March 16, 1937. W. A. CONDON 2,074,166

MANUFACTURE OF CEMENTED FOOTWEAR

Filed Sept. 6, 1935

Fig. 1

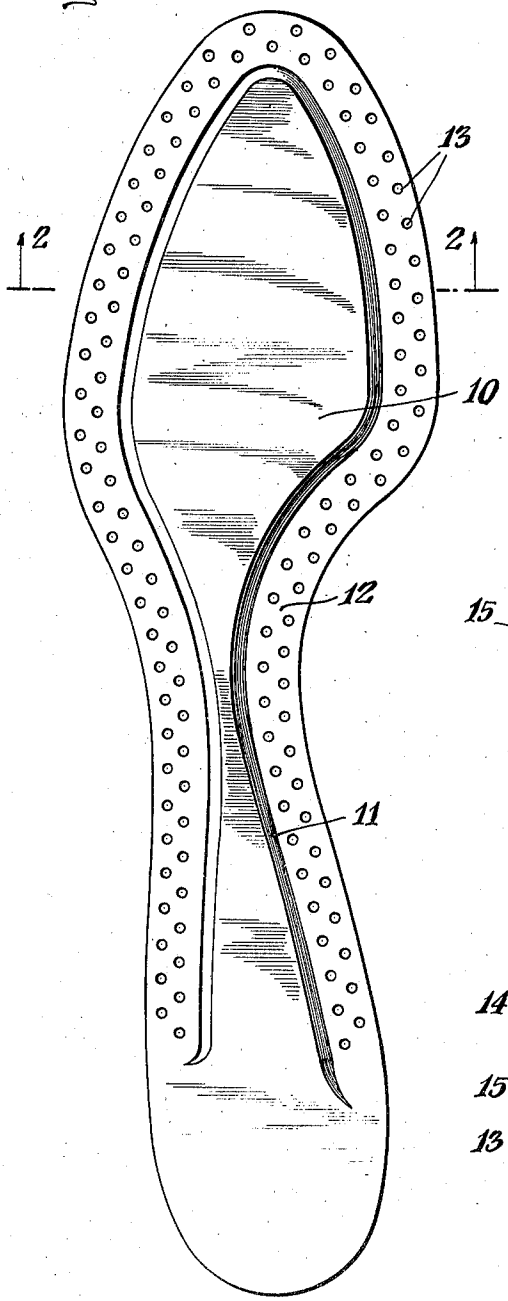


Fig. 2

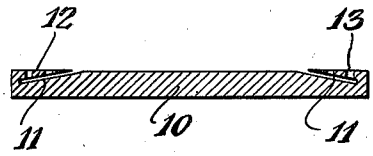


Fig. 3

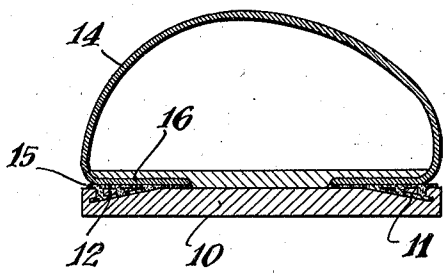
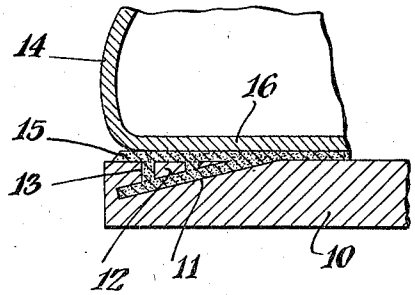


Fig. 4



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MANUFACTURE OF CEMENTED FOOTWEAR

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Application September 6, 1935, Serial No. 39,414

8 Claims. (Cl. 12—142)

This invention relates to the manufacture of cemented shoes, and more particularly to outer soles and their treatment for use in such shoes.

A general object of the invention is to provide an outer sole which is adapted to form a very firm cemented bond with a lasted upper.

More specifically, an object of the invention is to provide an outer sole which may be formed of relatively loose fibered stock such as belly leather, which is nevertheless capable of forming a firm cemented bond with the lasted upper.

Further objects of the invention are to provide a method of forming sole stock to make outer soles of the kind described, and to provide a method of making a cemented shoe having a firm cemented bond between the outsole and upper.

A further object of the invention is to provide a shoe wherein the upper and outsole are firmly bonded in an improved manner.

Other objects of the invention will in part be obvious and will in part appear hereinafter.

The invention accordingly comprises the several steps and the relation of one or more of such steps with respect to each of the others, and the article possessing the features, properties, and the relation of elements, which are exemplified in the following detailed disclosure, and the scope of the application of which will be indicated in the claims.

For a fuller understanding of the nature and objects of the invention reference should be had to the following detailed description taken in connection with the accompanying drawing, in which:

Fig. 1 is a plan view of an outsole embodying principles of the present invention;

Fig. 2 is a transverse sectional view taken along line 2—2 of Fig. 1;

Fig. 3 is a transverse sectional view taken across the forepart of a shoe equipped with the outsole of the present invention; and

Fig. 4 is a fragmentary sectional view on an enlarged scale showing a detail of the cement application in connection with the outsole of the present invention.

The belly leather taken from the lateral edges of cured hides, is of relatively coarse or loose fibered texture. Heretofore, such leather has not generally been considered suitable for use in the outsoles of cemented shoes since the loose fibrous structure on its flesh side was not readily amenable to cement attachment to a lasted upper. This was largely because of the tendency of these fibers to pull loose if the cement joint were subjected to strain.

In accordance with the present invention an outsole is provided which is adapted to be cemented to a lasted upper and which has a cemented joint of such nature that the above described belly leather may be used to advantage while overcoming the defects previously encountered through its use. While thus primarily useful in rendering such cheap leather available for outsole use, it is to be understood that the present invention also is generally applicable in connection with any type of outsole material in that it affords a very firm and secure union between the sole and the upper.

Referring more particularly to the drawing, there is provided a rounded blank 10 of outsole stock. This blank is provided with a channel 11 which extends from its flesh surface downwardly and outwardly toward its edge along the sole margin. Such channel, as illustrated, may desirably begin at the forward heel seat portion on one side of the sole and continue entirely around the shank and forepart portions back to the heel seat on the other side. If desired, such channel may continue entirely around the shoe periphery including the heel, or, in short, it may be provided at any portion of the sole where a firm cemented bond is wanted.

The channel 11 provides a marginal lip 12 which is adapted to lie flat against the body portion of the outside. This lip is provided with a plurality of perforations 13 which extend from its upper or flesh side therethrough into communication with channel 11. These perforations are adapted to provide channels for the flow of cement, and are sufficiently numerous and closely spaced to afford ready access of cement from the flesh surface of the sole into channel 11.

In constructing a shoe with the presently described sole, a lasted upper 14 is provided and a quantity of suitable adhesive 15, preferably pyroxylin cement, is applied between the lasting allowance 16 of such upper and the marginal portion of the outsole. This cement flows between the lasting allowance and the top or flesh surface of the sole, and also passes downwardly through perforations 13 and into channel 11, forming a cement body or mass having the cross sectional outline shown in Fig. 4. Upon hardening, the cement in channel 11 and that along the outer surface of lip 12 is joined by a plurality of cement rivets extending through perforations 13. The cement in channel 11 in effect forms a head for each of these rivets, forming a secure anchorage between the upper and the sole. The entire fibrous mass in this vicinity is

more or less permeated with cement, which, upon hardening, tends to mat the fibers both within and below lip 12 into a compactly cemented mass which is firmly bonded to the upper. A shoe constructed in this manner has far greater sole tenacity than can be obtained by the ordinary expedient of simply applying cement between the upper and the flesh surface of the upper soles.

Since certain changes in carrying out the above process, and certain modifications in the article which embody the invention may be made without departing from its scope, it is intended that all matter contained in the above description or shown in the accompanying drawing shall be interpreted as illustrative and not in a limiting sense.

It is also to be understood that the following claims are intended to cover all of the generic and specific features of the invention herein described, and all statements of the scope of the invention which, as a matter of language, might be said to fall therebetween.

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

1. An outer sole adapted for cement attachment to a lasted upper, said sole having a channel extending toward but not to its edge forming a marginal lip lying flat against the body of the sole, and said lip having a plurality of perforations communicating with said channel.

2. An outer sole adapted for cement attachment to a lasted upper, said sole having a channel therein extending from its flesh surface downwardly and outwardly toward its edge along the sole margin and having a plurality of perforations extending from its flesh surface to said channel.

3. An outer sole adapted for cement attachment to a lasted upper, said sole having a channel therein extending from its flesh surface downwardly and outwardly toward its edge along the sole margin to form a lip lying flat against the sole body, said lip having a plurality of perforations communicating with said channels.

4. An outer sole adapted for cement attachment to an upper, having a perforate marginal lip lying flat against the body thereof along its flesh side and integrally attached thereto along the sole edge.

5. An outer sole of coarse fibered belly leather adapted for cement attachment to a lasted upper, said sole having a perforate marginal lip lying flat against the body thereof along its flesh side and integrally attached thereto along the sole edge, said perforations being sufficiently closely spaced to pass a quantity of cement beneath said lip.

6. A method of making a cemented shoe which comprises providing a lasted upper, supplying an outer sole having a perforate lip lying flat against the sole body, applying cement between the lasted upper and said lip so as to permit passage of cement through the perforations in the lip and into the channel, and pressing said sole and upper together.

7. A method of making a cemented shoe which comprises providing a lasted upper, supplying an outsole having a channel therein extending from its flesh surface downwardly and outwardly toward its edge to provide a lip along the sole margin, providing said lip with a plurality of perforations, applying cement between said sole and upper, and pressing them together.

8. A cemented shoe comprising a lasted upper, an outer sole having a marginal lip lying flat against the body thereof and having a plurality of perforations therethrough, said lip being integrally attached to the outsole body along the outer edge thereof, and an integral cement bond located between said lip and upper, in said perforations and beneath said lip.

WILLIAM ANTHONY CONDON.