Jan. 15, 1924. 1,481,133

F. GROSSMAN

ARCH SUPPORTER

Filed Dec. 19, 1921

Fig. 1.

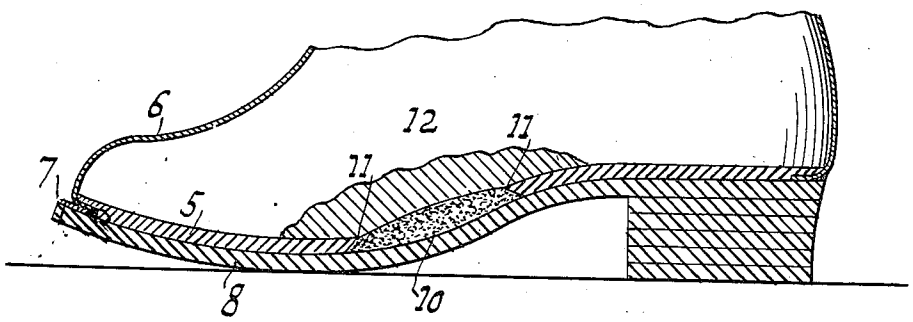


Fig. 2.

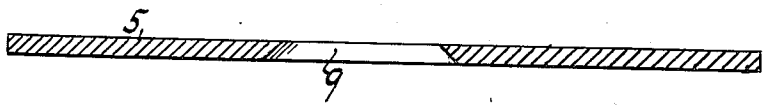


Fig. 3.

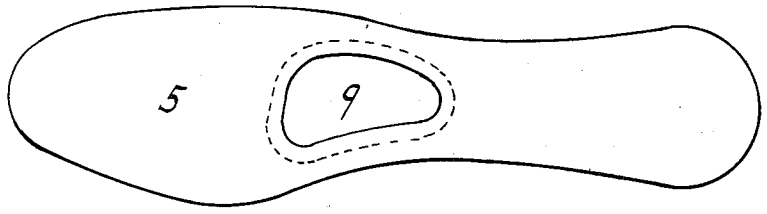
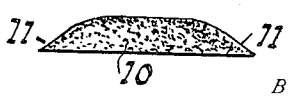


Fig. 4.



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UNITED STATES PATENT OFFICE.

FRANK GROSSMAN, OF BROOKLYN, NEW YORK.

ARCH SUPPORTER.

Application filed December 19, 1921. Serial No. 523,272.

To all whom it may concern:

Be it known that I, FRANK GROSSMAN, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented new and useful Improvements in Arch Supporters, of which the following is a specification.

This invention relates essentially to an arch supporter for boots and shoes in which a felt pad permanently fixed between the inner and outer soles serves to support the bones of a fallen arch.

An object of the invention is to position the pad in an opening located in the inner sole before the outer sole is sewed to the welt.

Another object of the invention is to provide the opening with means for locking the pad in its place so that it cannot shift after the outer sole is secured.

Another object of the invention provides a method of shaping the pad while the outer sole is sewed to the welt to conform it to the cavity of the arch portion of the foot.

The novel features of the invention are more fully described in the following specification and claims, and illustrated in the accompanying drawing, in which:

Figure 1 represents a vertical section of a shoe embodying this invention.

Figure 2 is a longitudinal section of the inner sole.

Figure 3 is a top view of the same.

Figure 4 is a side elevation of a pad.

In the drawing the numeral 5 designates an insole to which is sewed the upper 6 and the sole 7 as is well-known. An outer sole 8 is stitched to the welt in the ordinary way.

The present invention consists in providing the inner sole with a chamfered opening 9 shaped to correspond with the configuration or outline of the arch portion of the foot. A felt pad 10 having a beveled rim 11 is fitted into the opening of the inner sole. The beveled rim engages the chamfer in the edge of the opening thus locking it in place so that it will be impossible for it to move after the outer sole is fastened and presses against the back of the pad.

The pad is inserted into the opening after the upper and welt is stitched to the inner sole. The bottom of a last 12 arranged in the shoe is hollowed out adjacent to the hole in order to accommodate the convex top of the pad. The opening in the inner sole is preferably made after the sole, upper and welt are sewed together so that the cavity in the last can be shaped at the same time. The chamfered border of the opening primarily insures an interlocking joint to prevent displacement of the pad, and at the same time it obviates any bulging or wrinkling of the leather surrounding the opening. The elasticity of the pad permits it to be conformed to the curvature of the arch of the foot. The upward pressure of the outer sole on the back of the pad has a tendency to raise it so that the portion protruding from the hole will bolster the arch.

I claim:

1. In boots and shoes the combination of an insole formed of a single piece of material, an opening in the shank of said insole to lie beneath the arch of the foot, a resilient pad slightly larger than and protruding through said opening and held in place between the inner and outer soles, both soles lying in contact throughout substantially all their areas save for those parts separated by the pad.

2. In boots and shoes the combination of an insole formed of a single piece of material, a chamfered opening in the shank of said insole to lie beneath the arch of the foot, a resilient pad slightly larger than and protruding through said opening and held in place between the inner and outer soles, both soles lying in contact throughout substantially all their areas save for those parts separated by the pad.

3. The method of securing an arch supporter in a boot or shoe which consists of arranging a pad in an opening in the inner sole, and sewing the outer sole to the welt to lock the pad in place, the inner sole engaging the outer sole throughout its entire periphery.

4. The method of securing an arch supporter in a boot or shoe which consists in

forming an opening in the inner sole and a cavity in the last, then after the upper, welt and inner sole are sewed together, placing a pad in the opening, and sewing the outer sole to the welt, the inner sole engaging the outer sole throughout its entire periphery.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

FRANK GROSSMAN.

Witnesses:
INEZ M. SCHOMBS,
WILLIAM MILLER.