Sept. 17, 1957 R. J. POTVIN 2,806,234

MANUFACTURE OF MOCCASIN SHOES

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Fig. 1.

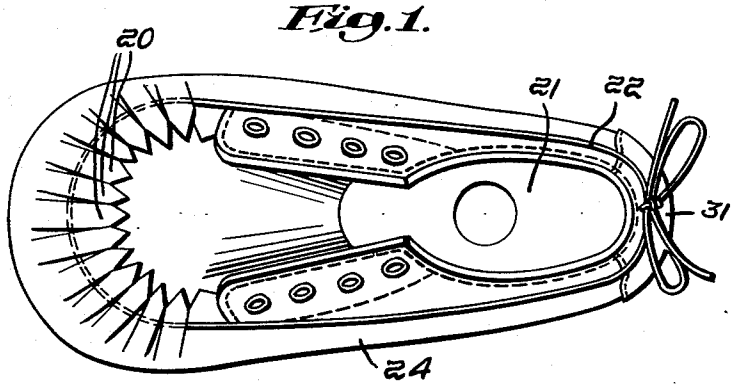


Fig. 2.

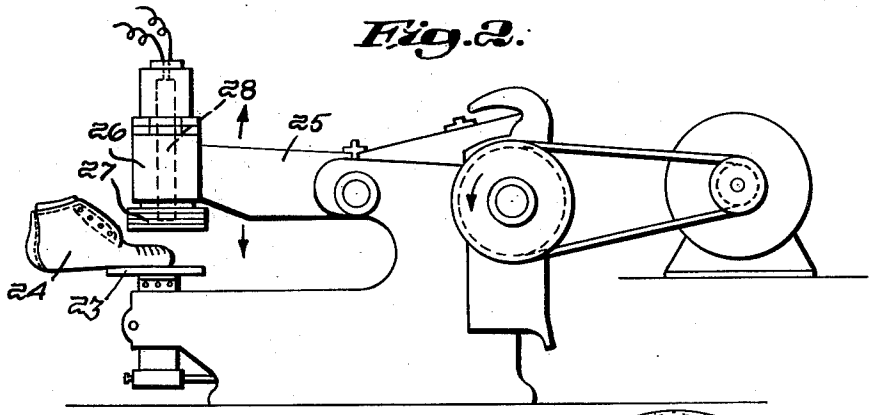


Fig. 4.

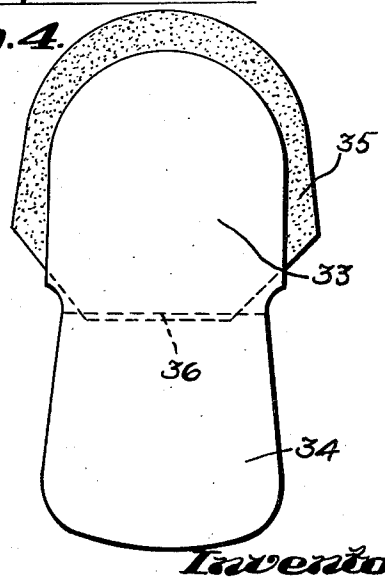
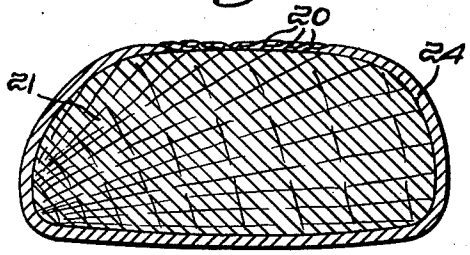


Fig. 3



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Fig. 5.

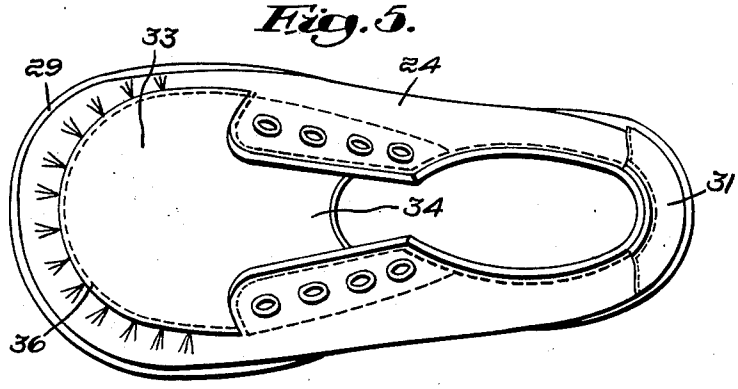


Fig. 6.

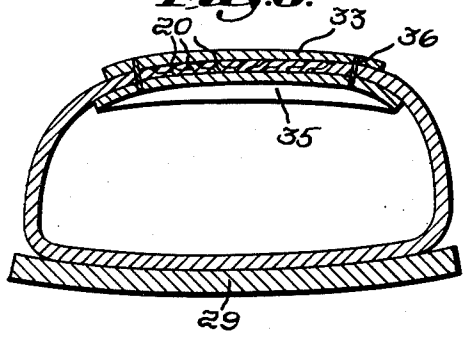


Fig. 7.

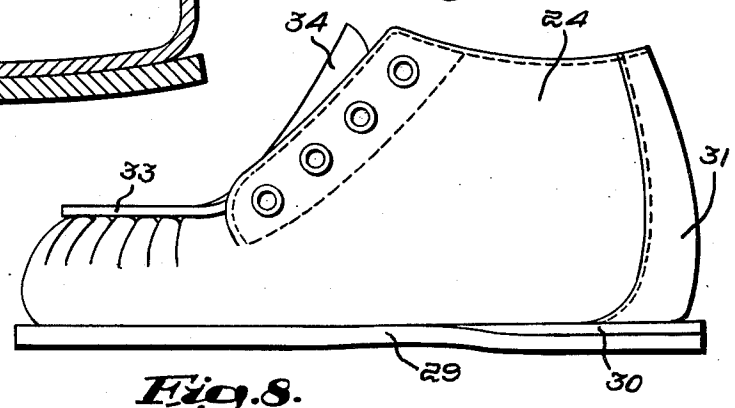
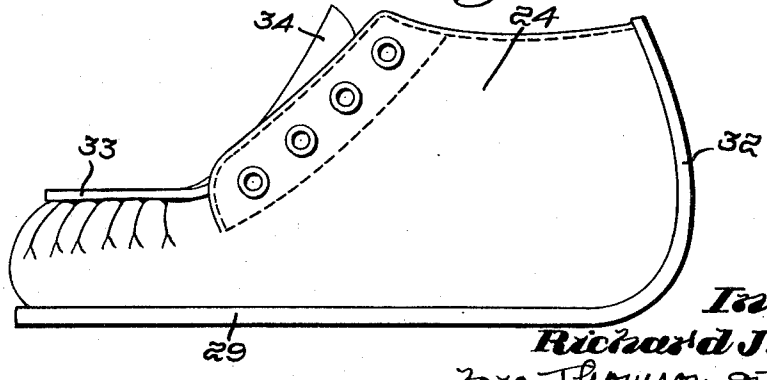


Fig. 8.



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MANUFACTURE OF MOCCASIN SHOES

Richard J. Potvin, Brockton, Mass.

Application May 14, 1954, Serial No. 429,737

2 Claims. (Cl. 12—142)

This invention relates to the manufacture of moccasin shoes for infants and children, and pertains more particularly to a method of forming the forepart of such a shoe.

The method here disclosed is an improvement over the method described in my Patent Number 2,537,602. The type of shoe for which this method of manufacture is particularly adapted consists in general of a one piece inner sole vamp and quarter of soft leather, the forward part of the vamp being gathered to form the toe and stitched to a plug which has an extension forming the tongue of the shoe. A soft outer sole of somewhat thicker leather than the upper is cemented or stitched to the bottom of the shoe. According to the method described in my aforesaid patent, the forward margin of the upper is gathered over the last by means of a puckering string, the gathers are flattened by hand hammering with a rawhide mallet, and the upper is left on the last for a day with the puckering string drawn taut to set the shape of the forepart. The object of this invention is to provide a superior method of flattening the gathers. The improvement consists in hammering the gathered margin with a rapidly reciprocating machine driven heated hammer. In this manner the gathers are more completely and permanently flattened, so that a smoother surface is obtained at the plug seam. This method, furthermore, produces more uniform results than hand hammering, and speeds up the drying and forming of the forepart so that the upper may be removed from the last in shorter time.

In the drawings illustrating the invention:

Fig. 1 is a plan view of a partly assembled and lasted moccasin shoe;

Fig. 2 is a diagrammatic view of a power hammer modified to perform the ironing process of the vamp of the shoe, according to this invention;

Fig. 3 is a transverse cross-section through the forepart of a shoe after ironing;

Fig. 4 is a plan view of the blank forming the plug and tongue of a moccasin shoe of the type produced by process here disclosed;

Fig. 5 is a plan view of a completed shoe;

Fig. 6 is a transverse cross-section through the forepart of the completed shoe of Fig. 5;

Fig. 7 is a side view of the shoe of Fig. 5; and

Fig. 8 is a side view of another type of moccasin shoe which can be made by the process here disclosed.

As in the method described in my Patent Number 2,537,602, the partly formed upper of Fig. 1, is made from a suitably shaped soft leather blank which is skived around the forward margin and cut to form tabs **20**. The rear edges of the quarter portions are joined to form a heel pocket in which the heel of last **21** is inserted, and the forepart is gathered over the last by means of a puckering string **22** which is laced through perforations around the forward margin. Prior to lasting, the blank is mulled and softened by dampening it in water or a suitable solution.

The apparatus for flattening the gathers, as illustrated in Fig. 2, is an automatic hammer of generally conventional type having a table **23**, on which the forepart of the lasted shoe **24** is laid right side up, and a reciprocating arm **25** which carries a head **26**. A hammer **27** is mounted in the head and is internally heated to about 160 degrees by means of an electric heating element **28**. The head is reciprocated rapidly so that the heated hammer is in contact with the leather only a second or two on each blow. Burning of the leather, which would result from more prolonged contact, is thus avoided, and yet the heat imparted is sufficient to dry and form the gathers in a short time. The uniform pressure, obtained by use of a flat hammer, produces a substantially smooth seat for the plug, and, as the margin is pounded until dry, rather than allowed to dry after pounding, the flattening of the gathers is permanently retained. A semi-automatic hammer operated, for example, by a foot treadle, may be employed for flattening the gathered margin in the manner just described, provided that the operator exercises sufficient care to avoid burning the leather. A power-driven automatic hammer is preferable, however, as the timing of the blows can be more accurately controlled.

Either of the types of shoe shown in Figs. 7 and 8 may be made by the method here disclosed. The shoe of Fig. 7 has a flat sole **29** and a back stay **31**, and may have a heel lift **30** inserted between the upper and sole. The shoe of Fig. 8 has no heel lift, and a sole extension **32** is brought up and stitched over the heel joint of the upper in place of the back stay.

One sequence of operation in making a moccasin shoe according to this method is as follows:

The heel of the upper is joined and the upper placed on the last. The forward margin is pulled over and gathered by means of the puckering string. At this point the gathered margin may be hammered with a mallet to distribute the creases evenly. The outer sole is layed on and cemented. The sole may be permanently cemented by a conventional process at this time. If stitching is to be used, the upper is delasted and the outer sole and back stay (or sole extension as the case may be) is stitched on. The upper is then replaced on the last and the gathered margin of the vamp is flattened by hammering with the heated hammer as previously described.

After the gathered margin of the vamp has been flattened, a top piece of the type illustrated in Fig. 4 is applied. This piece is a leather blank cut to form the plug **33** and a tongue **34**. A plug lining **35**, preferably of felt or soft cloth, is attached to the blank by cement or stitching along line **36**. If desired, this lining may extend under the tongue part of the blank and be cemented to the inside of the tongue. The plug lining is bent back against the tongue and the plug **33** is cemented over the gathered margin of the vamp.

The puckering string is pulled out and the shoe is then removed from the last. The plug lining is inserted under the plug and margin of the vamp, and the three parts are stitched together by a line of stitching **36** to complete the shoe. The assembled shoe is then cleaned, dressed, and finished in the usual manner.

An alternative procedure in making a shoe by this method is as follows:

The heel is joined, the upper is lasted, and the sole cemented on as previously described. The lasted upper is then transferred immediately to the heated hammer and the vamp margin gathers are flattened. The plug is cemented to the vamp and the upper is removed from the last. The plug lining is laid in place and the plug, vamp and lining stitched together. If the sole is permanently cemented the shoe is ready for dressing and finishing. If the sole is to be stitched this may be done on a suitable machine such as a Littleway stitcher having a long horn. The sole extension of a shoe of the type shown in Fig. 8 is stitched at the same time as the sole. In making a shoe

of the type shown in Fig. 7, the back stay is preferably stitched when the heel is joined before lasting.

What is claimed is:

1. In the manufacture of moccasin shoes of the type having a vamp with a gathered margin to which an overlapping plug is attached, the method of forming and flattening the gathered margin which comprises dampening the vamp, placing the vamp on a rigid last having a forepart surface, gathering the vamp margin against said surface, placing the lasted vamp on a fixed support, and hammering the margin until dry with blows of short duration by means of a rapidly reciprocating, machine driven, internally heated, rigid hammer adapted to engage substantially the entire margin at once and arranged to reciprocate along a fixed path in a direction generally perpendicular to said surface.

2. The method described in claim 1, the hammer being heated to at least 160° F. and the blows being of less than two seconds' duration.

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