members for pressing the upper of a shoe about the heel end and adjacent to the heel seat, said members being arranged in a series extending from one side of the shoe around the heel end and forwardly on the opposite side of the shoe, an intermediate one of said members being arranged to engage the heel seam portion of the shoe, links operatively connecting said one member to members on either side thereof, means engaging intermediate points of said links for moving said one member and said link connected members toward a shoe presented thereto, and interconnections between adjacent members for holding their shoe-engaging faces in substantial continuous contour relation.

16. In a machine of the class described, shoe pressing mechanism including a series of pressing members each having a face portion for operative engagement with a shoe upper following the line of the heel seat of the shoe heel, and connections between said members for maintaining said members in assembled relation.

17. In a machine of the class described, shoe pressing mechanism including a series of pressing members each having a face for operative engagement with a shoe upper about its heel seat

and adjacent to its heel, and means for pressing said members in definite paths to conform to various sizes of heels.

18. A machine of the class described, comprising a series of more than three blocks for pressing the margin of a heel seat of a shoe next to the heel, and means operative to close said blocks about said margin and about the margin of the shoe heel.

19. A machine of the class described, comprising a shoe support, means for pressing against the back and sides of the shoe heel portion of a shoe carried on said support, and means for adjusting the height and angular position of said support to position the shoe with one face of said pressing means lying along the edge of the heel of a shoe on said support.

20. In a machine of the class described, a machine head, a block supported for front and back motions on said head, a spindle mounted for up and down motion in said block, a shoe form pivoted on an axis transverse to said spindle, a rod operatively secured to said form at one side of said pivot, means for adjusting said block with respect to said head, means for adjusting said spindle up and down with respect to said block, and means for adjusting said rod to adjust the angularity of said form on said spindle.

21. In a machine of the class described, a machine head, a block supported for front and back motions on said head, a spindle mounted for up and down motion in said block, a shoe form pivoted on an axis transverse to said spindle, a rod operatively secured to said form at one side of said pivot, means for adjusting said block with respect to said head, means for adjusting said spindle up and down with respect to said block, means for adjusting said rod to adjust the angularity of said form on said spindle, and means positioned at the front of the machine for actuating all of said adjusting means.

22. In a machine of the class described, a machine head, a block supported for front and back motions on said head, a spindle mounted for up and down motion in said block, a shoe form pivoted on an axis transverse to said spindle, a rod operatively secured to said form at one side of said pivot, mechanism supported adjacent to said form for engaging about the sides and heel end of a shoe carried on said form, means for adjusting said block with respect to said head, means for adjusting said spindle up and down with respect to said block, and means for adjusting said rod to adjust the angularity of said form on said spindle.

23. A machine of the class described comprising a shoe support, means for pressing against the back and sides of a shoe carried on said support, and means for adjusting the position of said support to position the shoe with one face of said pressing means bridging over the juncture between the upper and the heel of a shoe on said support and in position to press the shoe into smooth contour with the adjacent surface of the shoe heel during the pressing action.

24. In a machine of the class described, means for pressing the counter portion of a shoe adjacent to the heel, and means for relatively adjusting the heightwise position of the heel seat of the shoe in relation to the pressing means to cause said pressing means to press the shoe into smooth contour with the adjacent surface of the shoe heel.

25. In a machine of the class described, means for pressing the counter portion of a shoe adjacent to the heel, and means for relatively adjusting the angular position of the heel seat of the shoe in relation to the pressing means to cause said pressing means to press the shoe into smooth contour with the adjacent surface of the shoe heel.

26. In a machine of the class described, means for pressing the counter portion of a shoe adjacent to the heel, and means for relatively adjusting both the heightwise and angular positions of the heel seat of the shoe in relation to the pressing means to cause said pressing means to press the shoe into smooth contour with the adjacent surface of the shoe heel.

27. The method of shaping the heel portion of a heeled shoe to shape the heel seat margin to the heel, which comprises simultaneously pressing the shoe upper around the heel seat portion of the shoe inwardly and into a contour merging with the contour of the shoe heel.

28. The method step which comprises pressing a shoe upper to smooth, curved contour around its heel end about the margin of its heel seat and merging with the contour of the heel and throughout substantially the full length of its heel seam portion in a single operation.

29. The method step which comprises conforming in one operation the heel seat of a shoe to the heel thereof around substantially the entire outer edge of the heel and with a component of pressure directed toward said heel.

30. The method of shaping the heel portion of a heeled shoe to shape the heel seat margin to the heel, which comprises simultaneously pressing the shoe upper closely adjacent to and around the juncture of the shoe upper and heel inwardly and into a contour merging with the contour of the shoe heel while smoothing the lining.

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