H. L. HASKELL.

BOOT OR SHOE SOLE.

APPLICATION FILED OCT 13, 1917.

1,343,450.

Patented June 15, 1920.

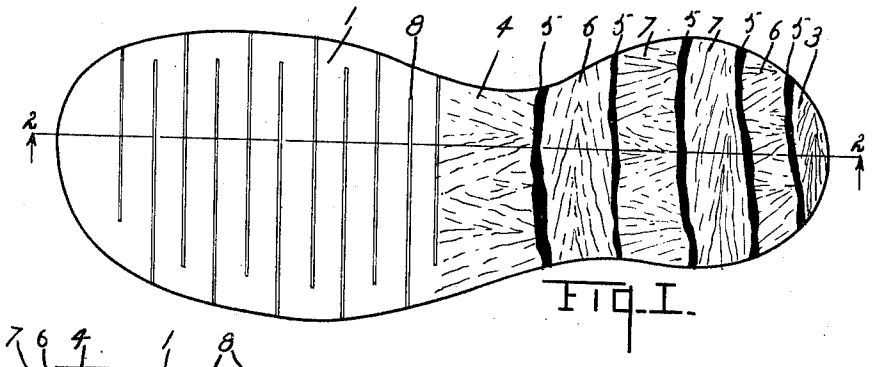


FIG. I.

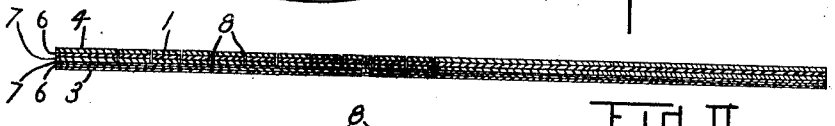


FIG. II.

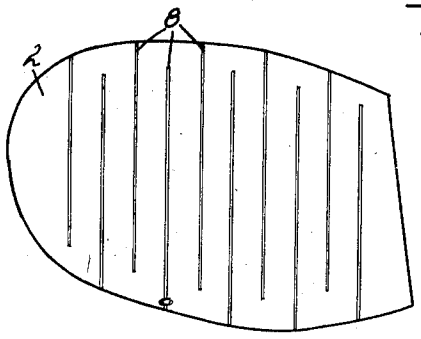


FIG. III.

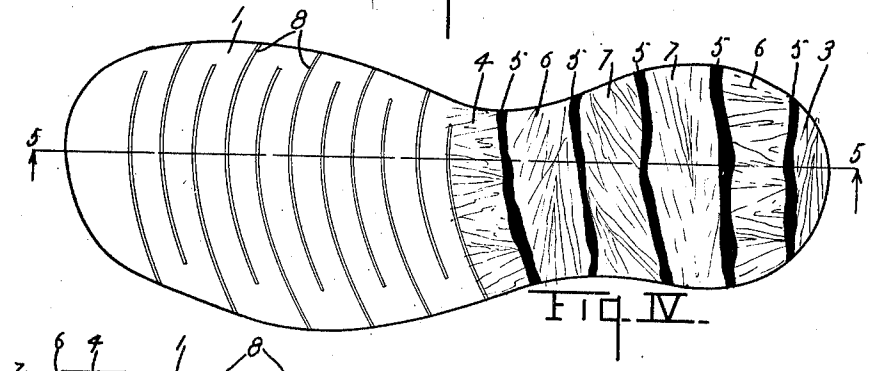


FIG. IV.

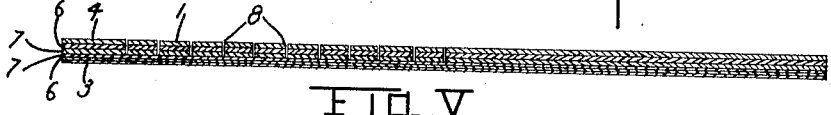


FIG. V.

WITNESSES:

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UNITED STATES PATENT OFFICE.

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BOOT OR SHOE SOLE.

1,343,450. Specification of Letters Patent. Patented June 15, 1920.

Application filed October 13, 1917. Serial No. 196,419.

To all whom it may concern:

Be it known that I, HENRY L. HASKELL, a citizen of the United States, residing at Ludington, county of Mason, State of Michigan, have invented certain new and useful Improvements in Boot or Shoe Soles, of which the following is a specification.

This invention relates to improvements in boot or shoe soles.

The main objects of the invention are:

First, to provide a boot or shoe sole formed of veneer.

Second, to provide a boot or shoe sole formed of veneer which is waterproof.

Third, to provide a boot or shoe sole formed of veneer which is comparatively thick and has at the same time the desired flexibility.

Further objects, and objects relating to structural details, will definitely appear from the detailed description to follow.

I accomplish the objects of my invention by the devices and means described in the following specification. The invention is clearly defined and pointed out in the claims.

A structure which is a preferred embodiment of my invention is clearly illustrated in the accompanying drawing, forming a part of this specification, in which:

Figure I is an inverted view of a sole embodying my invention, portions of the several plies being broken away to disclose the disposition of the grain thereof.

Fig. II is a longitudinal section on a line corresponding to line 2—2 of Fig. I.

Fig. III is an inverted view of a half sole or "tap" embodying my invention.

Fig. IV is an inverted view, similar to Fig. I, of a modified form of my invention, in which the kerfs or slots are curved.

Fig. V is a longitudinal section of the modified embodiment of my invention on a line corresponding to line 5—5 of Fig. IV.

In the drawing similar reference characters refer to similar parts throughout the several views, and the sectional views are taken looking in the direction of the little arrows at the ends of the section lines.

Referring to the drawing, 1 indicates a sole generally embodying my invention and 2,—see Fig. III, a half sole or "tap." In the specification and claims I use the term sole in its comprehensive sense.

In the embodiment of my invention illustrated the sole is made up of an inner member 3 and an outer member 4, each formed of a plurality of plies of veneer, the members and the plies being united throughout by waterproof cement or glue, indicated at 5. Each of the members 3 and 4 in the embodiment illustrated comprises an intermediate ply 6 and outer plies 7, the veneer forming the outer member being substantially thicker than that forming the inner member, the object being to provide a comparatively thin flexible inner retaining and water resisting member and an outer heavier member adapted to sustain the wear. Fine grained hard maple veneer is very satisfactory for the purpose.

The grain of the plies is disposed crosswise, the preferred arrangement being indicated in Fig. I in which the grain of the intermediate ply of the inner member is disposed longitudinally and of the outer plies transversely, while the grain of the intermediate ply of the outer member is disposed transversely and the outer plies longitudinally.

It is of advantage in arranging the plies that the grain of the outer plies shall be longitudinal of the sole as that adds to its wearing capacity.

To add to the flexibility of the sole the outer member preferably has a plurality of spaced transverse slits 8 therein, the slits being alternately arranged to extend from its edges with their inner ends spaced from but adjacent to the opposite edge. This provides a substantial overlap for the kerfs through the central part of the sole. By providing the kerfs, the sole may be made quite thick and still possess sufficient flexibility.

In the embodiment of my invention shown in Fig. IV, the kerfs are forwardly curved and the grain of certain of the plies is indicated as being diagonally disposed.

A sole constructed according to my invention may be used as are leather soles, it being possible to sew or stitch the same or to nail the same as may be desired. The soles are economical to produce and at the same time are waterproof and durable.

I preferably employ a water proof glue or cement invented by me, but, as this forms no part of my present invention, I do not describe the same herein. The waterproof cement not only has the advantage of uniting the plies and making the sole water-

proof, but prevents water soaking and resulting deterioration of the plies to which they would be subject if not rendered waterproof.

I have illustrated and described my improvements as embodied in soles and half soles, the illustrations being more or less conventional which, however, I deem sufficient to enable the application of my improvements as may be desired. My improved soles are capable of quite general application or use.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. A boot or shoe sole comprising inner and outer members each formed of three-ply wood veneer, the plies of the outer member being thicker than the plies of the inner member, the plies of the inner member being arranged with the grain of the intermediate ply disposed longitudinally and the grain of the outer plies disposed transversely of the sole and the plies of the outer member being arranged with the grain of the intermediate ply disposed transversely and the grain of the outer plies disposed longitudinally of the sole, the said members and the several plies thereof being secured together throughout by a waterproof glue, the outer member having uniformly spaced kerfs extending alternately from its opposite edges with their inner ends spaced from but adjacent to the opposite edge.

2. A boot or shoe sole comprising inner and outer members each formed of three-ply wood veneer, the plies of the inner member being arranged with the grain of the intermediate ply disposed longitudinally and the grain of the outer plies disposed transversely of the sole and the plies of the outer member being arranged with the grain of the intermediate ply disposed transversely and the grain of the outer plies disposed longitudinally of the sole, the said members and the several plies thereof being secured together throughout by a waterproof glue, the outer member having uniformly spaced kerfs extending alternately from its opposite edges with their inner ends spaced from but adjacent to the opposite edge.

3. A boot or shoe sole comprising inner and outer members each formed of multiple-ply wood veneer, the plies of the outer member being thicker than the plies of the inner member, the plies of the members being arranged with their grain in a crossed relation, the said members and the several plies thereof being secured together throughout by a waterproof glue, the outer member having transverse kerfs therein.

4. A boot or shoe sole comprising inner and outer members each formed of multiple-ply wood veneer, the plies of the members being arranged with their grain in a crossed relation, the said members and the several plies thereof being secured together throughout by a waterproof glue, the outer member having transverse kerfs therein.

In witness whereof, I have hereunto set my hand and seal in the presence of two witnesses.

HENRY L. HASKELL. [L. S.]

Witnesses:

W. H. HASKELL,

E. L. EDWARDS.