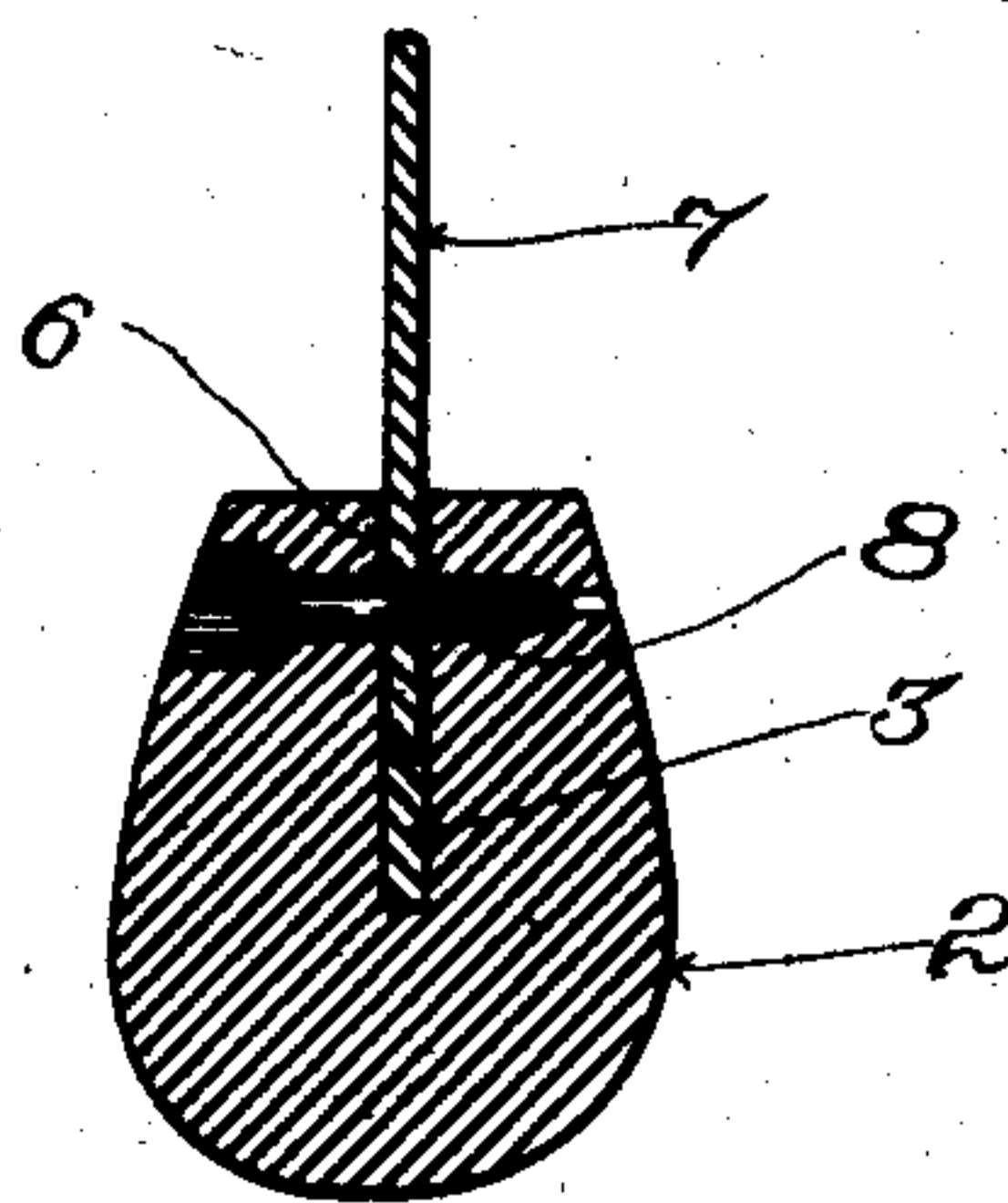


TREE OR FORMER FOR SHOES.

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TREE OR FORMER FOR SHOES.

No. 907,020.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM H. FARNHAM, a citizen of the United States, residing at Malden, in the county of Middlesex, State of Massachusetts, have invented a certain new and useful Improvement in Trees or Formers for Shoes, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to trees or formers of that class which are adjustable in length and provided with adjusting means for shortening them to facilitate their insertion into a shoe, or removal therefrom, and for extending them when within the shoe to stretch the upper of the latter and hold it in shape.

The invention consists in a tree or former comprising, essentially, a fore-part and a separate heel-part, a connecting strip that extends rearwardly from the fore-part with its width arranged vertically and its rear portion received within a vertical kerf in the heel-part and fitting such kerf, and an adjusting handle mounted within the said kerf and operatively connected or engaged with the said strip. By operating the said handle, relative movement of the fore-part and heel-part with respect to each other is occasioned. The strip fitting the kerf in the heel-part holds the latter from displacement by a turning movement relative to the fore-part, in all positions of adjustment, which result is enhanced by fitting the forward portion of the strip within a similar kerf in the fore-part. The said forward portion preferably is pivoted within the said kerf in the fore-part, and thereby the connecting strip and heel-part are enabled to swing so as to facilitate the operation of inserting the tree or former into a shoe or of withdrawing it therefrom. The construction enables the sides of the kerf in the heel-part to be drawn toward each other to produce frictional engagement within such kerf serving to hold the parts yieldingly in adjusted position, without however interfering with the convenient operation of the parts for purposes of adjustment.

An embodiment of the invention is shown in the drawings, in which—

Figure 1 represents such embodiment in place within a shoe, the latter being partly in section. Fig. 2 represents the said embodiment separately, mainly in side-eleva-

tion, but with the heel-part in longitudinal vertical section. Fig. 3 represents the same in transverse vertical section on line 3, 3, of Fig. 2, looking in the direction indicated by the arrows at the ends of such line.

Having reference to the drawings,—At A, Fig. 1, is represented the upper of the shoe which is represented in such figure, and at B, the sole thereof.

The fore-part of the tree or former is designated 1 in Figs. 1 and 2, and 2, Figs. 1, 2 and 3, is the heel-part.

At 3 is the connecting-strip. Fig. 2 represents in dotted lines the forward portion of the said strip occupying a vertical kerf 4 (the bottom of which is indicated by a dotted line in such figure) in the top of the fore-part, and at the rear of the latter, and connected with the fore-part by a pin 5 (see also Fig. 1) passing through the material of the fore-part at both sides of the kerf and through a hole in the strip. The said pin constitutes a pivot, around which the strip 3 is capable of swinging in a vertical plane.

At 6, Figs. 2 and 3, is the vertical kerf in the top of the heel-part 2 which receives the rear portion of the connecting-strip. The under edge of the said strip rests upon the bottom of the said kerf, and is adapted to slide thereon as the heel-part and fore-part are adjusted longitudinally with relation to each other.

At 7 is the operating or adjusting handle by means of which the adjustment may be effected when desired. It consists of a flat piece that is fitted within the kerf 6 of the heel-part, with one portion thereof projecting upward above the heel-part and conveniently adapted for being taken hold of in making use of the same, the said piece being, as previously explained, operatively connected or engaged with the connecting-strip 3. I prefer, as in this instance, to mount the said handle upon a pivot so as to turn upon the latter in being actuated to effect the desired adjustment. In the drawings, such pivot is designated 8, and is constituted by a screw passing through the material of the upper portion of the heel-part at both sides of the kerf 6, and through a hole in the handle. The connection or engagement between the handle 7 and the connecting-strip 3 is effected in this instance by forming the handle as a sector, with teeth 7^a upon the portion thereof

which works within the kerf 6, and by forming the upper edge of the connecting-strip 3 with teeth, as at 3^a, constituting a rack, the teeth 7^a and 3^a intermeshing and engaging with one another. When, now, the lever-like handle, or "sector", as it also may be termed, is caused to turn upon its pivot 8, it acts, in consequence of the engagement of its teeth with those of the connecting-strip, or "rack-strip", as it also may be called, to occasion longitudinal movement of the heel-part and fore-part relative to each other.

The parts of the tree or former are held yieldingly in adjusted position in the illustrated embodiment of the invention through the frictional engagement of the side-walls of kerf 6 with the side surfaces of the rack-strip 3. By means of the screw 8 the said side-walls are drawn toward each other so as to make the desired contact with the said side surfaces of the rack-strip, and by turning the said screw the pressure may be varied to adjust the degree of frictional resistance which is offered to the movement of the contacting surfaces upon one another. Power applied to the upwardly-projecting portion of the sector 7 sufficient to overcome this resistance will occasion the required relative movement in adjusting the parts. To hold the heel-part from turning in a vertical plane relative to the rack-strip 3, a pin 10 is applied to the upper portion of the heel-part in position to engage with the top edge of the rack-strip in advance of the teeth 3^a thereof.

As has been mentioned, the width of the rack-strip is disposed vertically, and the contact of the side-walls of the kerf in the fore-part with the side-surfaces of the forward portion of the rack-strip holds the latter from turning transversely. In addition, the contact of the side-walls of the kerf in the heel-part with the side-surfaces of the rear portion of the rack-strip holds the heel-part from turning transversely upon the rack-strip. Thereby the heel-part is prevented from turning transversely out of proper position with relation to the fore-part.

The upwardly-projecting portion of the sector 7 constitutes a handle by means of which the lifting of the heel-part may conveniently be effected in removing the tree or former from the interior of a shoe. The said portion is shown formed with an opening 7^b, Figs. 1 and 2, to facilitate taking hold thereof.

It is to be understood that while I have been careful to describe fully herein the details of construction of the illustrated embodiment of the various features of my

invention, yet the said details may vary somewhat in different embodiments of the broader features of the invention, and so, also, in some instances certain of the said features may be omitted.

In making the tree or former, a block is turned to proper shape, a saw-cut is made in the top thereof to constitute the kerfs 6 and 4, and then the heel-part is separated from the fore-part by a slightly inclined transverse cut.

What is claimed is:—

1. In an adjustable tree or former for shoes, the combination with a fore-part and a heel-part having a kerf in each, and a rack-strip pivoted by its front end within the kerf in the fore-part and having its toothed portion within the kerf in the heel-part, of the adjusting sector pivoted within the latter kerf and having a series of teeth engaging with the said toothed portion of the rack-strip, and means to hold the said sector yieldingly from turning movement in the said kerf in the heel-part, permitting it to be operated to adjust the length of the tree or former, and retaining the adjustment.

2. In an adjustable tree or former for shoes, the combination with a fore-part and a heel-part having a kerf in each, and a strip pivoted by its front end within the kerf in the fore-part and movable longitudinally within the kerf in the heel-part, of an adjusting lever pivoted within the latter kerf and operatively connecting with the rear portion of the strip, and means to hold the parts yieldingly in position within the kerf of the heel-part, permitting relative movement thereof to vary the length of the tree or former, and retaining the adjustment.

3. In an adjustable tree or former for shoes, the combination with a fore-part and a heel-part having a kerf in each, and a strip pivoted by its front end within the kerf in the fore-part and movable longitudinally within the kerf in the heel-part, of an adjusting lever pivoted within the latter kerf and operatively connecting with the rear portion of the strip, and means holding the sides of such kerf drawn toward each other and producing frictional engagement by which the parts are held in position of adjustment but permitting relative movement thereof for the purposes of adjustment.

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

WILLIAM H. FARNHAM.

Witnesses:

CHAS. F. RANDALL,
EDITH J. ANDERSON.