

W. H. WOOD.
 COMBINED SHANK STIFFENER AND FILLER.
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1,049,284.

Patented Dec. 31, 1912.

Fig. 1

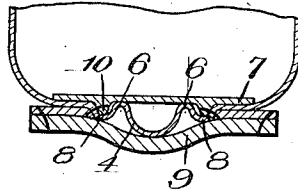


Fig. 2



Fig. 3

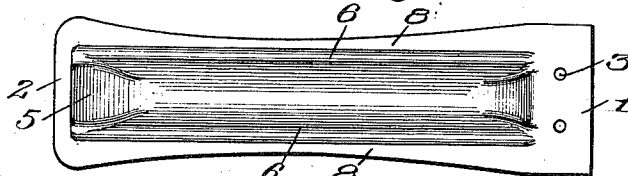


Fig. 4

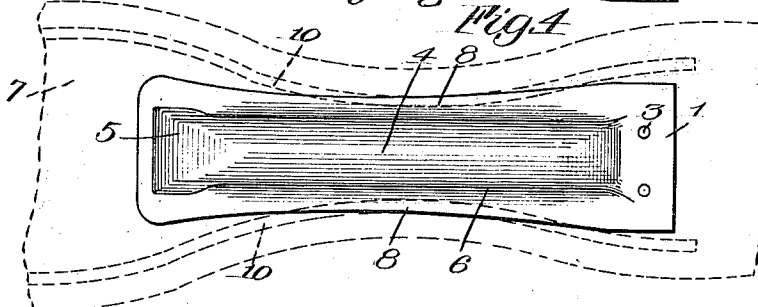


Fig. 5



Fig. 6



Witnesses
 Ada M. Whitmore
 Louise M. Cope

Inventor
 William H. Wood
 By H. H. Simms
 his Attorney

UNITED STATES PATENT OFFICE.

WILLIAM H. WOOD, OF ROCHESTER, NEW YORK.

COMBINED SHANK STIFFENER AND FILLER.

1,049,284.

Specification of Letters Patent.

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Application filed April 1, 1912. Serial No. 687,598.

To all whom it may concern:

Be it known that I, WILLIAM H. WOOD, of Rochester, in the county of Monroe and State of New York, have invented a new and useful Improvement in Combined Shank Stiffeners and Fillers, which improvement is fully set forth in the following specification and shown in the accompanying drawings.

The present invention relates to a combined shank stiffener and filler of the type adapted to be arranged within the arch of a boot or shoe for the purpose of stiffening such arch and, at the same time, to provide for filling in and maintaining the transverse curve of the arch, an object of this invention being to construct the shank so that it fills in on a line which gradually merges into the line of the sole to the end that a depression is not formed in proximity to the end of the shank.

Another object of the invention is to support the outer sole in such a manner that the transverse curve is maintained, while, at the same time, the leveling tool, which is employed in forming this curve, does not cause the device to cut the main sole.

To these and other ends the invention consists in certain parts and combination of parts, all of which will be hereinafter described and the novel features pointed out in the appended claims.

In the drawings: Figure 1 is a transverse section of a shoe with the improved device shown in section; Fig. 2 is a side view of the device; Fig. 3 is a top view; Fig. 4 is a bottom view showing its position upon the insole; Fig. 5 is a transverse section through the forward portion of the device; and Fig. 6 is a longitudinal section through the forward portion of the shoe.

In the illustrated embodiment of the invention, the combined shank stiffener and filler is formed from a single piece of sheet material of uniform width. This material is preferably so bent as to form flattened end portions 1 and 2, the former preferably having openings 3 by which the device is secured to the insole. Between the end portions the material is arched on a slight curve conforming to the arch of the boot or shoe and varying according to the height of the heel, the end 2 being turned slightly in a reverse direction to that of the arch in order to conform to the general curve of the sole of the boot or shoe to which the device

is applied. The material is longitudinally corrugated to provide, on the under side of the arch, a central longitudinally extending projection or rib 4 which is of uniform width throughout the greater portion of its length and conforms to the curve of the arch. The forward portion, or end 5, of this rib widens but decreases in height, so that it gradually merges into the forward end 2 on a curve which is the reverse of the curve of the arch. With this arrangement, the outer sole of the shoe passes onto the forward end of the central rib or projection without having an unsupported portion between this forward end and the flattened end 2 to break down under the action of the leveling tool.

Upon the upper side of the arch and upon opposite sides of the rib 4, ribs or projections 6 are formed, for engagement with the under side of the inner sole 7. These ribs are of a width to provide sufficient bearing for the inner sole and consequently do not cut through the latter, their forward ends merging into the widened portion 5 of the rib 4, so that said widened portion is equal to the width of both ribs 6 and the rib 4.

Upon the under side of the arch and upon opposite sides of the central rib 4, projections 8 may be provided. These projections are not so high as the central projection 4 and act to support the outer sole 9 upon opposite sides of the central projection 4 in order to maintain the transverse curve of the arch of the shoe. Preferably, said projections 8 are widened laterally or turn outwardly, and as they are located between the upper surfaces of the projections 6 and the under surface of the projection 4 they may extend over the usual shoulders 10 on the inner sole 7, thus protecting such shoulders against the action of the leveling tool, and at the same time, providing wide engaging surfaces for the outer sole 9 so as not to cut through such outer sole during the operation of the leveling tool.

A shoe shank constructed in accordance with this invention supports the outer sole in proximity to the forward end of the filler arch or projection, as the filler rib has its forward end conforming to the general curve of the outer sole, leaving no unsupported portion in proximity to the forward end of the projection. The device also has its arch supporting projections or portions

on opposite sides of its main or central projection constructed to cover the shoulder of the inner sole, and at the same time, to provide wide bearing surfaces for engagement with the outer sole.

What I claim as my invention and desire to secure by Letters Patent is:

1. A shank stiffener and filler formed from sheet material, arched between its ends with its forward end bent on a curve which is the reverse of the arch curve, the material of the device being bent to provide, on the upper side of the arch, two longitudinally extending parallel ribs and, on the underside of the arch, a central longitudinally extending rib which projects below all other portions of the device and is of uniform width throughout the greater portion of its length, the forward end of the said rib being widened beyond the forward ends of the upper ribs and gradually decreasing in height so as to merge gradually into the reversely curved forward end.

2. A shank stiffener and filler made from sheet material, arched between its ends and bent to provide, on the upper side of the arch, two longitudinally extending ribs, and,

on the under side of the arch, a central longitudinally extending rib between the ribs on the upper side and also longitudinally extending portions on opposite sides of the central rib, the last named portions being above the lower most portion of the central rib and being widened laterally.

3. A shank stiffener and filler made from sheet material arched between its ends and bent to provide, on the upper side of the arch, two longitudinally extending ribs, and, on the under side of the arch a central longitudinally extending rib and also longitudinally extending and outwardly presented portions on opposite sides of the central rib beyond the two longitudinally extending ribs, said outwardly presented portions being substantially flat in cross section and lying above the lowermost portion of the central rib and below the uppermost portions of the ribs on the upper side of the arch with their upper faces substantially in the same plane.

WILLIAM H. WOOD.

Witnesses:

HAROLD H. SIMMS,
ADA M. WHITMORE.