(No Model.)

H. MAYER.

SOLE.

No. 546,932. Patented Sept. 24, 1895.

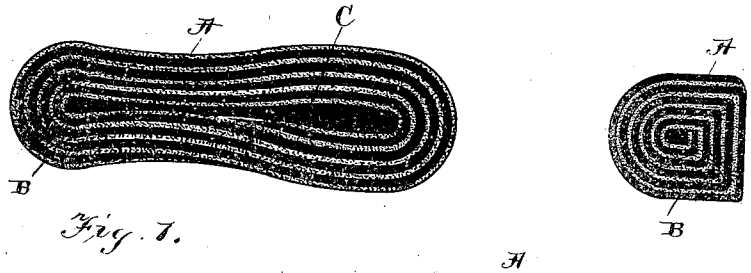


Fig. 1.

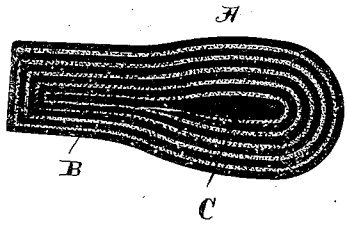


Fig. 2.

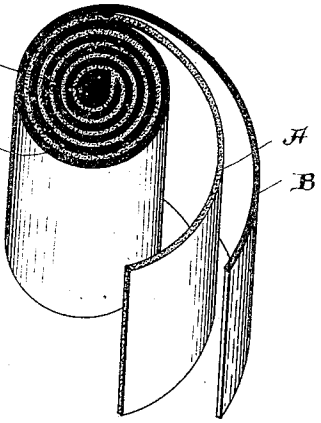
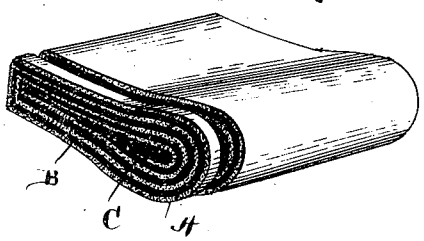


Fig. 3



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SOLE.

SPECIFICATION forming part of Letters Patent No. 546,932, dated September 24, 1895.

Application filed June 27, 1894. Serial No. 515,862. (No model.)

To all whom it may concern:

Be it known that I, HERMAN MAYER, of Bradford, in the county of McKean and State of Pennsylvania, have invented certain new and useful Improvements in Soles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in soles and heels and the method of making the same; and the object of the invention is to provide a very durable sole and heel which are at once cheap and simple in construction.

The invention consists in the novel formation of the sole and heel and in the novel steps in forming the same, as fully described hereinafter, and especially designated in the claims.

Referring to the accompanying drawings, Figure 1 represents a plan of my improved sole, half-sole, and heel. Fig. 2 illustrates the method of rolling the rubber and textile material before being placed in a suitable press. Fig. 3 illustrates a block of the rolled material after being in the press, and in transverse section being the shape of a half-sole.

The sole, half-sole, and heel illustrated in Fig. 1 consist of transverse alternating strips or sections of rubber and textile material, so that in use both materials extend vertically from the lower or wearing surface, so that each is subjected to as much wear as the other.

In manufacturing my improved sole and heel I employ sheets of textile material A and corresponding sheets of rubber B, the latter being non-vulcanized. The edges of the two sheets are placed together and wound continuously about a spindle until a roll of proper dimensions has been formed. The metallic or other form of spindle is then removed and a core C of non-vulcanized rubber substituted therefore. The roll is then placed in any suitable form or construction of press which will so shape the roll that soles, half-soles, or heels may be secured therefrom, Fig. 3 of the drawings showing the shape of the roll after being pressed to form half-soles. The soles, half-soles, or heels are secured from the pressed roll by slicing the same transversely, as shown in Fig. 3. It is apparent that soles and heels may be formed in exactly the same way, and it is immaterial as to what form of clamp or press is used for effecting the desired shape of the roll. However, before the roll is removed from the press it is subjected to dry heat for the purpose of vulcanizing the rubber, which is essential to the formation of a durable wearing-surface.

Soles and heels constructed in the manner and by the method herein shown and described are very durable and comparatively cheap and at the same time entirely waterproof; also, they are not liable to slip and throw the wearer in cold and wet weather.

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

1. An improved sole or heel composed of transversely alternating strips of rubber and textile material wound in successive layers from a central or starting point, and a means for securing together the strips, substantially as shown and described.

2. An improved method of making soles and heels which consists in winding sheets of rubber and textile material to form a block or roll and securing the sheets together, then pressing the block or roll to the shape of the sole or heel, and finally slicing the sole or heel therefrom, substantially as described.

3. An improved method of making soles and heels consisting in winding sheets of textile material and non-vulcanized rubber about a spindle to form a roll or block, then substituting a core of non-vulcanized rubber, then placing the block or roll in a press to conform it to the shape of the sole or heel, vulcanizing the rubber while in the press, and finally slicing the sole or heel from the block or roll after removing from the press, substantially as described.

4. A sole or heel consisting of united strips of rubber and textile material wound spirally, substantially as shown and described.

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

HERMAN MAYER.

Witnesses:
H. H. NORTH,
KATHARINE ZALMISER.