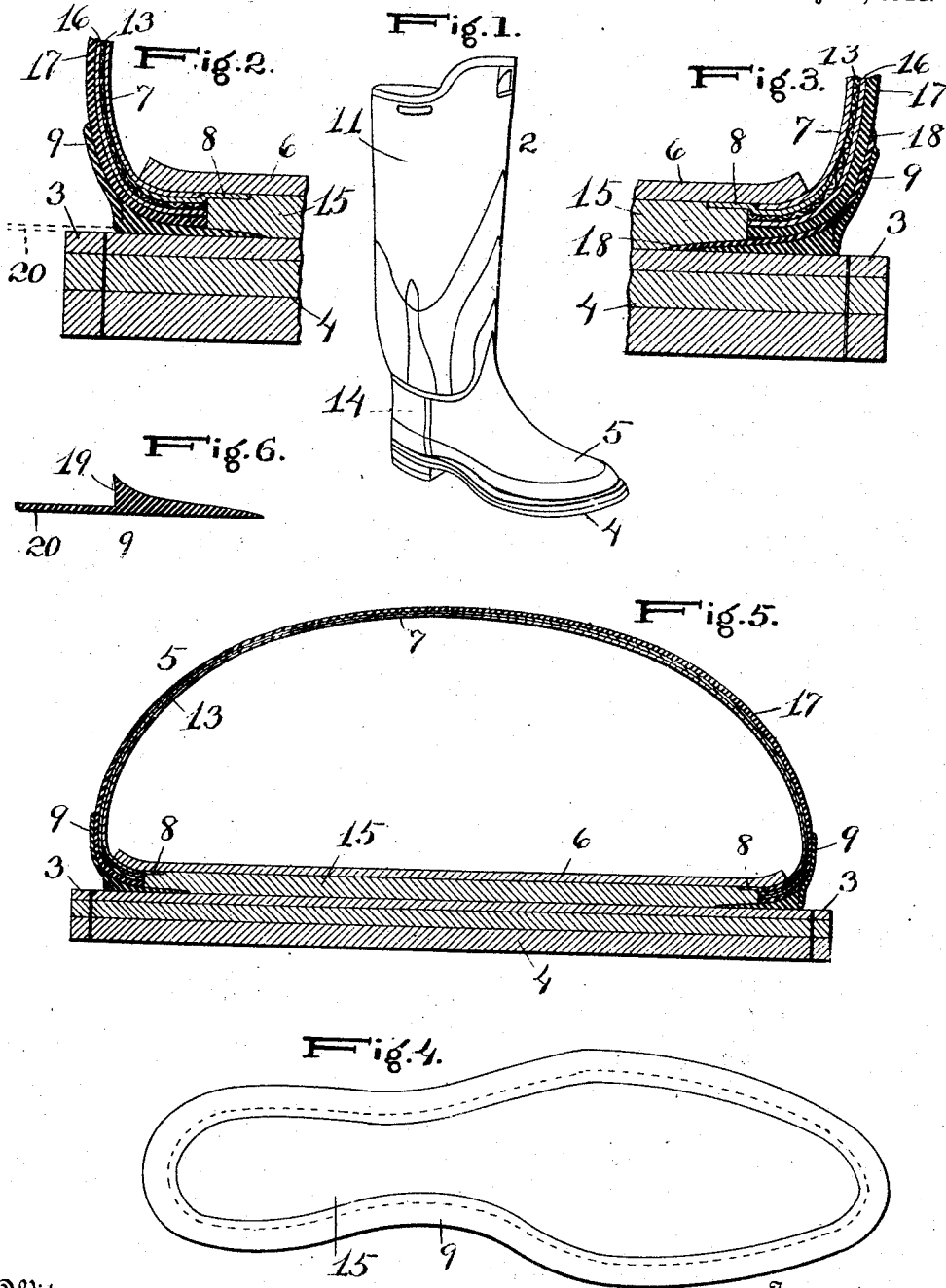


S. J. HARRIS.
 BOOT AND SHOE.
 APPLICATION FILED MAY 29, 1912.

1,062,826.

Patented May 27, 1913.



Witnesses

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UNITED STATES PATENT OFFICE.

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BOOT AND SHOE.

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Specification of Letters Patent.

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Application filed May 29, 1912. Serial No. 700,479.

To all whom it may concern:

Be it known that I, SAMUEL J. HARRIS, a citizen of the United States, resident of Randolph, in the county of Norfolk and State of Massachusetts, have made a certain new and useful Invention in Boots and Shoes; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the invention, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 is a perspective view of a boot having my invention embodied therein. Fig. 2 is a cross section of an edge portion of the boot, enlarged. Fig. 3 is a similar view showing a modification. Fig. 4 is a detail plan view showing the lapping of the shouldered strip upon the middle sole. Fig. 5 is a cross section of the foot portion of the boot enlarged with the extra vamp lining omitted. Fig. 6 is a detail cross section of the shouldered strip blank.

The invention has relation to rubber boots and shoes having combined rubber and leather soles, and is designed to provide an improved product having superior features in regard to strength, durability, and the prevention of leakage.

The invention consists in the novel construction and combinations of parts, as hereinafter set forth.

In the accompanying drawings illustrating the invention, the numeral 2, indicates a rubber boot, having a welt sole or intermediate sole 3, which projects outward around the lower portion of the upper, and is secured to the lower or leather sole 4.

The upper is indicated at 5.

In carrying out the manufacture of a rubber boot, the leg lining is lapped at the back of the tree or last, and its edges are joined from the top to the bottom. The lower inside edge of the lining is covered with cement, which is designed to unite the lining to the under surface of the lasting or insole of the boot, upon which it is lapped. The outer surface of the insole 6, is covered with a rubber compound for the purpose of securing the parts which come in contact therewith. The foot lining 7 is then put in place, its edge being lapped upon and attached to the leg lining by a rubber-sized strip, over the instep portion.

The lower edge of the lining is connected to the under surface of the insole, being lasted to the shape of the foot. The parts are now trimmed and stay pieces and counter form attached by being laid over the lining and cemented and rolled thereto. A strip of rubber or other suitable material is now laid over the edge of the boot, running from the top to the bottom of the same at the back, and covering in the lapped seam at the back. A reinforcing strip 8, of rubber sized cloth, having a smooth rubber surface is next applied, this strip running around the bottom, one half lying on the edge of the lining and the other half fitted under the bottom of the insole. This strip is designed to materially strengthen the foot of the boot and has for this purpose special relation to the shouldered strip or snake strip 9, hereinafter described. The usual ankle piece is then applied, and the leg cover 11, having been laid on the front of the lining is drawn tightly around the boot, the lapped seam at its back covering in the lining seam. The parts are then rolled solidly together. After the boot has been built thus far, the usual vamp lining 13, is applied, this being laid upon the upper part of the foot and lapped upon the leg cover and drawn tightly over the sides and toe portion of the foot in such wise as to lap over the strip 8, on the bottom of the boot. The counter 14, is now put in place, its forward edges lapping over the vamp lining and over the sides of the boot at its bottom edges, over the bottom on to the strip 8. The parts are now rolled solidly together. A middle sole 15, preferably of canvas, is now provided, of sufficient thickness to render the bottom of the structure substantially flat. This middle sole covers the insole, and closes against the edge portions of the parts lapping thereover and is solidly rolled in place.

An inside or extra vamp 16 of canvas is applied in the same manner as the foot lining, this extra vamp having been treated with rubber compound to make it very adhesive. Over this the exterior or rubber vamp 17, is applied, this vamp lapping over the bottom and having its edge in connection with the edge of the middle sole. A shouldered strip or snake strip 9, of rubber or of canvas, suitably treated with rubber, is now applied. This strip is made with a longitudinal shoulder 19, and its body portion

shelves therefrom on the inside for three quarters of an inch to an inch to a thin inside edge, which is preferably skived. Outside of the shoulder, which faces outward, the material is extended to form a thin longitudinal flange 20, which is continuous with the length of the strip, and lies in the plane of its lower portion or base. This shouldered strip is applied around the boot in such wise that its beveled body portion covers in the edge of the vamp under the bottom of the boot. At the same time, the shoulder of this strip follows the contour of the vamp, its beveled face fitting against the rounded surface thereof. As this strip has considerable width, as well as a special thickness at the shoulder, the exterior flange is provided not only to strengthen the connection to the vamp, but also to cause the strip to have a neat fit, and to this end, after the strip is applied and secured in place, the outside flange, which is more flexible, is turned up against the surface of the vamp and rolled against the round of the foot, in this way giving great strength to the connection and providing an even finish around the boot. This outside shouldered and flanged strip is designed to cooperate with the inside reinforcing strip 8, to hold the upper securely to the middle sole. The welt sole 3, is next applied. This sole is preferably made up of alternate sheets of rubber and rubberized canvas, a rubber surface being provided however to meet the adjacent surface of the shouldered strip above referred to. These layers forming the welt sole are rolled together and after they are firmly cemented this sole is pressed and secured to the bottom of the boot, rendering it watertight. The whole is then vulcanized, and an insole preferably of leather, placed in the boot, or shell, as it is known at this stage. The leather soles, indicated at 4, are now attached, preferably by sewing or by other common means, whereby the outer or projecting portion of the welt sole is secured to the leather soles and heel.

In some cases, when an extra stout boot is required, a reinforcing strip 18, of canvas covered with rubber, and of sufficient width to extend above the round of the foot, and

to extend inward on the middle sole is employed, this strip being applied and secured in place around the bottom before the shouldered strip is applied.

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

1. An exterior flexible strengthening strip adapted for use in rubber boots and shoes, 60 having a continuous outwardly facing shoulder extending longitudinally thereof, a surface beveled from the top of said shoulder to the inner edge of the strip, and a continuous flange extending outwardly from the bottom of said shoulder and adapted to be turned upward to engage said shoulder, said flange having a width greater than the height of said shoulder, whereby when said flange is turned upward against said shoulder it will extend above the same. 70

2. In rubber boots and shoes, a middle sole, an insole secured to the top of said middle sole, a welt sole secured to the bottom of the middle sole, a composite upper 75 joining the middle sole between said insole and said welt sole, an interior circumferential strengthening strip secured partly in the upper and partly between the insole and middle sole, and an exterior circumferential 80 strengthening strip secured partly between the upper and welt sole and partly between the welt sole and the middle sole.

3. In rubber boots and shoes, a middle sole, an insole secured to the top of said 85 middle sole, a welt sole secured to the bottom of the middle sole, a composite upper extending between the insole and the welt sole, an interior circumferential strengthening strip engaging the insole, the top of the 90 middle sole and the inner portion of the composite upper and an exterior circumferential strengthening strip secured to the bottom of said middle sole and to the lower edge portions of the composite upper. 95

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

SAMUEL J. HARRIS.

Witnesses:

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