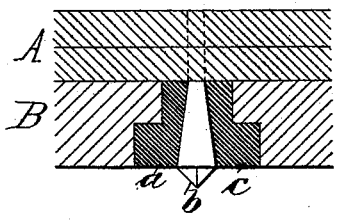
(No Model.)

H. MENIER.

MEANS FOR ATTACHING INDIA RUBBER, &c., TO THE SOLES OF BOOTS AND SHOES.

No. 522,477. Patented July 3, 1894.



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UNITED STATES PATENT OFFICE.

HENRI MENIER, OF PARIS, FRANCE.

MEANS FOR ATTACHING INDIA-RUBBER, &c., TO THE SOLES OF BOOTS OR SHOES.

SPECIFICATION forming part of Letters Patent No. 522,477, dated July 3, 1894.

Application filed March 20, 1891. Serial No. 385,763. (No model.) Patented in France October 29, 1889, No. 201,589; in Belgium January 30, 1891, No. 93,598; in Switzerland January 30, 1891, No. 3,111; in England January 31, 1891, No. 1,813; in Portugal February 18, 1891, No. 1,653; in Italy February 20, 1891, No. 29,021; in Spain April 4, 1891, No. 11,728; in Austria-Hungary June 22, 1891, No. 6,377; in Luxemburg September 7, 1891, No. 1,498; in Norway September 15, 1891, No. 2,481; in Germany November 19, 1891, No. 65,272; in Denmark December 29, 1891, No. 492, and in Russia August 10, 1892, No. 9,356.

To all whom it may concern:

Be it known that I, HENRI MENIER, a citizen of the Republic of France, residing at Paris, France, have invented certain Improvements in Means for Attaching India-Rubber or Flexible or Yielding Material to the Soles of Boots or Shoes or other Like Surfaces, (for which I have obtained Letters Patent in France, No. 201,589, dated October 29, 1889; in Belgium, No. 93,598, dated January 30 1891; in Switzerland, No. 3,111, dated January 30, 1891; in Great Britain, No. 1,813, dated January 31, 1891; in Portugal, No. 1,653, dated February 18, 1891; in Italy, No. 29,021, dated February 20, 1891; in Spain, No. 11,728, dated April 4, 1891; in Austria-Hungary, No. 6,377, dated June 22, 1891; in Russia, No. 9,356, dated August 10, 1892; in Luxemburg, No. 1,498, dated September 7, 1891; in Norway, No. 2,481, dated September 15, 1891; in Germany, No. 65,272, dated November 19, 1891, and in Denmark, No. 492, dated December 29, 1891,) of which the following is a specification.

The means heretofore employed for attaching rubber studs, calks, strips and the like or other elastic or yielding material to the soles or heels of boots or shoes are all of them attended with serious disadvantages. When sewing is resorted to the stitches cut the rubber and nails, screws or rivets soon grind it away in consequence of the shaking or vibration to which they are exposed. The loosening of such nails is the consequence of their having to support almost all the strain produced in walking which drives them inward while the elasticity of the rubber constantly tends to pull them out. In all cases the calk or piece of rubber comes off after a time and always before it is completely worn out. In order to provide a remedy for these defects and enable elastic or rubber calks or the like to be employed with advantage I attach the yielding material to the sole or other surface by the means hereinafter described.

According to my invention the nail, screw or rivet employed to attach the elastic material is passed through a washer, collar, bush or sleeve of rigid or relatively unyielding material inserted or embedded in the thickness of the elastic or yielding material and extending from one side of it to the other, that is to say, from the outer surface to the inner surface so as to take a bearing directly upon the sole or other surface to which the said yielding material is to be applied. Strips, calks or pieces of rubber attached to boots or shoes, according to my invention are completely worn away before the attaching device becomes loose and the rubber is not liable to injury from the action of the said device.

The accompanying drawing illustrates in section an example of the way in which the piece of rubber or yielding material is attached to the sole or surface according to my invention.

In the drawing A represents a portion of a boot sole for example and B a portion of a piece of rubber or flexible material to be attached thereto.

The part marked *a* represents the washer which is perforated by a conical hole for the passage of a nail, screw or rivet having a head *b* of corresponding shape. The washer *a* may be inserted by any suitable process during or after the manufacture of the piece of rubber (B).

The rubber or other yielding material B is retained by the washer *a* by means of a flange or shoulder *c* on the said washer or by any other equivalent projection or arrangement.

Any suitable material may be employed to form the washer *a* provided that it presents the required strength or firmness and is of an unyielding nature or relatively incapable of being compressed. Wood may be employed for example or horn or metal or undurated rubber which may if required be formed in the yielding or flexible part of the rubber. By means of this arrangement the head *b* of the nail, screw or rivet is not exposed to the blows incidental to walking the strain of which is borne by the wide surface of the washer *a* which is flush with the wearing surface and bears directly against the solid surface of the sole or heel of the boot or shoe. Consequently the nail, screw or rivet is never shaken, is not called upon to sustain the whole of the strain

and its head wears away equally with the calk or piece of rubber secured by the rigid collar *a*. This collar may be of any suitable shape and its thickness may be either equal to or greater or less than that of the rubber or yielding material. These means of attaching yielding material to surfaces are evidently applicable to attaching strips or sheets of rubber or other elastic or yielding material to any other like description of surfaces or supports.

I claim—

A boot or shoe having two soles provided with a rigid unyielding flanged washer passing through the outer sole of yielding material with its flange seated in a recess in the lower part of said sole and flush with the lower surface of the same and having the small end bearing against the inner sole and a nail, screw, or rivet passing through said washer into said inner sole, substantially as and for the purpose described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HENRI MENIER.

Witnesses:

LEON FRANCKENS,

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