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SHOE AND SOLE THEREFOR.

APPLICATION FILED FEB. 15, 1918. RENEWED JUNE 28, 1921.

1,406,033.

Patented Feb. 7, 1922.

Fig. 1.

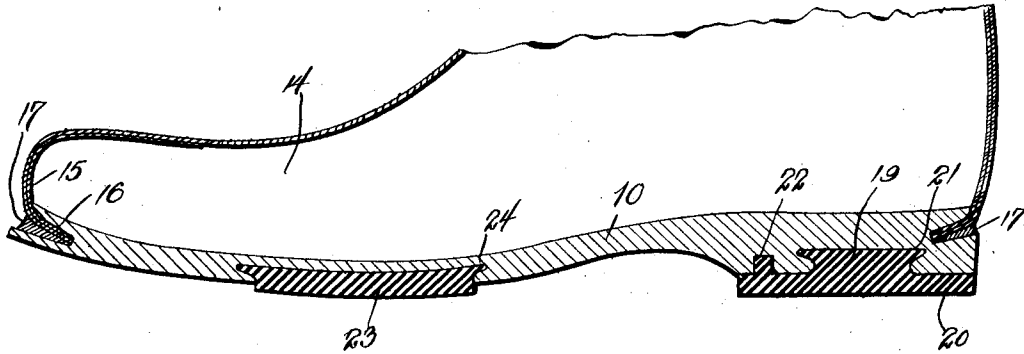


Fig. 2.

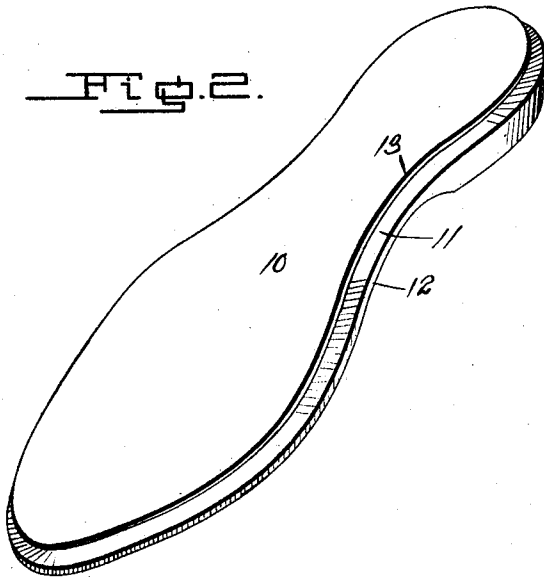


Fig. 3.

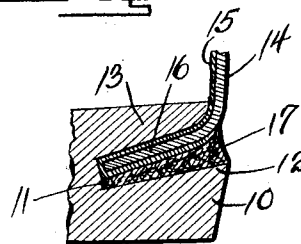


Fig. 4.

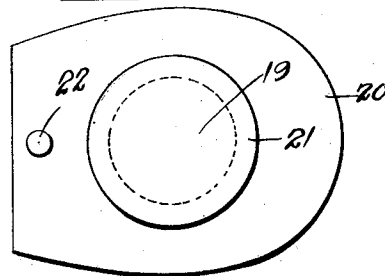
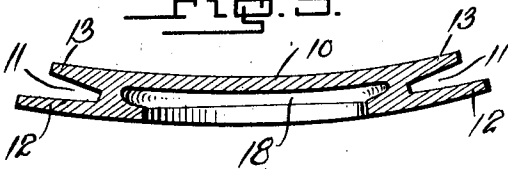


Fig. 5.



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# UNITED STATES PATENT OFFICE.

ALFRED P. KINGSTON, OF LITTLE FALLS, NEW YORK.

SHOE AND SOLE THEREFOR.

1,406,033.

Specification of Letters Patent.

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*To all whom it may concern:*

Be it known that I, ALFRED P. KINGSTON, citizen of the United States, and resident of Little Falls, in the county of Herkimer and State of New York, have invented new and useful Improvements in Shoes and Soles Therefor, of which the following is a specification.

The present invention relates to shoes, and more particularly to the construction of soles and novel means for applying the same to shoe uppers.

An object of the present invention is to provide an improved construction of soles which constitutes an integral outer sole and inner sole and an improved means for attaching the combined sole to the shoe upper.

Another object of the present invention is to provide a construction of shoe generally which will eliminate a large number of parts required in the manufacture of shoes; which will considerably economize in the consumption of material employed; and which provides a new construction capable of withstanding considerable wear, and a construction of shoe which is comfortable to the foot.

The invention has for a further object to provide a shoe upper of any desired material which may be detachably connected to a sole; a sole of any desired material which may be detachably connected to the upper; and an upper adapted to be connected directly to the improved sole.

The above, and various other objects and advantages of this invention will be in part described, and in part understood, from the following detail description of the present preferred embodiment, the same being illustrated in the accompanying drawing, wherein—

Figure 1 is a longitudinal vertical section taken through the lower portion of a shoe, disclosing a sole constructed according to the present invention and attached to the upper in the manner of this invention.

Figure 2 is a detail perspective view of the sole detached.

Figure 3 is a fragmentary enlarged sectional view through the heel portion of the

shoe showing the manner of securing the upper to the outsole.

Figure 4 is a detail top plan view of the separate heel part or insert.

Figure 5 is a transverse section taken through a portion of the outsole with the insert removed, and showing the recess for the reception of the shank of the insert.

Referring to this drawing, 10 designates the body of the sole which is preferably constructed of wood, or similar material. The sole 10 is made in one piece and includes the toe part and the heel part, and is provided with an outer marginal edge groove 11 of considerable depth providing upper and lower outstanding flanges 12 and 13, the latter taking the place of the usual welt employed for comprising a continuation on the upper surface portion of the sole 10 and forms an integral projection that supports the marginal portion of the foot of the wearer. Preferably, the lower flange 12 is of greater depth than the flange 13 and outstands beyond the marginal edge of the flange 13.

The shoe upper 14 may be reinforced at its lower edge portion by the provision of a lining 15 which is preferably relatively stiff and which may be continued in the toe part of the upper to form the boxing therefor, and which may be continued in the heel part of the upper for stiffening the same. The lower edge portion of the upper 14, together with its lining 15, is turned inwardly at substantially right angles to the adjacent parts of the upper to form an attaching flange 16 which is relatively stiff and which is of considerable depth. The inturned flange 16 is annular or continuous around the lower edge portion of the upper and is of a length less than the length of the flanges 12 and 13, and is adapted to be stretched by application of sufficient pressure to engage over the upper flange 13 and bind therebeneath in the groove 11 of the sole 10. The upper flange 16 is therefore foreshortened, or of less length than the marginal edge of the sole 10 and is adapted to yieldingly bind in the groove 11 and retain the upper 14 from dis-

placement from the sole 10 under any ordinary use to which the shoe may be subjected when worn.

A packing or retaining strip 17 may be fitted in the groove 11 beneath the upper flange 16 to bind the latter against the flange 13 of the sole 10 and not only insures the retention of the flange 16 in engagement with the sole 10, but also excludes moisture, dirt, and other accumulation which might otherwise lodge in the groove 11 on top of the flange 12. As shown in Fig. 3, the packing strip 17 may be formed of fibrous material which is adapted to absorb moisture when brought into contact with the same, and which is adapted to swell and bind or close the groove 11 and thus effectively exclude moisture and dirt. As exemplary of the manner in which shoes are assembled according to this invention, the operations may be stated briefly as follows:

The upper is first lasted over what is commonly known as a "first lasting last" to obtain the desired stretch, the lower edge of the upper being turned under the last at a relatively sharp angle. A lasting string is used and rolled down with glue and sized until dry. The string is then cut and the last removed. The upper thus formed with its inturned flange, shown at 16 in the drawing, is assembled upon the sole without the use of a last, and requiring no welt, binding wire or other fastening means. The flange 16 is sufficient to retain the sole upon the upper. As shown in the drawings, a "mock" welt 17 may be used and pressed in or laid on the lower edge of the sole to stimulate a leather shoe, or the like, construction. The welt 17 assists in maintaining the flange 16 in the groove or mortise in the sole. The completed shoe has a finished appearance which does not deviate from the adopted outlines of a dress shoe.

The sole 10 is provided in its heel part and in its forepart with openings 18, and the opening 18 in the heel part is adapted to receive the tongue 19 of a separate heel 20 which may be formed of rubber or the like for deadening the noise of the sole when in use. The heel 20 is in the form of a flat disc conforming in outline to the general configuration of the heel, is preferably formed from rubber, and has the tongue 19 integrally formed therewith. The tongue 19 has an outstanding retaining flange 21 upon its upper end adapted to engage in the undercut portion of the slot 18 and retain the heel 20 in position. The flange 21 and the tongue 19 are adapted to be suitably compressed into the opening 18 and are permitted to expand therein for permanently securing the heel 20 to the sole 10. The heel 20 may also be provided at one side of the tongue 19 with an integral upstanding stud

22 adapted to enter a correspondingly formed opening in the bottom of the sole 10 for holding the heel 20 from turning.

The forepart of the sole 10 is provided with a surface contact pad 23 which may also be formed from rubber and provided with a marginal outstanding flange 24 at its upper edge portion adapted to enter the undercut part of the opening 18. The tread 23 is also adapted to be suitably compressed to enter the opening 18 and is permitted to expand therein for retaining the pad in the sole. The pad 23 is preferably positioned at the lower portion of the sole 10 and is adapted to deaden the impact of the forepart of the sole with the ground when the shoe is use.

It is of course understood that various changes and modifications may be made in the details of construction of the above specifically described parts of the invention without departing from the spirit thereof, such changes and modifications being restricted only by the scope of the following claims.

What is claimed is:

1. In a shoe the combination of a sole provided around its perimeter with a relatively deep groove forming upper and lower flanges on the sole, a lasted shoe upper having its lower perimetral edge engage said groove, and a wedge-shaped strip of resilient material adapted to fit in said groove and frictionally bind said lower perimetral edge.

2. In a shoe the combination of a sole provided with a marginal groove providing an upper and a lower flange, said upper flange being provided with an inclined straight surface; and a lasted shoe upper provided at its lower edge with an angularly disposed portion having a straight surface, said portion being of less length than the outer perimeter of the sole and adapted to enter said groove with its angularly disposed straight surface engaging the inclined straight surface of the sole flange.

3. In a shoe the combination of a sole provided with a wedge-shaped marginal groove providing an upper and a lower flange, said upper flange being of less length than said lower flange; a lasted shoe upper provided at its lower edge with a straight angularly disposed portion of less perimetral length than the outer perimeter of said flanges and adapted to enter said groove and engage the inclined surface of said upper flange; and wedge-shaped packing means adapted to engage the under surface of said angularly disposed portion and the upper surface of said lower flange to retain said portion in said groove.

4. In a shoe, the combination of a sole provided with a marginal relatively deep groove forming upper and lower marginal flanges

for the sole, the upper flange constituting a continuation of the upper surface of the sole and forming a projection that is adapted to support the marginal portion of the foot, 5 a lasted shoe upper having an inturned flange at its lower marginal edge, said flange being of less length than the circumference of the sole and adapted to seat in said groove and bind against the inner surface of said upper flange, and a wedge shaped absorbent pack- 10 ing strip in said groove between the under surface of the flange or the upper and the upper surface of the lower sole flange, said packing strip and flange on upper serving to unite the upper and the sole.

ALFRED P. KINGSTON.