

SHOE FABRICATION TECHNIQUES

CHAPTER 3

ALTERNATIVE REGULAR WEIGHT



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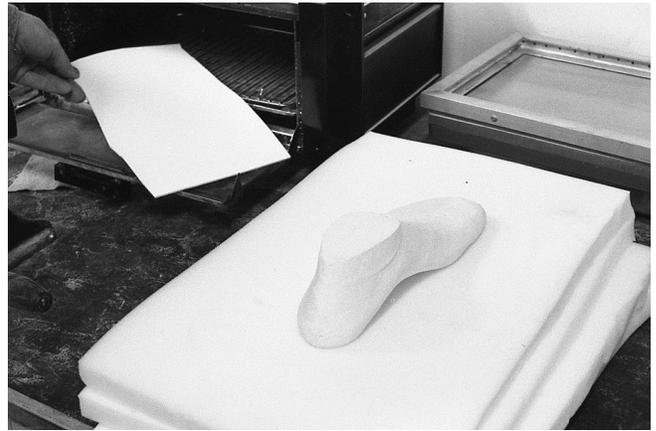
The alternative regular weight shoe is another variation of techniques, processes, materials and compromises. The purpose is to satisfy the diverse needs of individual wearers. The alternative regular weight still maintains the desirable attributes of the traditional regular weight shoe.

As an amateur, vocational or professional molded shoe, boot or sandal maker, you should have a good understanding of alternative methods and materials. You will then be able to choose and select the best way for your intended application. Maybe you will even develop your own modifications as circumstances require.

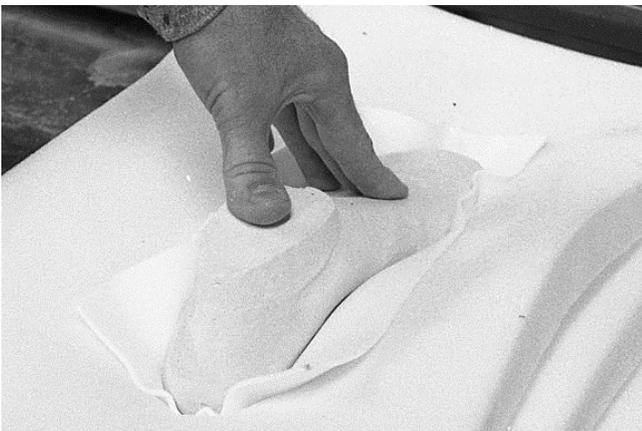
The important principle to maintain is quality of the final product, to provide a proper fit and comfort to the wearer. This is always based on the philosophy that the best custom footwear is achieved by molding the shape of the footwear to wearer's feet. Achieving form and space is the artisan's challenge.



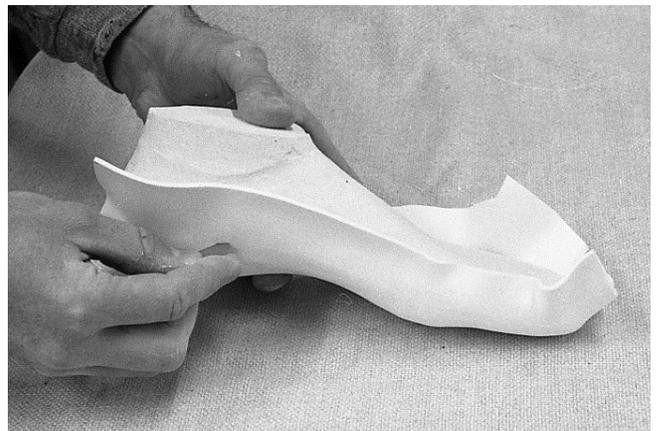
1 1/8" Pe-Lite® (3mm) is cut from sheet to make insert for foot bed inside of shoe.



2 Pe-Lite® is heated in oven at about 250F until it slightly begins to curl.



3 Pe-Lite® is placed on top of foam. Last is placed on top of Pe-Lite® and pressed into foam until it cools enough to take and retain the shape of the bottom of last.



4 Single edge razor blade is used to trim off excess Pe-Lite®.



5 Ditto.



6 Pe-Lite® is sanded so edges meet the perpendicular edge of last.



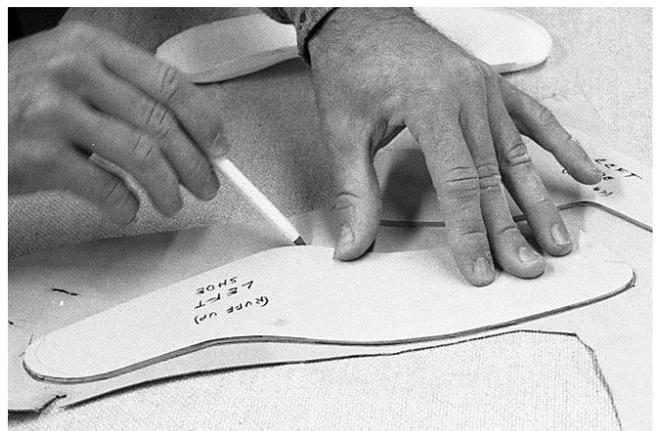
7 Ditto.



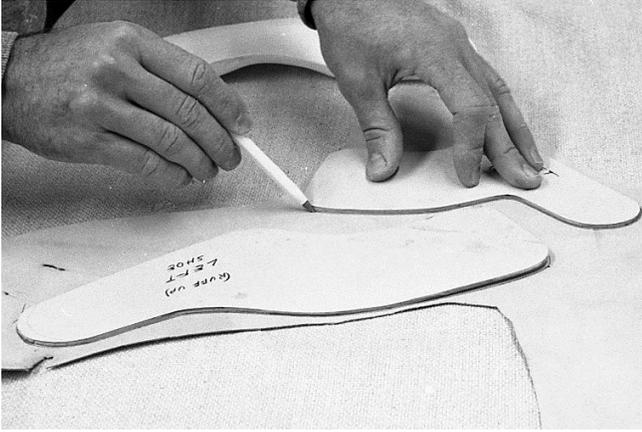
8 Ditto.



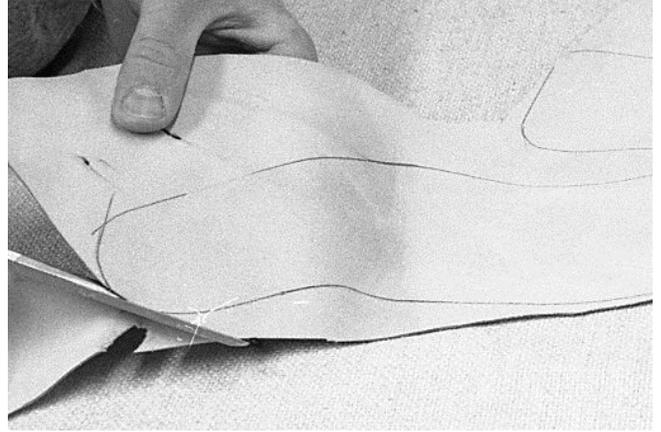
9 Last is soaked in water for about one minute or so.



10 Pattern of lining is placed on lining leather and outer shape of pattern is traced or transferred to smooth side of lining leather.



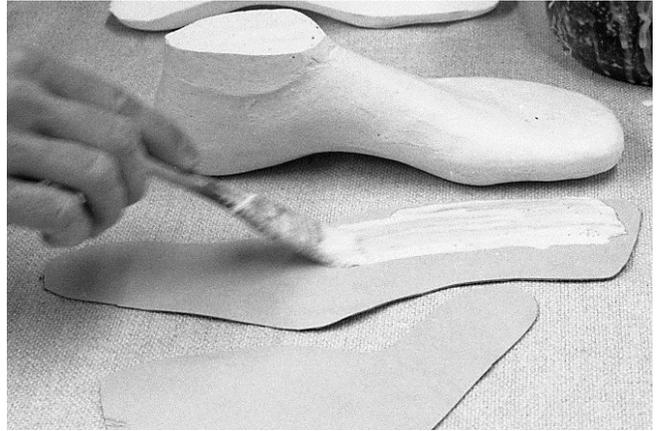
11 Ditto.



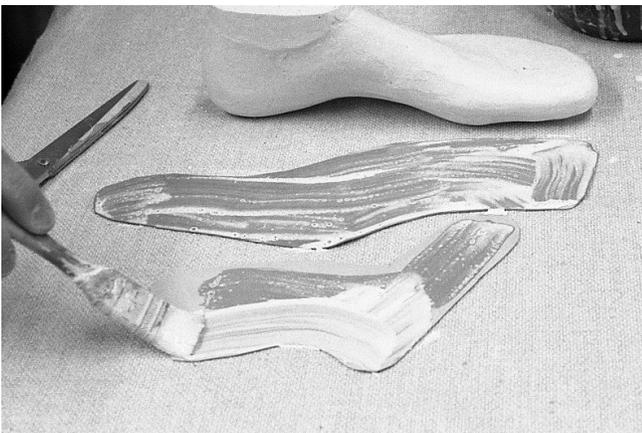
12 Lining leather is cut to shape of pattern.



13 Ditto.



14 Latex is applied to smooth side of lining leather.



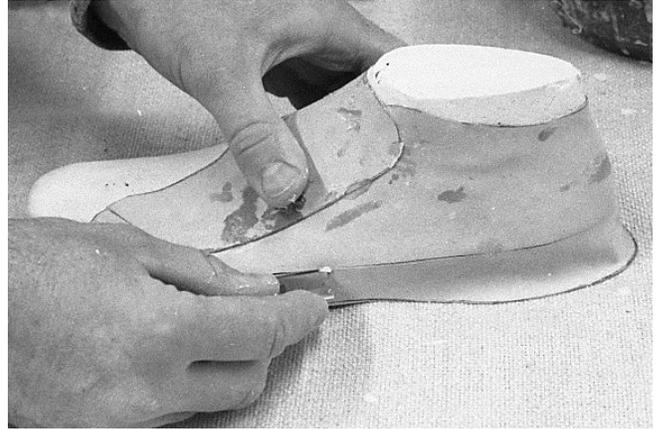
15 Ditto.



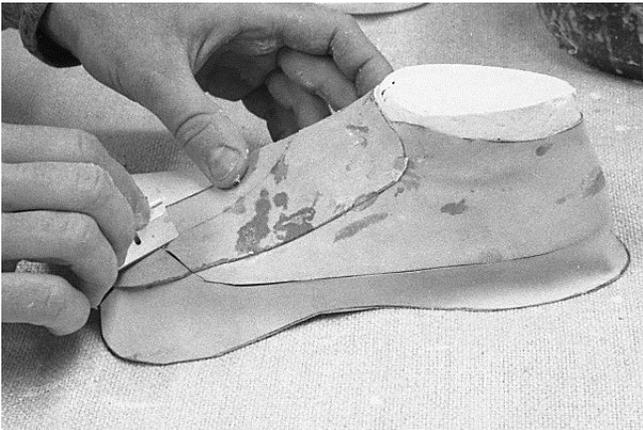
16 Latexed surface of lining leather is placed on last and pressed into place when wet.



17 Second lining leather piece is placed on last and pressed into place.



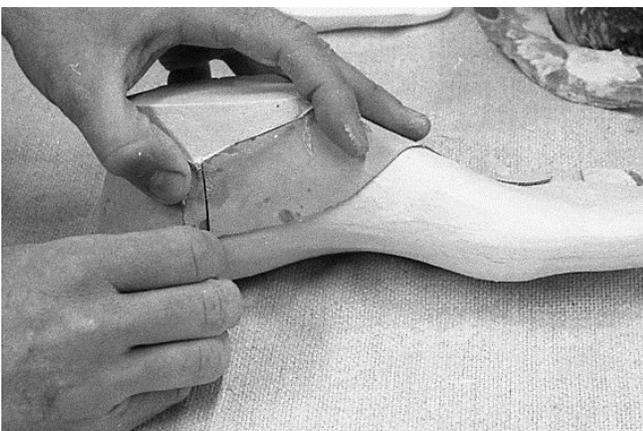
18 Razor blade is used to cut off waste.



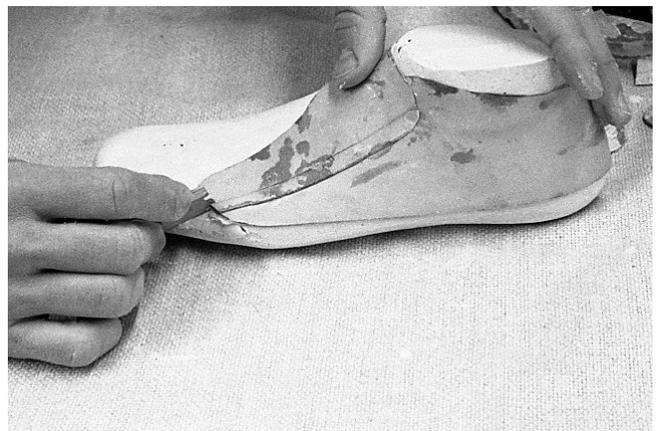
19 Ditto.



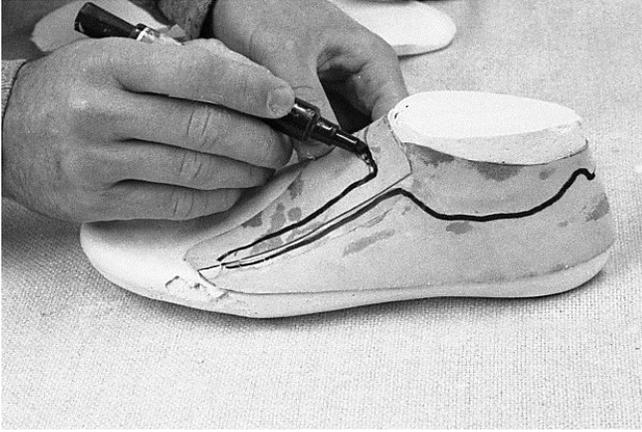
20 Ditto.



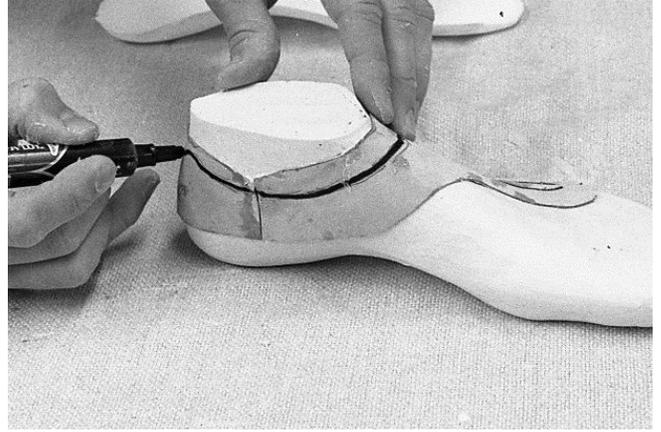
21 Common edges are cut at inner side seam.



22 Common edges are cut at lace opening.



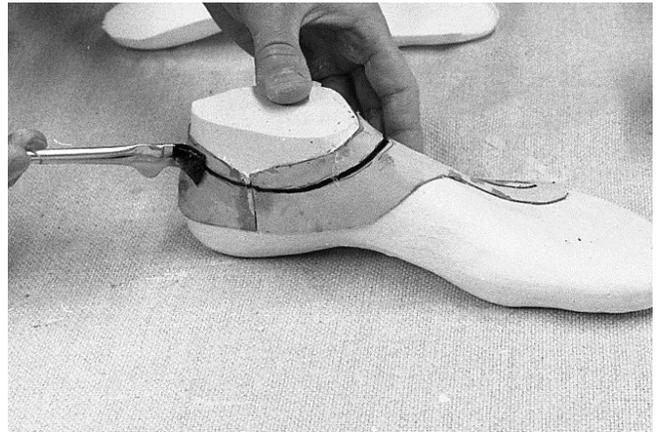
23 Upper edge of shoe is marked.



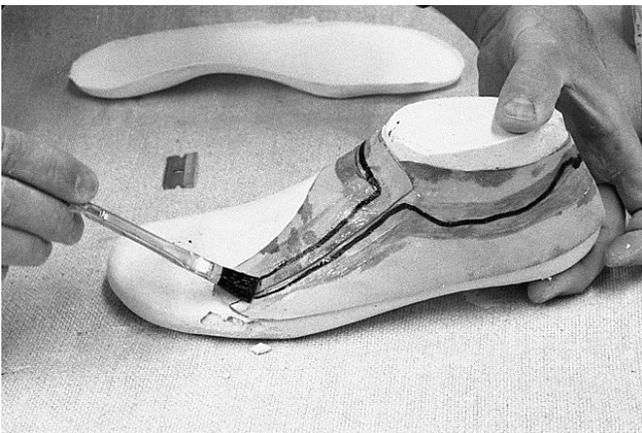
24 Ditto.



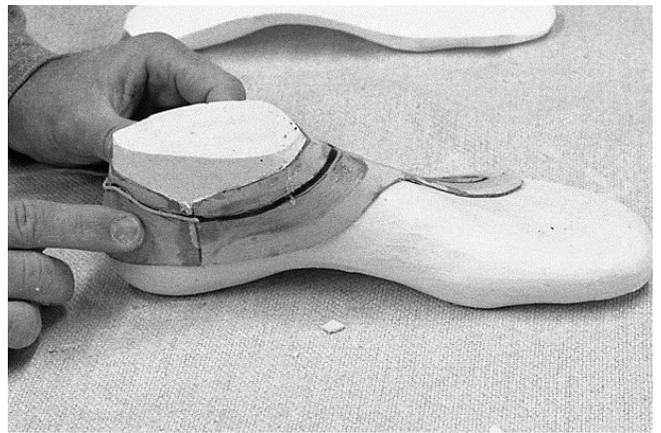
25 Glue is applied to design string.



26 Glue is applied to lining leather.



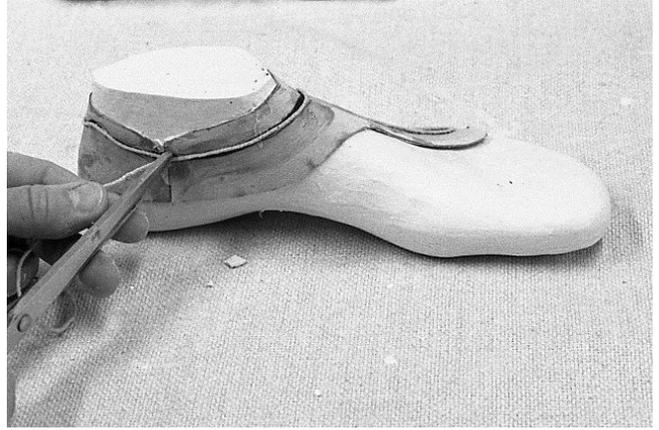
27 Ditto.



28 Design string is placed on lining leather.



29 Ditto.



30 Ditto.



31 Insert is put on proper position on last.



32 Double knit sock is pulled over last.



33 Ditto.



34 Ditto.

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35 If a standard (heavy) weight shoe is desired, a second double knit sock is pulled over first sock. If a lighter weight (less ridged) shoe is desired only one sock can be used.



36 Ditto.



37 Ditto.



38 Ditto.



39 Ditto.



40 The socked last is dipped in latex (preferably 3E6S).



41 Ditto.



42 Excess latex is pressed out of socks.



43 Ditto.



44 Ditto.



45 Ditto. Sock is hand molded to fit contours of last!



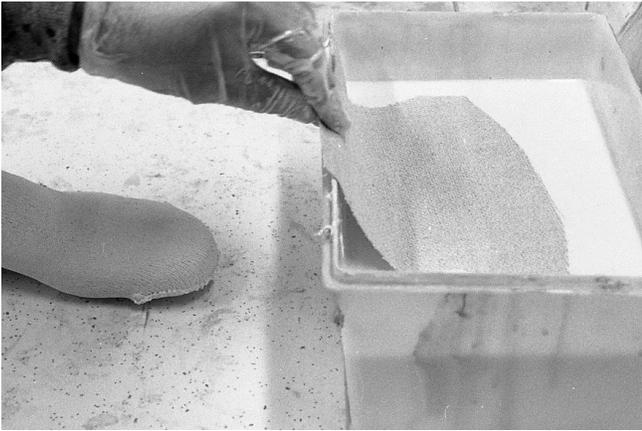
46 Ditto.



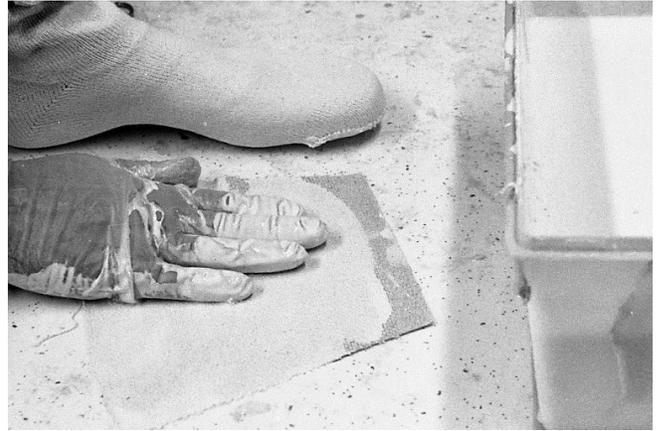
47 Ditto.



48 Ditto.



49 Heel Monks Cloth is dipped into latex.



50 Latex is pressed evenly into Monks Cloth.



51 Latexed Monks Cloth is applied to latexed sock.



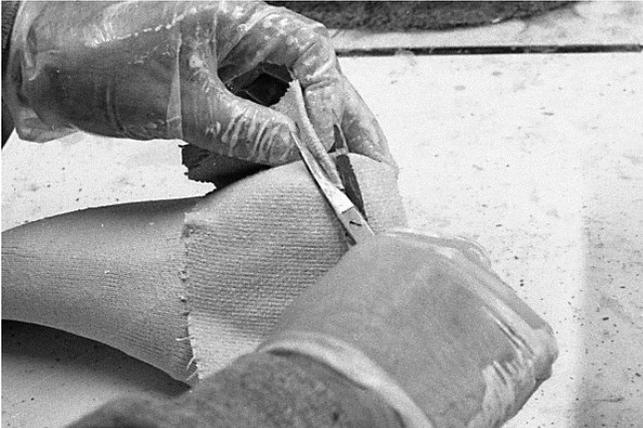
52 Ditto.



53 Ditto.



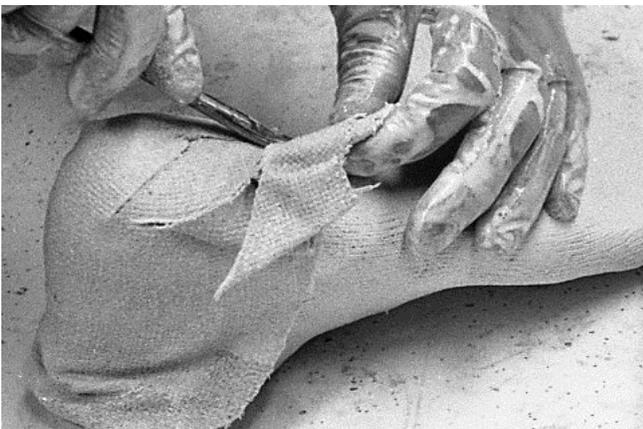
54 Ditto.



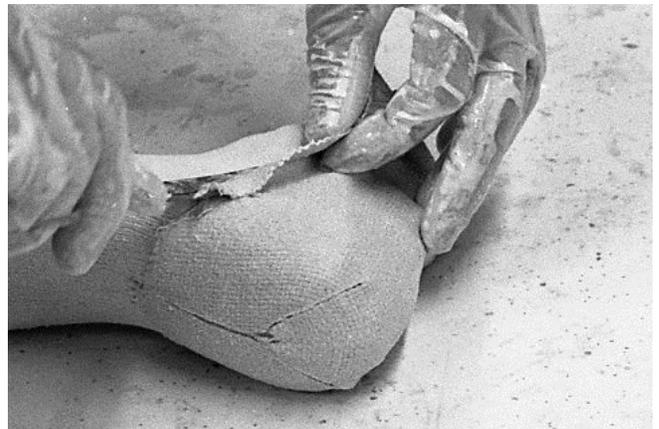
55 Waste is trimmed.



56 Ditto.

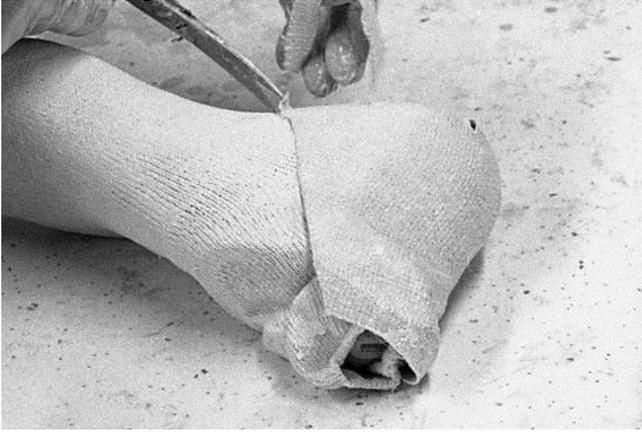


57 Ditto.

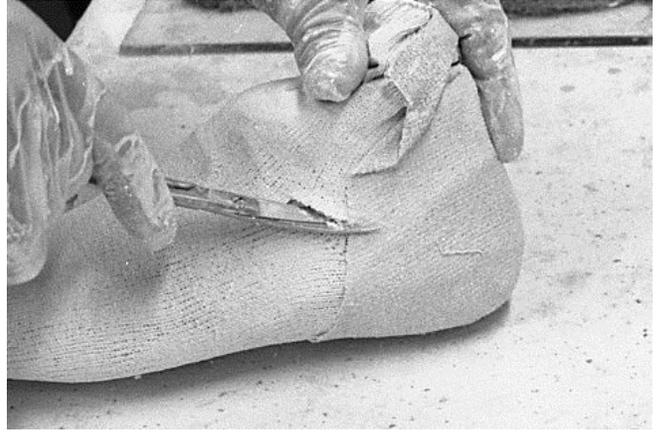


58 Ditto.

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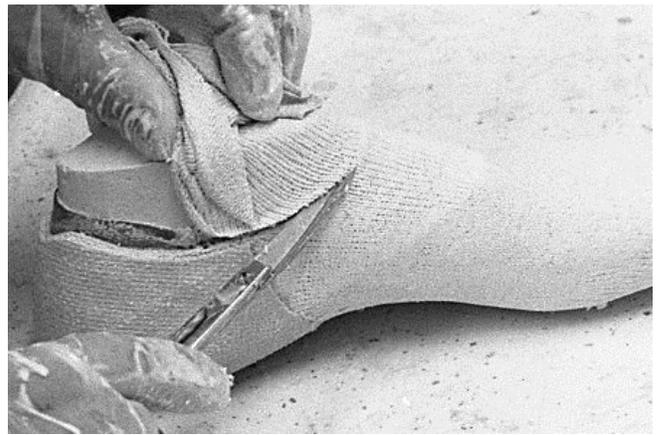
59 Ditto.



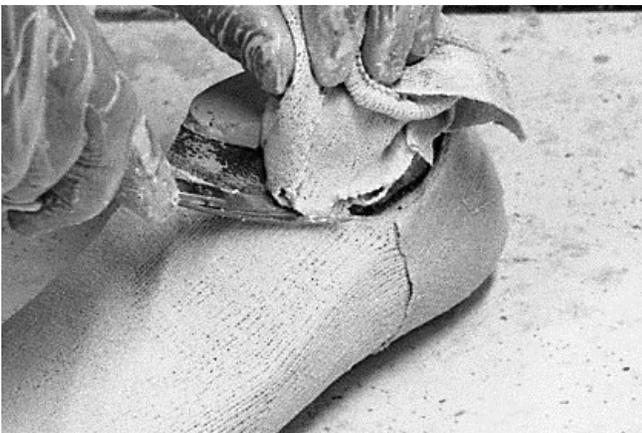
60 Excess waste of socks and Monks Cloth is cut off above design cord.



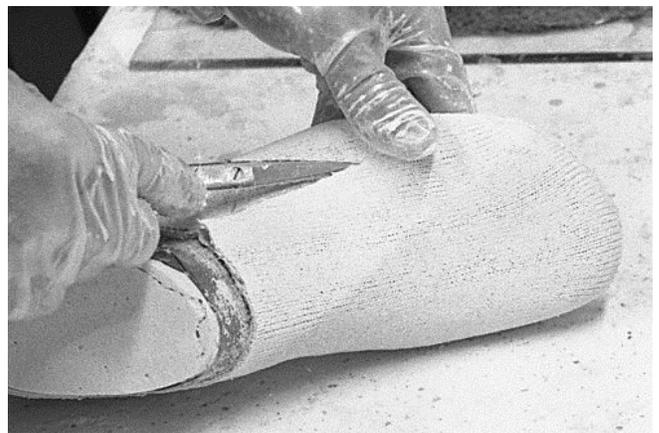
61 Ditto.



62 Ditto.



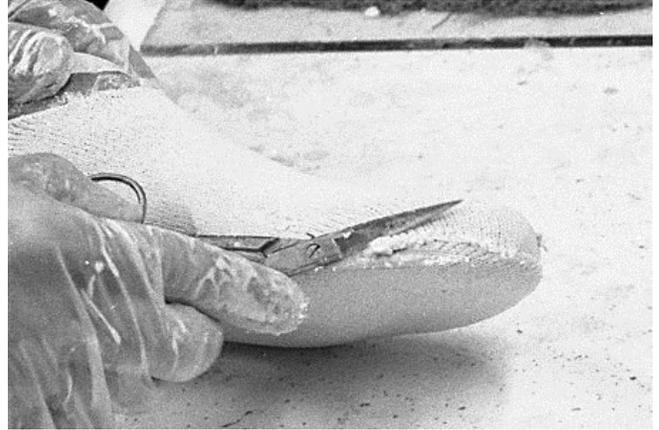
63 Ditto.



64 Lace opening is cut and trimmed.



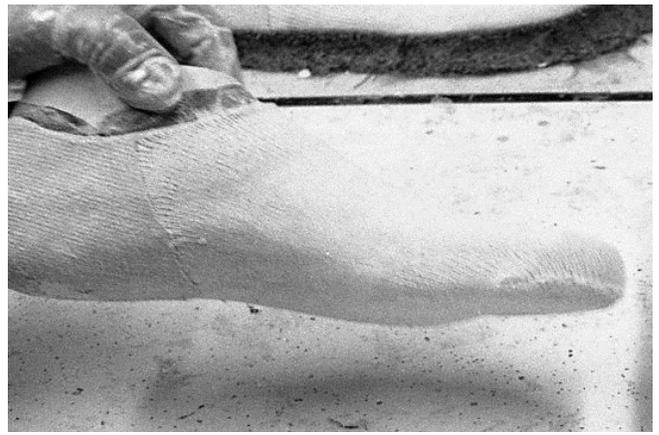
65 Ditto.



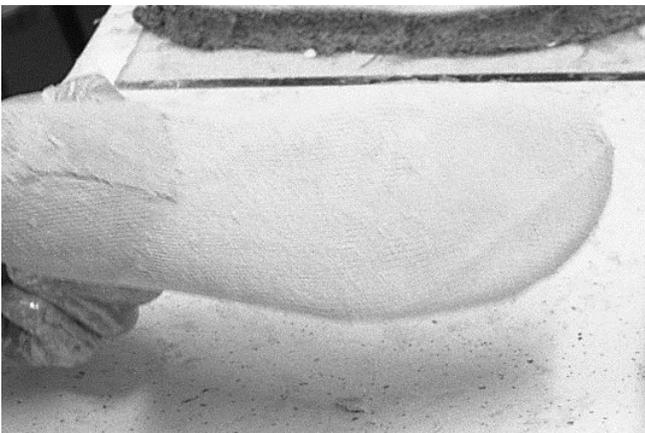
66 Excess of front seam of sock is cut off.



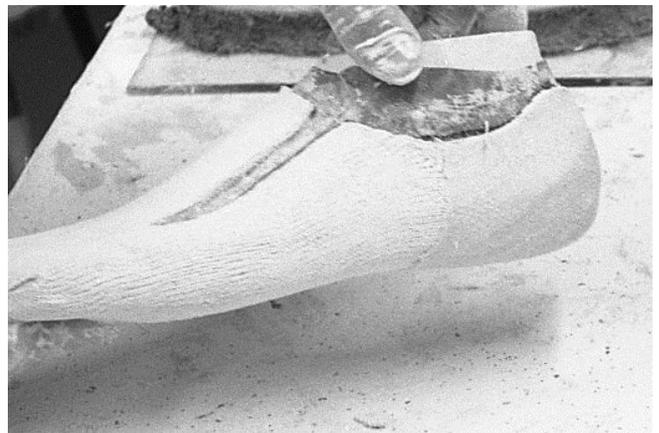
67 Ditto.



68 Ditto.



69 Bottom view.

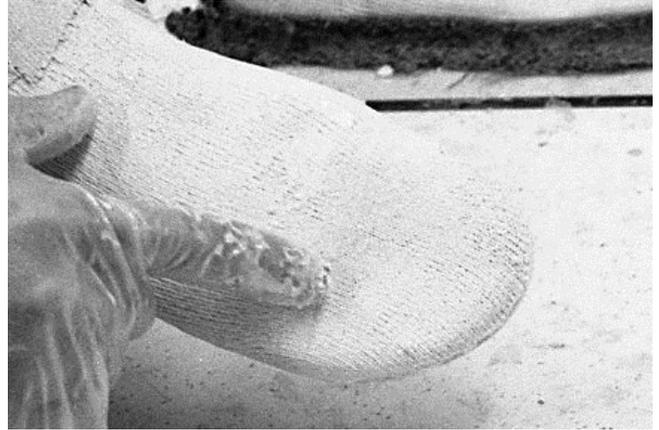


70 Side view.

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71 Back view.



72 Notice the pyramid area between ball and toes. It should be pressed in so it contours to shape of last and insert. Pressing when partly dry is helpful. Latexed last should be allowed to dry overnight.



73 Glue is applied to 3/16" or 1/4" cordage which is preferably all cotton.



74 Glue is applied to latexed last which has dried overnight.



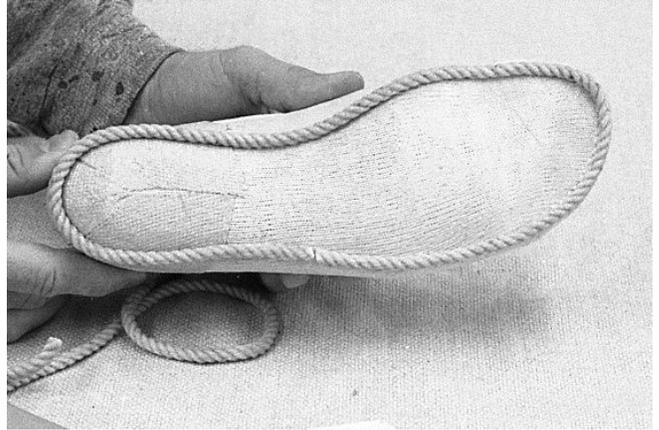
75 Base cord is attached around perimeter of socked last.



76 Ditto.



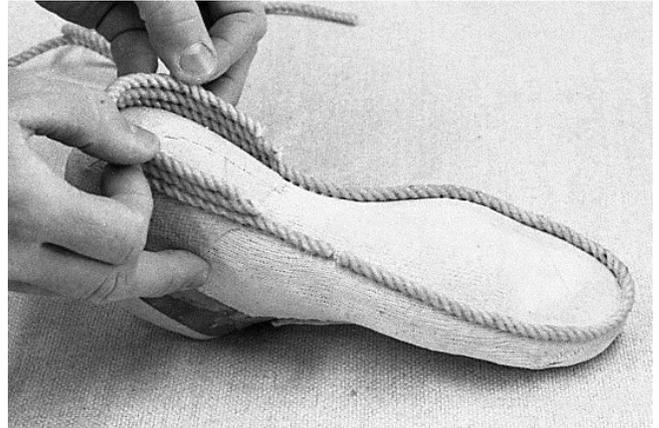
77 Ditto.



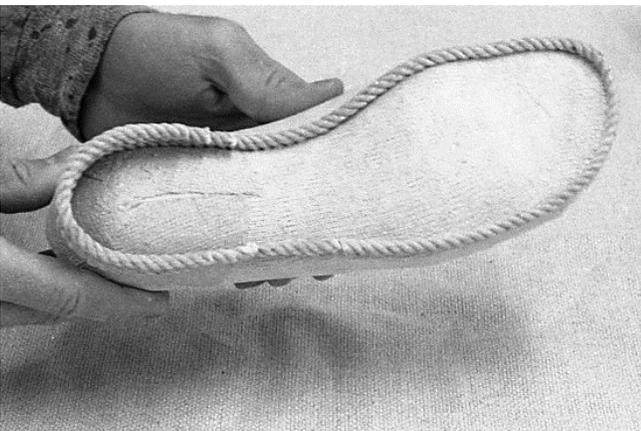
78 Ditto.



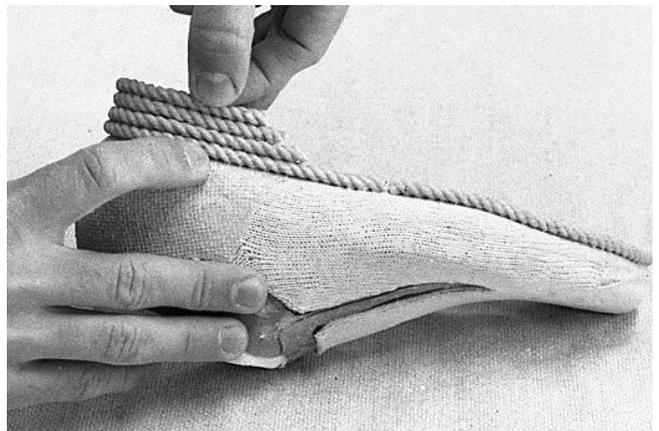
79 First heel cord is added.



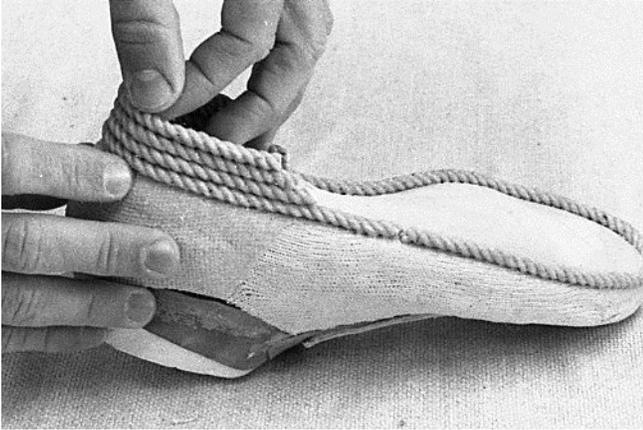
80 Second heel cord is added.



81 Bottom view of second heel cord.



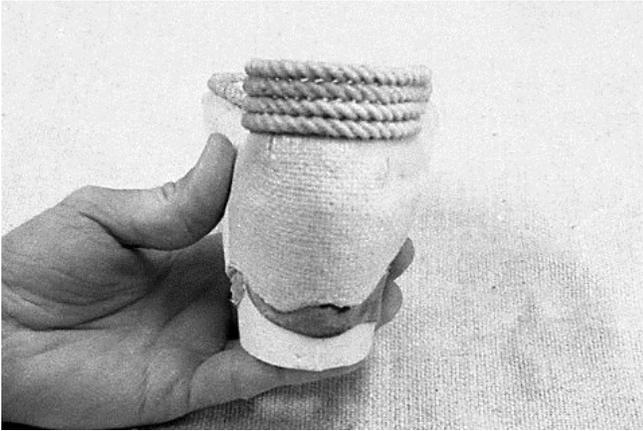
82 Third heel cord is added.



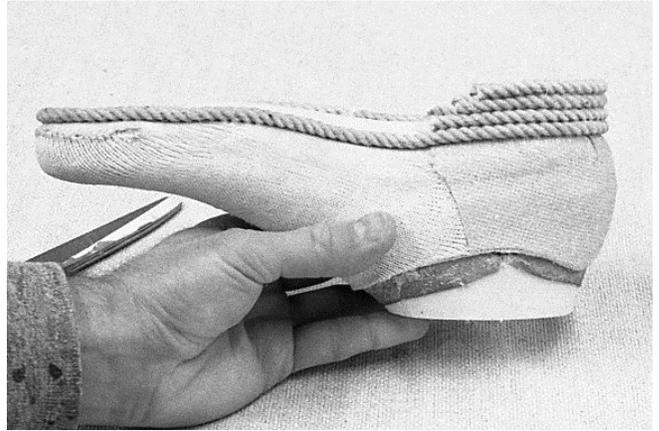
83 Heel cord are pressed together.



84 Ditto.



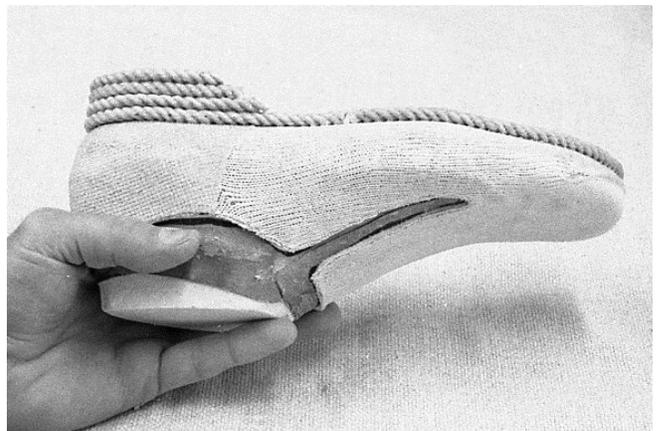
85 Back view of base cord plus three heel cords sacked in vertical alignment. This lateral flare may or may not be desired based on the wearer's needs.



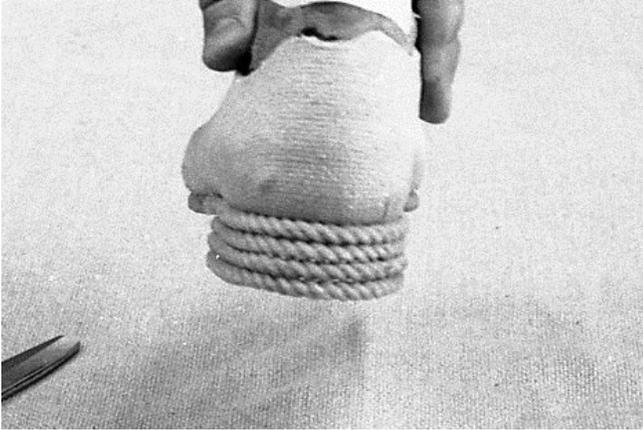
86 Medial view of cords relative to last.



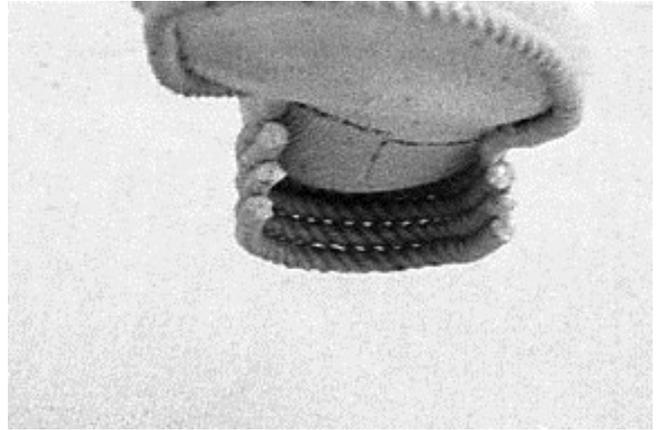
87 Front view.



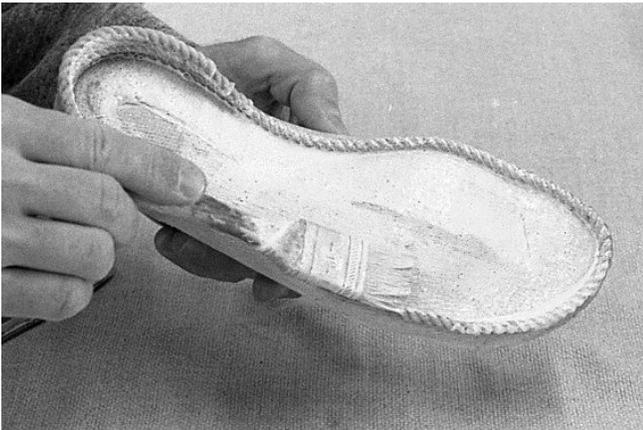
88 Lateral view.



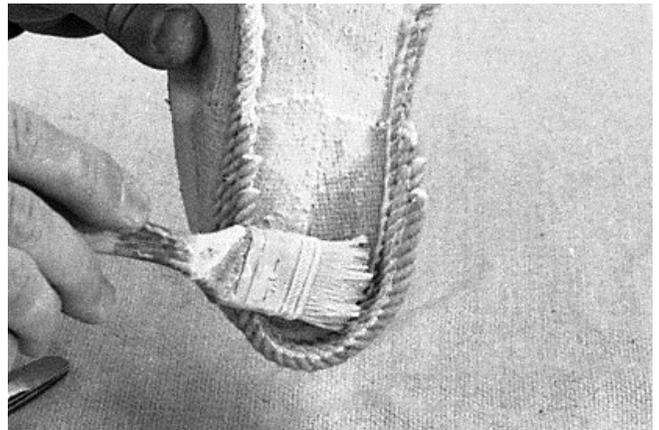
89 Back view.



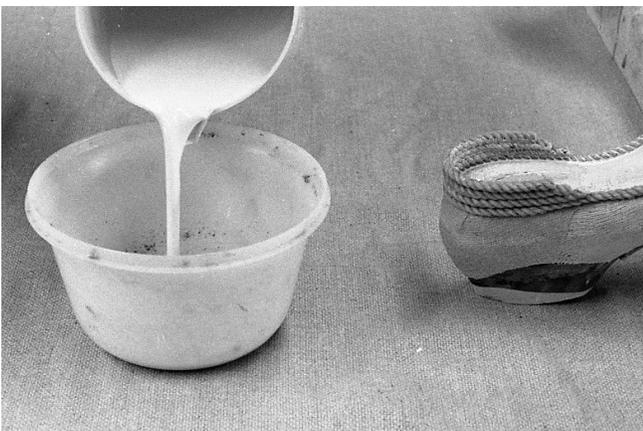
90 Front bottom view.



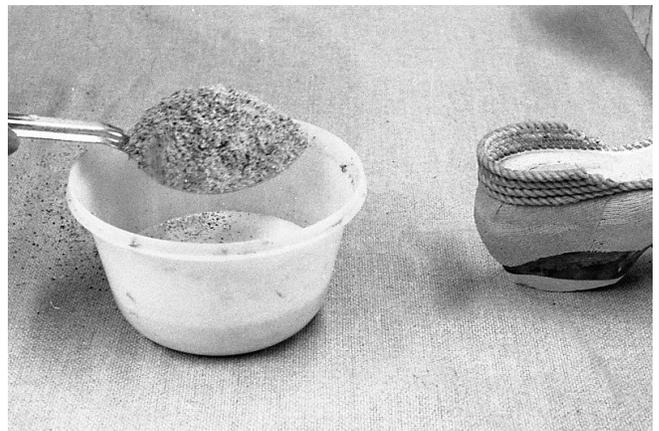
91 Latex is brushed inside cords.



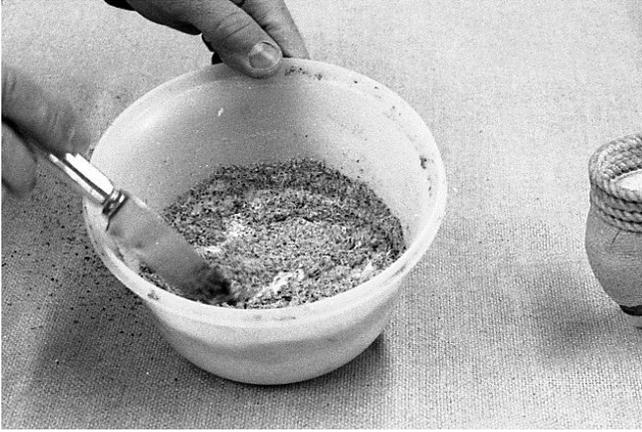
92 Ditto.



93 Latex is poured into bowl.



94 Dry "mud" mix or flour (wood flour and cork mix) is added to latex.



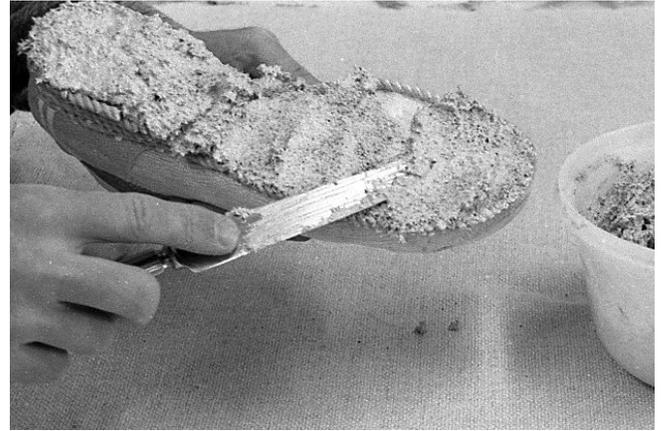
95 The mix is mixed.



96 Notice the free standing consistency (lack of too much slump) of mix. The "mud" is placed and pressed into position inside cords.



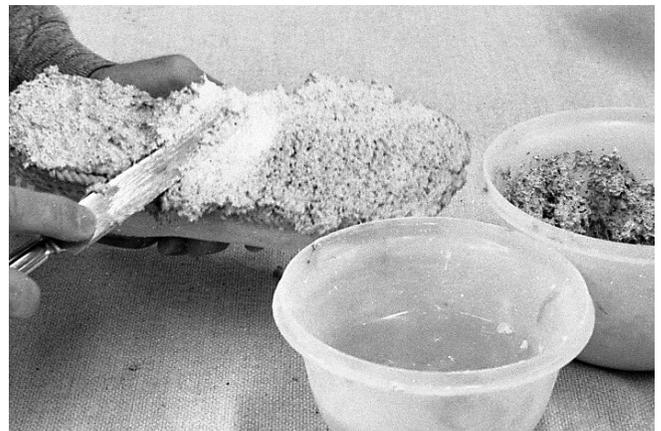
97 "Mud" is applied and pressed into place.



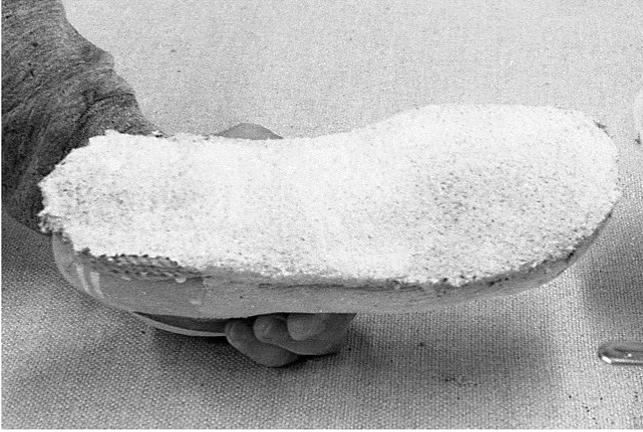
98 Ditto.



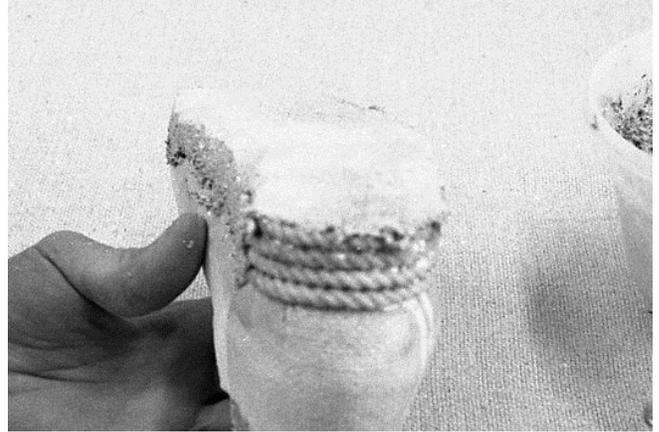
99 Water and/or latex can be added to make the "Mud" mix flow more easily as it is positioned.



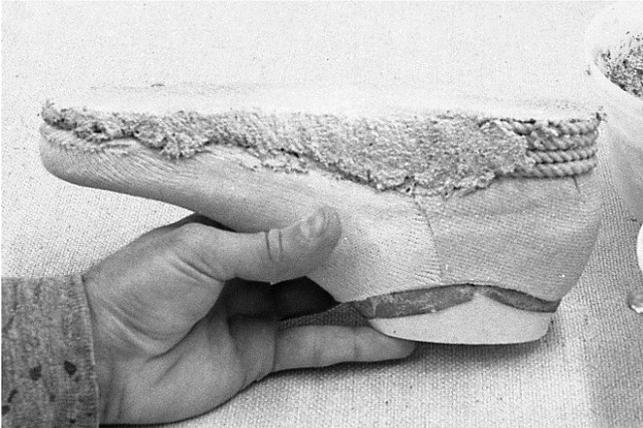
100 Ditto.



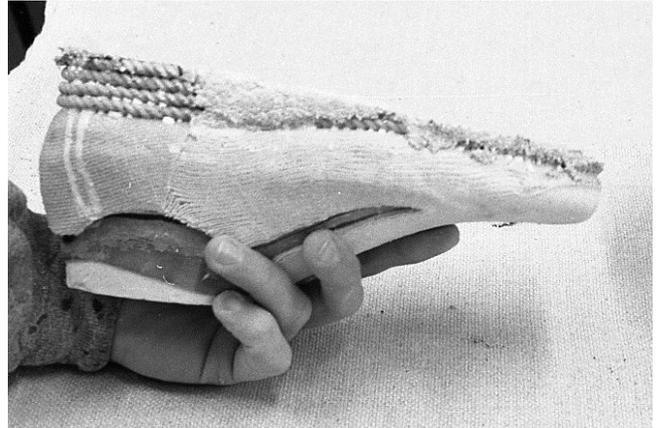
101 View of "mud" mix after it has been smoothed.



102 Ditto.



103 Ditto.



104 Ditto.



105 Ditto.



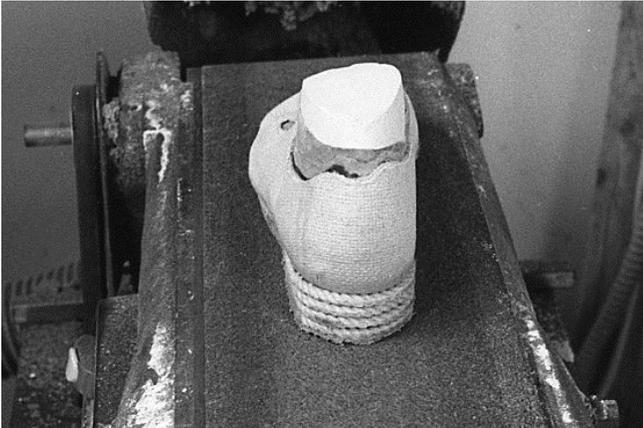
106 After "mud" has dried one to two days, it is lightly shaped and sanded smooth on the rough 24 or 36 grit sanding belt. If the "mud" deforms while sanding, the "mud" needs more time to dry.



107 Ditto.



108 Ditto.



109 "Mud" bottom is sanded flat (notice that sanding belt runs away from operator).



110 The correct medial/lateral stance is important!!!



111 The bottom has been sanded flat from heel to ball and ball to toe.



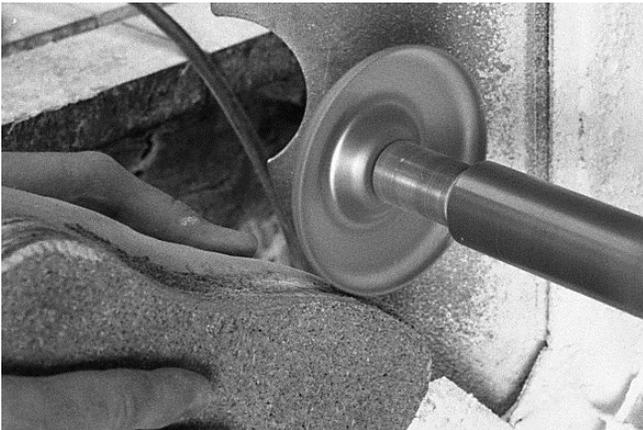
112 The outside of cord/mud base is sanded to the finish as desired.



113 Ditto.



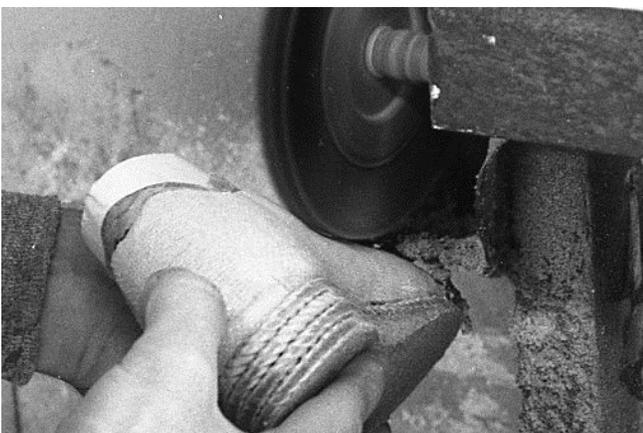
114 Any burrs at corner edge are sanded.



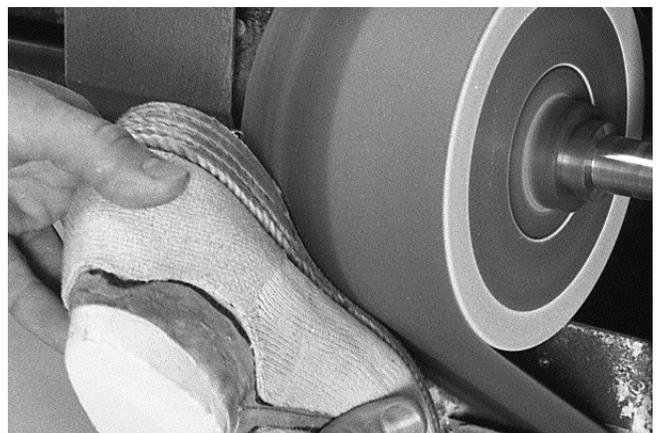
115 The groove between sock and top of cords is cleaned.



116 Ditto.



117 The upper is cleaned with a fine wire brush.



118 The lateral scallop is sanded.



119 The medial scallop is sanded.



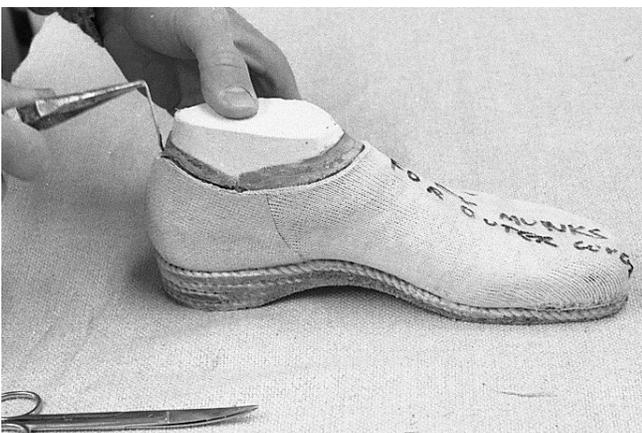
120 View of scallops.



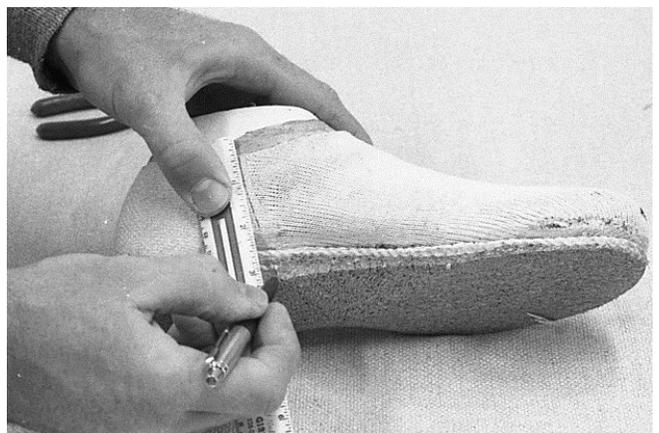
121 The waste material is removed to design cord.



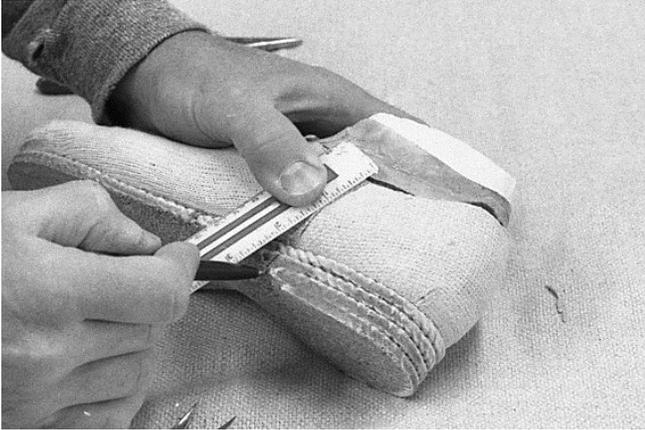
122 Ditto.



123 The design cord is removed.



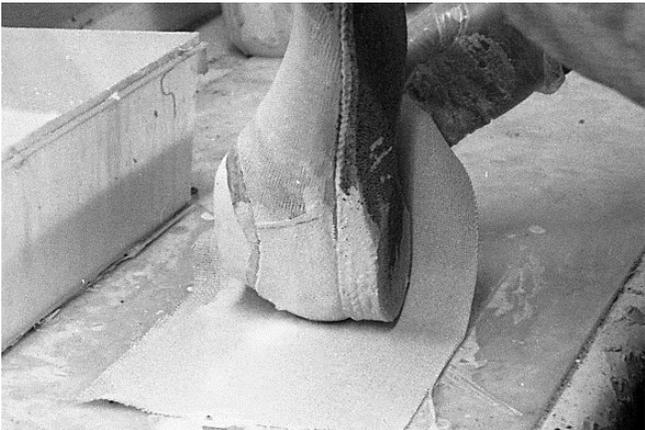
124 Marking the medial side seam.



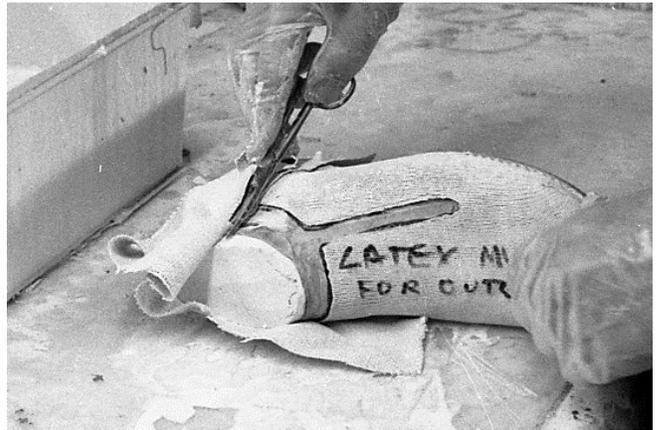
125 Marking the lateral side seam.



126 Latexing the heel of shoe.



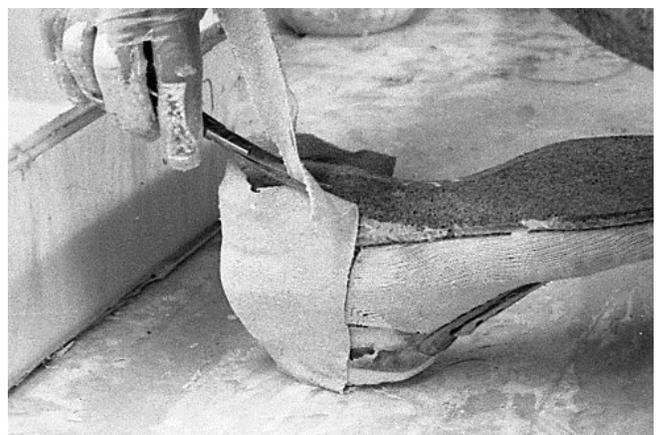
127 This is going to be a Monks Cloth shoe. The heel Monks Cloth has been dipped in latex and placed on glass. The shoe is positioned and Monks Cloth is placed and pressed to mold the fabric to the contours of the shoe.



128 Excess Monks Cloth is cut off at lateral side seam mark.



129 Ditto for medial side seam.



130 Heel Monks Cloth is trimmed at bottom allowing for fold over.

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131 Top of heel Monks Cloth is pressed.



132 Top of heel cord groove is pressed.



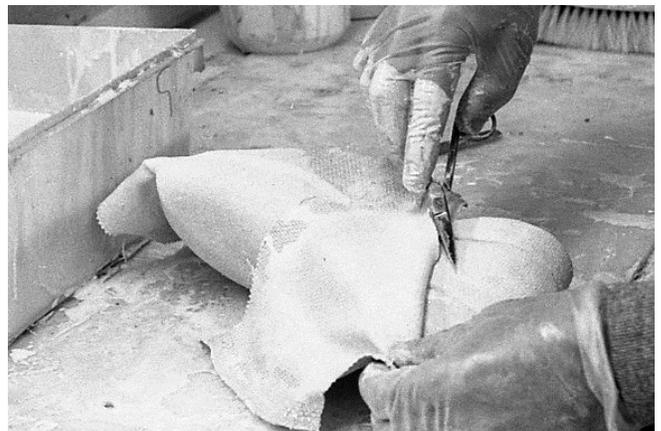
133 Latex is applied to front Monks Cloth by dipping and then hand spreading. Then latex is applied to front of shoe.



134 Front Monks Cloth is placed over shoe and center cut is made to top of shoe.



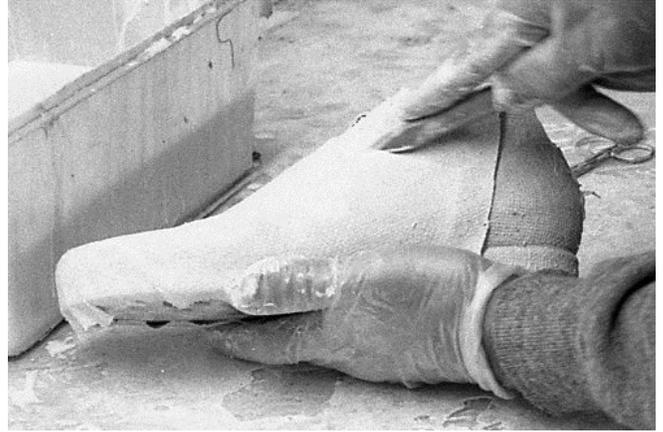
135 Front Monks Cloth is formed (molded) to front of shoe.



136 Excess front Monks Cloth is cut at side seam allowing 1/4 to 3/8 inch overlap.



137 Ditto.



138 Front Monks Cloth is pressed in with blunt tool at upper edge.



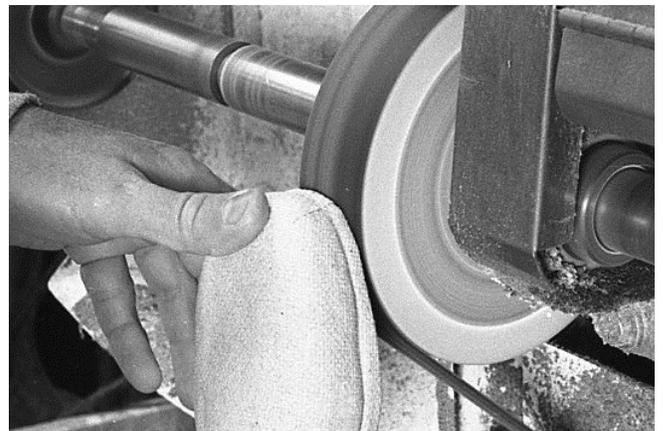
139 Front Monks Cloth is pressed in above base cords.



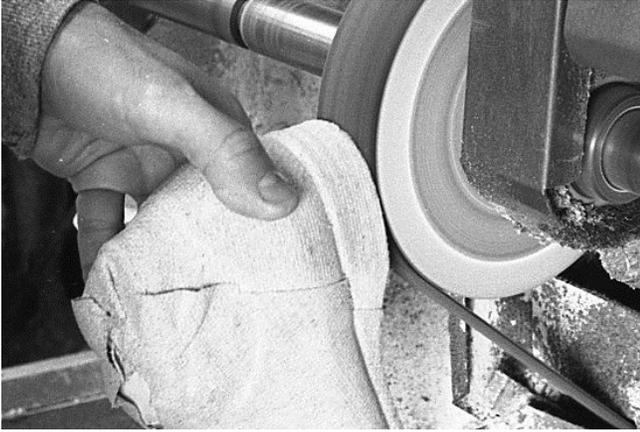
140 View of Monks Cloth covered shoe which has been "molded" together with latex. The latexed materials need to dry overnight.



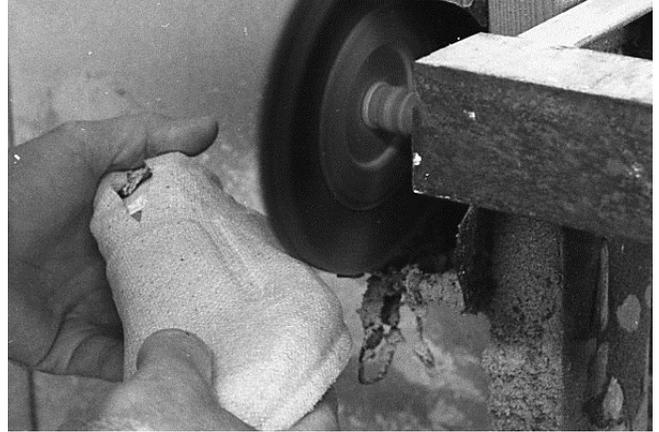
141 The bottom of Monks Cloth covering is carefully sanded smooth.



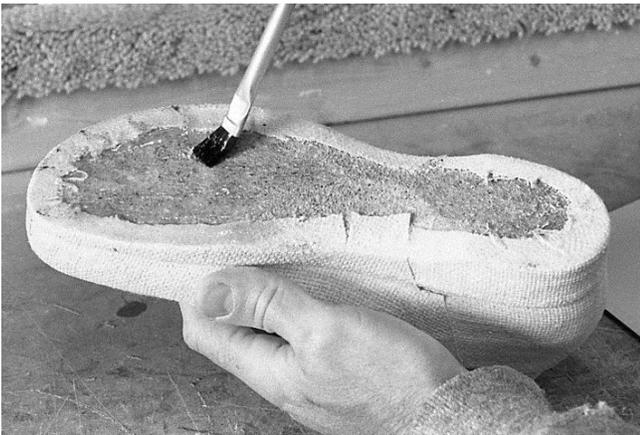
142 Ditto.



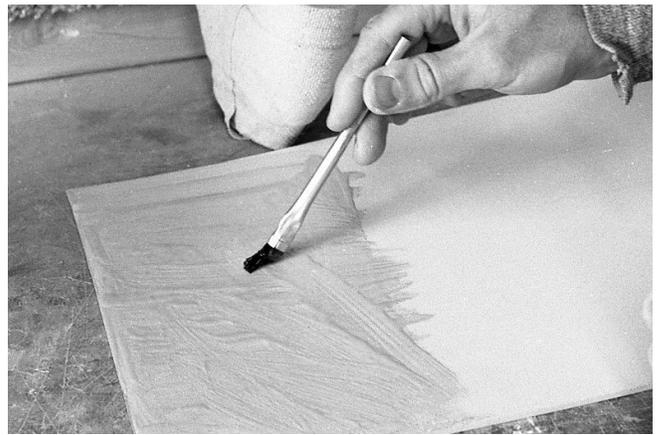
143 Ditto.



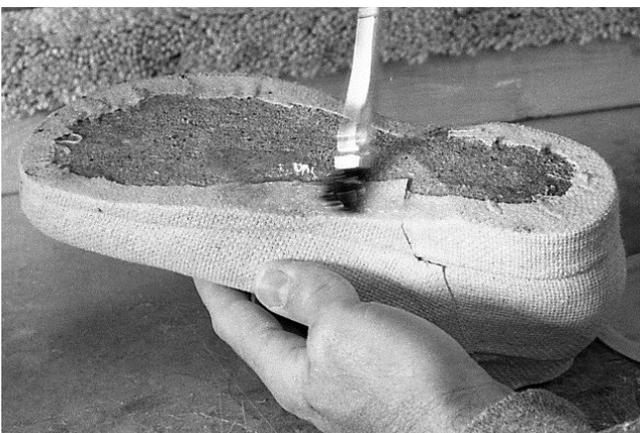
144 The outer covering of Monks Cloth is cleaned by brushing lightly with a fine wire brush.



145 Glue is applied to bottom of shoe.



146 Glue is applied to mid sole material.



147 A second coat of glue is applied to bottom of shoe.



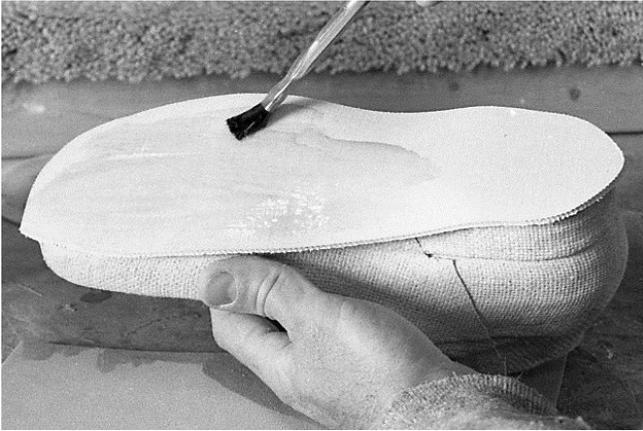
148 After drying, some adhesives can be reactivated by heat or heat can be used to drive off any leftover solvents so as to produce a firmer bond.



149 Mid sole is pressed into shoe.



150 Mid sole is trimmed of waste.



151 Adhesive is applied to bottom of mid sole. Then adhesive is applied to outer sole material (not pictured).



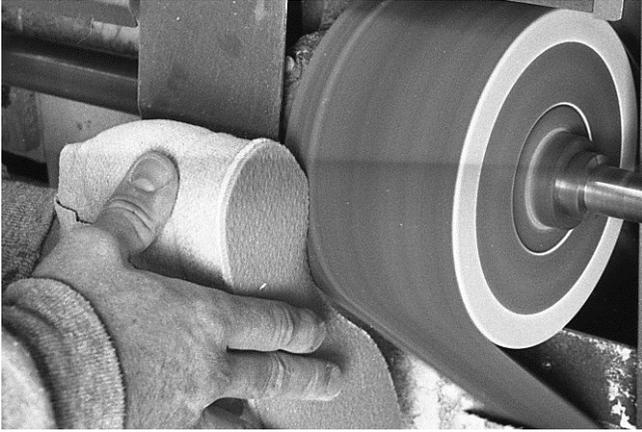
152 After adhesives dry, soling materials can be fit together.



153 Then the soles are pressed together.



154 Then the outer soling is trimmed of waste.



155 The outer sole and mid sole are rough sanded.



156 Then they are finely sanded.



157 A dental lab brush is used to clean Monks Cloth to sole joint.



158 Base perforations are punched with a #3 punch.



159 Bottom of lace opening is punched.



160 A single edge razor blade is used to cut lace opening.



161 A large and long shanked screwdriver is used to crack the last and pry out pieces.



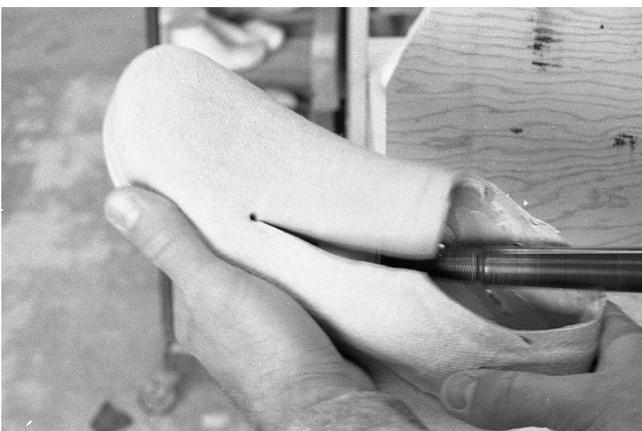
162 Then front of last is pulled out of shoe.



163 Insert is removed.



164 Inside of shoe is cleaned with a toe brush.



165 Ditto.



166 Then the inside is cleaned with a hand brush.

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167 Insert is placed back into shoe.



168 Excess material is trimmed from top of shoe.



169 Laced opening is trimmed.



170 Lace holes are punched.



171 Elastic shoe laces are added.



172 Lateral view of finished Monks Cloth covered shoe.



173 Medial view of finished Monks Cloth covered shoe.

Good leathers are very suitable for many inner, outer and soling applications for footwear. But, many good fabrics also have desirable attributes and virtues for footwear. The type of fiber, type of weave, durability and thickness are all very important considerations. Different fabrics may necessitate changes in procedures and techniques. I have used many kinds of fabrics. Monks Cloth is easy to work and makes comfortable shoes. I have also made shoes from an old painters drop cloth for a painting artist and used nylon for salt and fresh water fishing boots.



174 By omitting all leather (the lining leather) this shoe could become all vegan. Monks Cloth would be a very good lining material and it could be latexed. But, I think that the use of petroleum, synthetic materials and almost all industrial processes destroy more animal life and the environment than the use of natural leather. The aborigines of Australia and the bush people of Africa found a way to use animal products. They became "Thankful" to the animals, to use only what they needed, to respect the animals rights and to protect them too. There are no simple answers of what is right and what is wrong. If you say "good-bye" to cars etc. and walk on your own two feet, maybe you could be happier. Especially, if you made your own molded shoes, boots and sandals!

At times, Mr. Murray made truly vegan footwear with all natural products. He could not obtain some man made materials during WWII. He was quite frugal in the beginning, because that was more or less the way of life back then.

Mr. Murray invented a "Kit Shoe" (a do it yourself "amateur" molded shoe). It was made using only latex and fabric.

The original moulded shoe techniques and the later alternative methods, in general, do make a superior shoe, boot or sandal than the "Kit Shoe". Therefore, you are learning the "best" of all the techniques for making molded footwear.