(No Model.)

H. W. MERRILL.

SOLE.

No. 481,909. Patented Aug. 30, 1892.

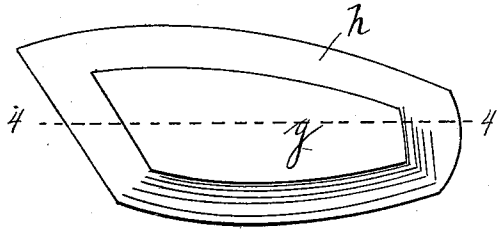

Fig. 3.

Fig. 4.

Fig. 2.

Fig. 6.

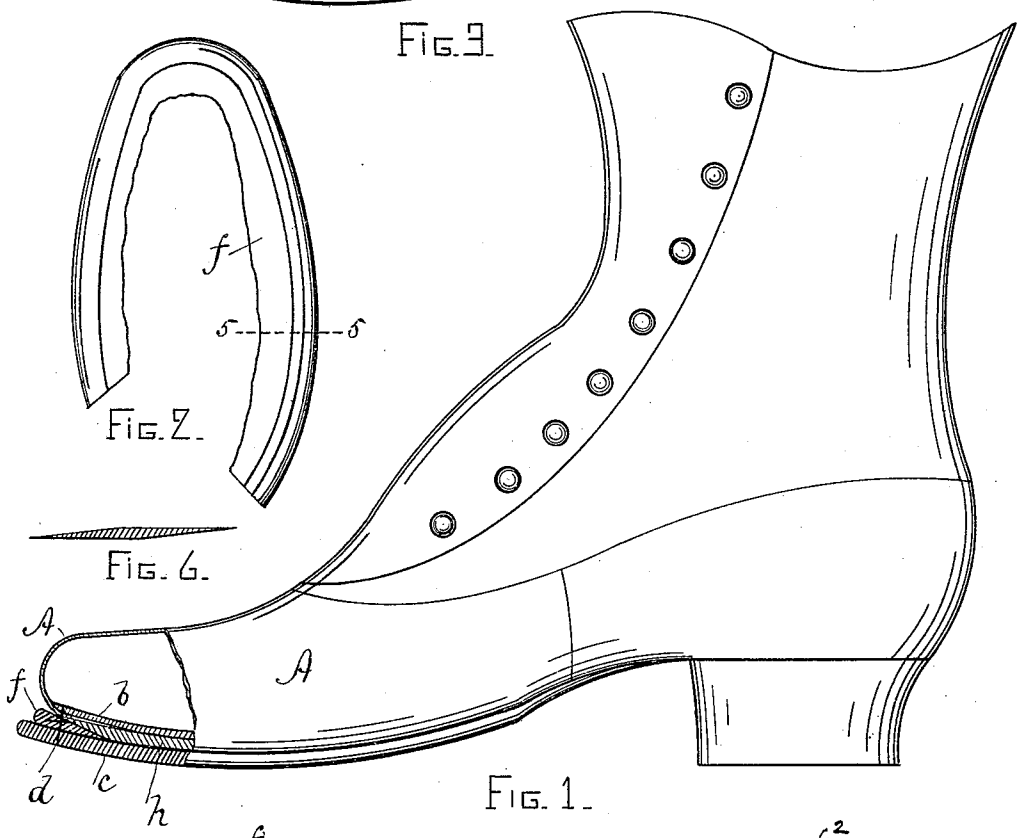

Fig. 1.

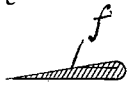

Fig. 5.

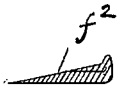

Fig. 7.

WITNESSES.

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HOLLIS W. MERRILL, OF LYNN, ASSIGNOR TO THE AMERICAN SHOE TIP COMPANY, OF BOSTON, MASSACHUSETTS.

SOLE.

SPECIFICATION forming part of Letters Patent No. 481,909, dated August 30, 1892.

Application filed November 24, 1891. Serial No. 412,948. (No model.)

To all whom it may concern:

Be it known that I, HOLLIS W. MERRILL, a citizen of the United States, residing at Lynn, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Boots and Shoes, of which the following is a specification, reference being had therein to the accompanying drawings.

It has been common heretofore to construct shoes having the space between the insole and the outsole filled with a filler of waterproof or other material. It has also been common to use a protecting-welt between the upper and the outsole, said welt being made of leather and having its edge finished in substantially the same manner as is the edge of the outsole. Such a welt is objectionable, because it is apt to become rusty in appearance and thus to interfere with the finish of the shoe. In the case of light shoes and of children's shoes a welt of heavy leather is not desirable, and my improvement is particularly applicable to shoes of these kinds.

My invention has for its object to produce a shoe which shall be free from the objections referred to; and it consists in a shoe provided with an intermediate sole or filler which I make, preferably, of waterproof material, and which is provided with an edge of leather which may or may not be secured to the said filler before it is placed in the shoe, said edge being made from a strip of finished leather which is skived and folded upon itself, as hereinafter set forth, so that the folded edge shall form a beading of substantially the same finish and character as the upper of the shoe, thereby presenting a durable finish and serving as a protection to the upper.

My invention will be readily understood from the following description and the accompanying drawings, in which latter—

Figure 1 is a side elevation of a shoe embodying my invention, the said shoe being represented in vertical section at the toe thereof in order to show the construction. Fig. 2 is a plan view of the welt. Fig. 3 is a similar view of the filler. Fig. 4 is a section on line 4 4, Fig. 3. Fig. 5 is a section on line 5 5, Fig. 2. Fig. 6 is a cross-section of the strip from which the welt is formed. Fig. 7 is a cross-section of the molded welt.

A represents the upper of the shoe; *b*, the insole thereof; *c*, the outsole, and *d*, the line of stitching which secures the parts together.

f represents the welt or edge finish for the filler, and *g* the filler or intermediate sole. I prefer to construct the filler *g* of a flexible waterproof material—such, for example, as rubber. After a piece of material of the right size and shape has been cut from a flat sheet the under edges of such piece are skived, as shown at *h*, in order that the welt, which is also skived at its inner edge, may be lapped thereon, as shown in Fig. 1. The filler and edge finish or welt may be united, preferably by cement, to form a complete intermediate sole prior to their use in the construction of the shoe, or they may be used separately and placed together in position when the shoe is built up. If the size and shape of the intermediate sole are exactly known beforehand, I prefer to supply the filler with the edge finish attached thereto to the operator who is to construct the shoe. By so doing less skill is required in the construction of the shoe and better results are usually obtained; but where the intermediate sole is apt to vary in size the parts which compose it—namely, the edge finish *f* and the filler *g*—may be supplied separately, and in that case in constructing the shoe the edge finish may be moved inwardly or outwardly to the position required, and thus a very perfect construction and finish attained. The welt or edge finish *f* is not cut from a piece of solid leather of a finished shape, but is constructed as follows: A piece of light sole-leather or other suitable leather which is blackened or colored and finished on one side is cut into strips, which are reversely skived and which in cross-section are of the shape shown in Fig. 6. The finished side of the skived strip is then turned so that the edge is lapped on itself and in this position is cemented down, forming a strip which in cross-section is substantially of the shape shown in Fig. 5. This strip is then passed through a shaping-machine, which is of well-known construction, and thereby shaped to correspond to the general shape of a shoe, as

represented in Fig. 2. The welt or edge finish thus constructed is then ready to be applied to the filler *g*, and, if desired, to be secured thereto. This edge finish forms when applied to the shoe a neat and durable beading or edge for the intermediate sole which shows between the upper and the outsole of the shoe, as in Fig. 1. It does not change or alter in appearance after wear, is durable, and affords a considerable protection to the lower edge of the upper.

In constructing the shoe the parts are placed together in the usual way and secured by a line of stitching *d* or in any well-known manner. In molding or setting the welt-strip to the shape shown in Fig. 2 the outer edge of the strip may be raised somewhat, as shown in Fig. 7, at f^2 so that it will project upwardly slightly, forming a ledge or projection which adds to the protection afforded the upper. When such a projection is formed on the outer edge of the welt *f*, it adds to the speed of the operator in making the shoe when the edge finish or welt is furnished him separated from the filler, because he can bring the welt inward until the ledge or upward projection referred to bears against the insole and upper, which assures him that the parts are in the right position. In other words, it forms a gage which enables him to work more speedily and with the same degree of accuracy.

What I claim as my invention is—

1. An intermediate sole for boots or shoes, consisting of a central portion or body *g*, skived at its edge around the toe and sides, and an edge finish *f*, consisting of a reversely-skived strip of finished leather folded upon itself, the beveled inner edge of the piece *f* being joined to the reversely-beveled edge of the portion *g*, substantially as shown and described.

2. An intermediate sole for boots or shoes, consisting of a central portion or body *g*, provided around its toe and sides with an edge of finished material, composed of a reversely-beveled strip of finished leather folded upon itself and having a molded projection outside the line of the upper, whereby when the intermediate sole is in position in the shoe the lower edge of the upper is protected, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

HOLLIS W. MERRILL.

Witnesses:
WM. A. MACLEOD,
ROBERT WALLACE.