

(No Model.)

2 Sheets—Sheet 1.

J. F. SHARPE.
BOOT OR SHOE.

No. 542,175.

Patented July 2, 1895.

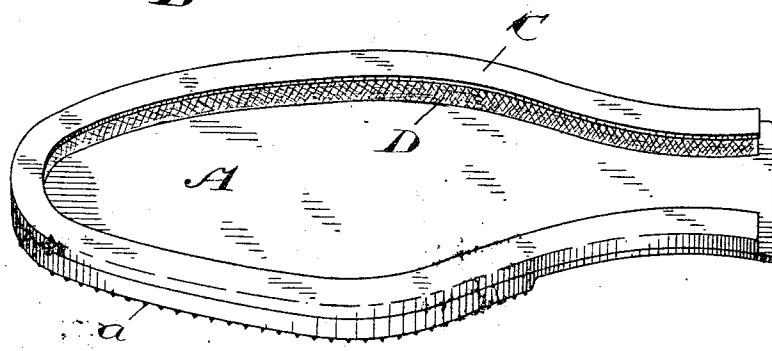
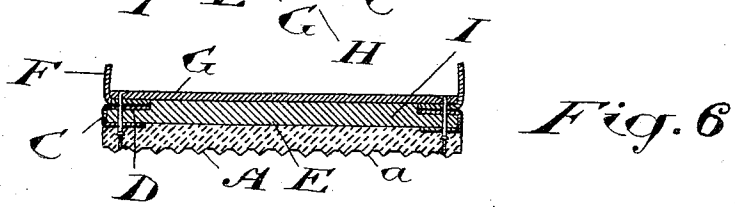
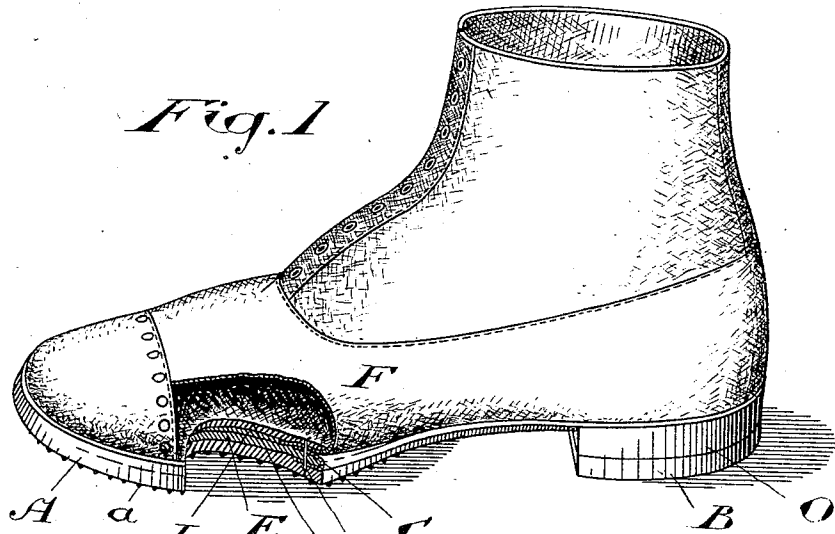


Fig. 2

Witnesses
 Fred Clarke
 A. Muff

Inventor
 J. F. Sharpe
 by Ridout & Maybee
 Attys

(No Model.)

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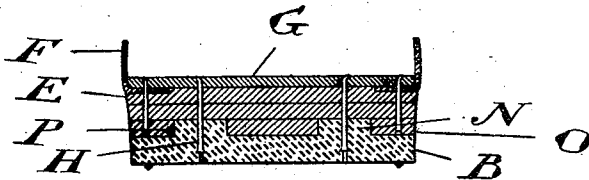


Fig. 5

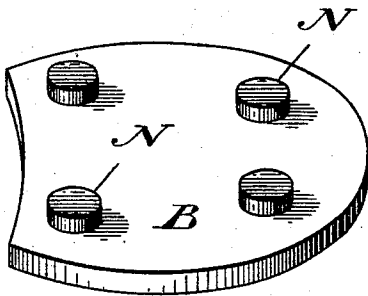


Fig. 3

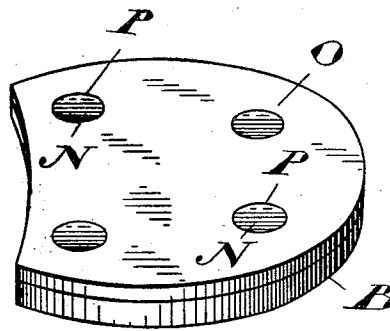


Fig. 4

Witnesses
Fred Clarke
Am. Buff.

Inventor
J. F. Sharpe
by
Ridout & Maybee
Attys

UNITED STATES PATENT OFFICE.

JAMES FERGUSON SHARPE, OF TORONTO, CANADA.

BOOT OR SHOE.

SPECIFICATION forming part of Letters Patent No. 542,175, dated July 2, 1895.

Application filed April 30, 1894. Serial No. 509,560. (No model.)

To all whom it may concern:

Be it known that I, JAMES FERGUSON SHARPE, of the city of Toronto, in the county of York and Province of Ontario, Canada, have invented certain new and useful Improvements in Boots or Shoes, of which the following is a specification.

My invention particularly relates to that class of boots and shoes which are provided with a rubber sole. Hitherto there has been considerable difficulty experienced in securely attaching the rubber sole to the leather middle sole, or, in the case of there being no middle sole, to the insole. The object of my invention is to overcome this difficulty and to provide a serviceable boot or shoe having a rubber sole and heel securely attached to the middle sole or insole, as the case may be, thus adapting the boot or shoe for use in all kinds of weather and excluding all dampness from the interior thereof; and it consists, essentially, in the case of a boot or shoe having a rubber sole and leather middle sole and insole, in cementing to the upper edge of the rubber sole, when in a soft state, a strip of canvas or other material covered with a coating of soft rubber, the rubber side of the strip being next to the rubber sole, and vulcanizing the same; in then cementing the leather middle sole on the rubber sole, and then turning the rubber-coated strip of canvas up and over the leather middle sole and cementing it down on the edge of the leather middle sole.

My invention further consists of a rubber tread for the heel formed integral with or separate from the rubber sole, the tread being provided with rubber lugs or projections adapted to pass through holes in the upper lift or lifts of the leather which form the heel, the rubber tread being cemented to the base of the adjoining leather lift as well as to the holes formed therein, and preferably also provided with rivets, which pass through the rubber tread and the lugs formed thereon into the leather lift or lifts for the purpose of more firmly attaching the rubber tread to the superimposed leather lifts.

My invention also consists in the boot or shoe made by the foregoing methods, as more particularly specified hereinafter and shown in the drawings.

Figure 1 is a perspective view of a boot with

a portion of the upper and sole broken away.

Fig. 2 is a perspective view of the rubber sole without the heel-piece, showing the rubber-coated welt or strip attached. Fig. 3 is a perspective detail of a rubber tread for the heel and projections formed thereon. Fig. 4 is a perspective view of a rubber tread with projections passing through holes in an adjoining heel-lift. Fig. 5 is a cross-section through the heel. Fig. 6 is a cross-section through the sole.

Like letters of reference indicate corresponding parts in the different figures.

In Fig. 1 A is the rubber sole, having, preferably, corrugations *a*. B is the rubber tread for the heel, and O is a leather heel lift or lifts. Where the boot has been broken away may be seen the rubber-coated strip or welt C, which is attached to the upper edge of the rubber sole and is turned up and over the middle sole E. F is the upper of the boot, which is turned in under the insole G and rests on the middle sole and the edge of the rubber-coated strip. I is a filling-piece placed under the insole and between the turned-in edges of the upper.

In Fig. 6 may be seen in section, on a large scale, the various parts just referred to.

The manner of attaching the rubber strip to the rubber insole is as follows: The rubber strip is preferably formed of canvas or other textile material and rubber-coated on one side. While the rubber sole is in a soft state, and the rubber on the strip also in a soft state, the rubber side of the strip is cemented down to the edge of the rubber sole and the rubber sole and strip are then vulcanized. The middle sole is then cemented onto the top of the rubber sole and the rubber-coated strip is turned up and over onto the top of the middle sole and securely cemented thereto. In some cases I may make the middle sole E and filling-sole I integral, as shown at Fig. 6, in which case the sole is notched or cut away around the upper edges to receive the uppers. The edge of the upper is then secured in position on the last with the insole, and the rubber outsole and middle sole are secured through the turned-in edge of the upper and insole by means of rivets which are clinched inside the boot. In this mode of construction it is important that

the rubber-coated strip should be placed on and cemented to the rubber sole, as in the process of cementing or vulcanizing rubber to rubber holds much more securely. It is also important and a leading feature of my invention that the rubber-coated strip so attached should be turned upward and over the middle sole, so that the rubber-coated side of the strip is exposed outside, and thus keeps all dampness or moisture from penetrating through to the inside of the boot or shoe.

Fig. 2 is a detail of the rubber sole in which the rubber-coated strip C is shown cemented and vulcanized to the rubber sole. D shows the interior lining of canvas or other textile material. The rubber sole in this case is shown without a heel-piece; but if desired a rubber tread may be molded integral therewith. These rubber soles are molded into standard sizes to suit the respective standard sizes of the leather middle or insole usually worn. Instead of having a rubber-coated strip cemented and vulcanized to the edge of the rubber sole, the rubber strip or welt may be cast or formed integral with the rubber sole.

Fig. 3, a perspective detail of the rubber tread B, shows the lugs or projections N, formed or cast on the rubber tread. These rubber projections N may be more or less in number than shown, and may be arranged differently if so desired; but four projections are usually considered sufficient, and are preferably placed as indicated.

In Fig. 4 the rubber tread and the projections N are shown cemented to the heel-lift O, the projections N passing through the holes P formed in the heel-lift.

Fig. 5 is a sectional detail through the heel showing the rubber sole and projections cemented to the adjoining heel-lift O. If desired the projections may be made longer, so as to pass through more than one heel-lift. In this view the rubber tread, the heel-lifts, the insole, and the upper are shown riveted together by the rivets H. The heads of the rivets H are shown deeply embedded in the rubber in Figs. 1, 5, and 6, in order to remove them from contact with the ground.

It is possible, without departing from the

spirit of my invention, to attach a rubber sole to a boot or shoe made after the ordinary welt process.

What I claim as my invention is—

1. The process herein described of securely attaching a rubber sole to boots or shoes, which consists in connecting to the rubber sole near its edge a waterproof strip or welt turning the rubber-coated strip over the edge of the middle sole or insole and then attaching the rubber sole and rubber-coated strip to the said middle-sole or insole, substantially as and for the purpose specified.

2. The process herein described of securely attaching a rubber sole and heel to boots or shoes, which consists in attaching to the rubber sole near its edge a waterproof strip or welt turning the rubber-coated strip over the edge of the middle-sole or insole and attaching the rubber sole and rubber-coated strip to the middle-sole or insole, and also in attaching to the heel a rubber tread formed integral with or separate from the rubber sole and having lugs or projections formed thereon, and cementing them into holes formed to receive them in a leather lift of the heel; the whole being riveted together, substantially as and for the purpose specified.

3. The process herein described of securely attaching a rubber sole to boots or shoes which consists, in the case of a boot or shoe having a leather middle-sole, in cementing to the upper edge of the rubber sole, when in a soft state, a strip of canvas or other material covered with a coating of soft rubber, the rubber side of the strip being next to the rubber sole, and vulcanizing the same; in then cementing the leather middle-sole on to the rubber sole, and then turning the rubber-coated strip of canvas up and over the leather middle-sole and cementing it down on the edge of the leather middle-sole; the rubber sole and the leather middle-sole thus secured together, then being riveted to the insole and the upper, substantially as and for the purpose specified.

Toronto, April 27, 1894.

JAMES FERGUSON SHARPE.

In presence of—

A. M. NEFF,

FRED. CLARKE.