

Oct. 28, 1930.

A. H. HOYER

1,779,671

REMOVABLE SPRING CLAMP FOR SECURING AN EXTRA SOLE TO FOOTWEAR

Filed June 11, 1929

Fig. 1.

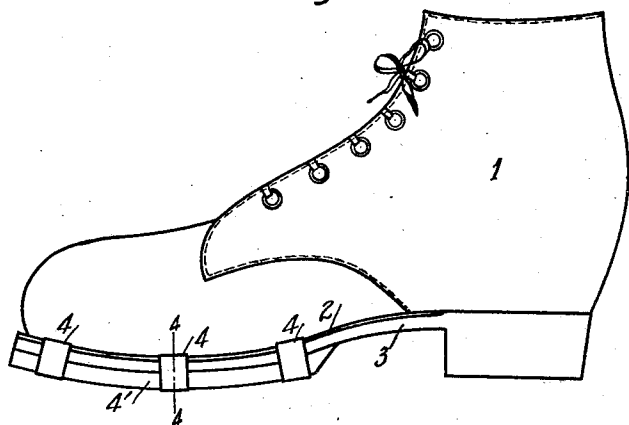


Fig. 2.

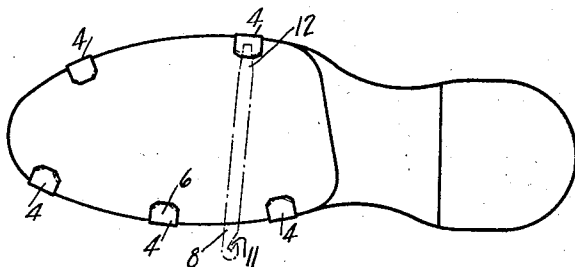


Fig. 3.

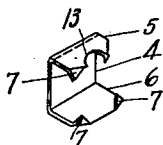


Fig. 4.

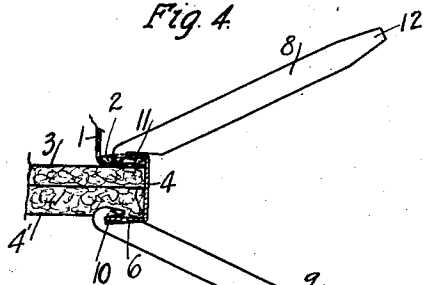
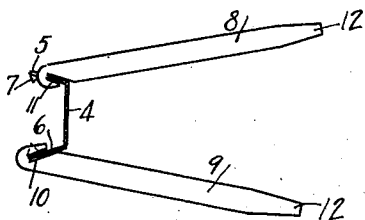


Fig. 5.



Inventor

Albert H. Hoyer

By

John V. Cross

his Attorney

UNITED STATES PATENT OFFICE

ALVIN H. HOYER, OF ASHLAND, OHIO

REMOVABLE SPRING CLAMP FOR SECURING AN EXTRA SOLE TO FOOTWEAR

Application filed June 11, 1929. Serial No. 370,074.

This invention relates to a removable spring clamp for securing an extra sole to footwear.

It is well-known to those skilled in the art of making and selling shoes that the soles of shoes are practically rendered useless or impaired and worn out excessively in many occupations engaged in by persons wearing same, that is, in working on and about heated or rough pavements, roads, floors and the like and that the fibres thereof become deleteriously affected or burned out when subjected to unusual wear and use.

It is also known that, although the main portions of the shoes, such as the uppers and the like, are still in good workable condition, the soles become worn or burned out to such an extent that it is necessary to discontinue the use thereof or put on a new sole to preserve and conserve the usefulness of the worker or wearer and especially for safety, comfort and convenience.

The primary object of the invention is to provide a clamping means whereby an extra sole can be removably clamped to the ordinary sole by a series of spring clamps that can be used for clamping an extra sole to the ordinary sole and removed therefrom without sewing, pegging or using nails or the like as is customary.

A further object of the present invention is to provide a means for preserving and saving the upper portions of the shoe by placing and clamping an extra sole over the ordinary sole of the shoe to cover the worn portion and clamping same over and thereto by spring clamping members.

Another object of the invention is to provide spring clamping members that are provided with a series of prongs which impinge upon the welt or ordinary sole and the extra sole to hold the extra sole firmly in contact with the ordinary sole of the shoe.

A further object is to provide means whereby a spring clamp member can be spread under tension to easily fit over the extra sole and the ordinary sole to hold the extra sole in place and then release the lever spreading means from the clamping member.

A further object is to provide means for

spreading a spring clamp, which means can also be used for removing the clamp from the extra sole of the shoe and ordinary sole when it is desired to remove the extra sole.

In the drawings, Fig. 1 represents a side elevation of a shoe showing the clamping members holding and maintaining an extra sole to the ordinary sole of a shoe.

Fig. 2 is a bottom plan view of Fig. 1.

Fig. 3 is an isometric view of one of the spring clamp members.

Fig. 4 is a sectional view of the ordinary sole and extra sole showing a section of a clamping member on the line 4-4 of Fig. 1, and the spreading or tension releasing levers 8 and 9 about to be removed from their engagement with the spring clamping member.

Fig. 5 is a sectional view of one of the clamping members showing a clamping member in a position about to be clamped to the sole of the shoe and clamping the extra sole thereto.

In the drawings, reference numeral 1 represents the upper portion of the shoe, 2 the welt of the shoe and 3 the ordinary sole of a shoe having a series of clamping members 4 attached to the ordinary sole and holding and maintaining an extra sole 4' in close contact to the ordinary sole.

The clamping means comprise a body portion 4 and extending portions 5 and 6 which are preferably provided with one or more prongs or pointed protuberances 7 which yieldingly impinge over the welt, ordinary sole and the extra sole 4' when placed upon footwear for the purpose set out.

In order to secure the extra sole to the ordinary sole of footwear, I provide two levers 8 and 9 which are shown in Fig. 4 in the original position in full lines. They are provided with inclined slots 10 and 11. When placed upon the clamping members they are adapted to be pressed toward each other against the tension of the spring clamping members 5 and 6 to spread same to present a mouth-like formation and when released, assuming the dotted line position shown in Fig. 4, permitting same to rebound back to their normal positions and permit the impingement

of the prong members 7 of the members 5 and 6, upon the ordinary sole and extra sole, thereby holding and maintaining the soles in frictional contact with each other under tension.

5 In Fig. 2, attention is called to the fact that one of the levers 8 has one end 12 formed similar to a screw driver and that it is adapted to be inserted underneath the clamping member 6 to remove one of the clamping members from the ordinary sole of the shoe. It will, of course, be understood that any sharp-pointed instrument can be used for the purpose of removing the extra sole from the ordinary sole of the shoe.

10 It will be understood that the series of clamping members 4 are made of spring steel preferably tempered and made to spread without breaking and engage the extra sole for holding it in its proper place together and in close contact with the ordinary sole.

15 It will also be noted that the prongs 7 on the clamping members can be made of any desired length or shape or may be made of a series of serrations or roughened surfaces if desired.

20 In order to permit the lever member 8 to fit close to the upper portion of the member 5 and operate, a portion 13 of the member 5 is cut away for clearance. It will also be noted that the portions 5 and 6 extend from the body of the clamping members 4 at different lengths as shown more specifically in Fig. 3, the upper portion 5 being shorter in length or extension than the lower portion 6. The upper portion 5 clamps as described herein to the top of the ordinary sole and the lower portion 6 extends in the same direction parallel thereto and over the extra sole 4' as shown in Fig. 2.

40 It will be noted that when the levers 8 and 9 are released after distorting parts 5 and 6 to open and tension same to fit over the ordinary sole and extra sole, the spring clamp recovers its original shape when released after being distorted.

45 It will also be noted that the inner sides of the clamping members 5 and 6 can be serrated, roughened, or notched if desired to hold the clamping means to both of the soles by frictional contact alone without protuberances or prongs if desired.

50 The drawing as shown herein represents the preferred embodiment of the invention, but variations in structure can be made without deviating from the spirit of the invention. Attention is called to the fact that the present invention is designed to provide means for attaching and detaching an extra sole to the ordinary sole of footwear or the like without the necessity of sewing same thereto, using pegs, rivets or the like to repair it in placing a new or extra sole thereon.

55 It will also be noted that the clamping members can be inserted thereon without the

use of the levers 8 and 9 if desired when the tension of the clamping members is such as to permit same.

Attention is further called to the fact that one or more of the clamping members can be used if desired or that they may be placed in any spaced apart relation to each other without deviating from the spirit of the invention.

70 The yielding clamping member herein described provides means for attaching and detaching an extra sole to a worn out ordinary sole without the use of the conventional nails, pegs, sewing or the like and affords a means for cheaply and economically repairing the ordinary worn or exhausted sole of a shoe and further provides a convenient and rapid means of replacement by providing a new extra sole for shoes which are subjected to excessive wear or tear or obnoxious use thereof by the wearer.

I claim:

75 In a means for securing an extra sole to a welted shoe, a spring clip including a wall, upper and lower clamping sections projecting therefrom, said sections being adapted to overlie the welt and underlie the extra sole and operating to grip bolt welt and extra sole through the inherent resiliency of the sections, the welt engaging section being shorter than the extra-sole engaging section, and being formed with a recess in its free edge for the reception of a tool to spread the sections in the application or removal of the clip.

100 In testimony whereof I affix my signature.

ALVIN H. HOYER.