No. 878,581. PATENTED FEB. 11, 1908.

J. A. WALLACE.

LACING ATTACHMENT FOR SHOE TREES.

APPLICATION FILED APR. 4, 1906.

Fig. 1

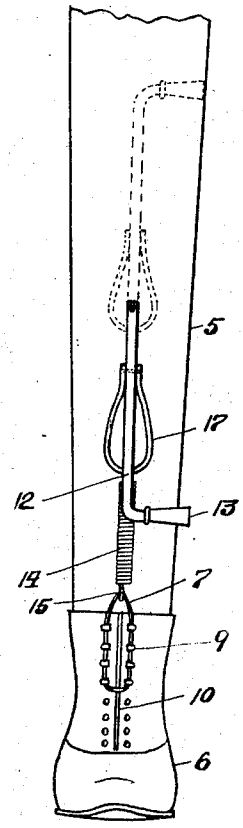
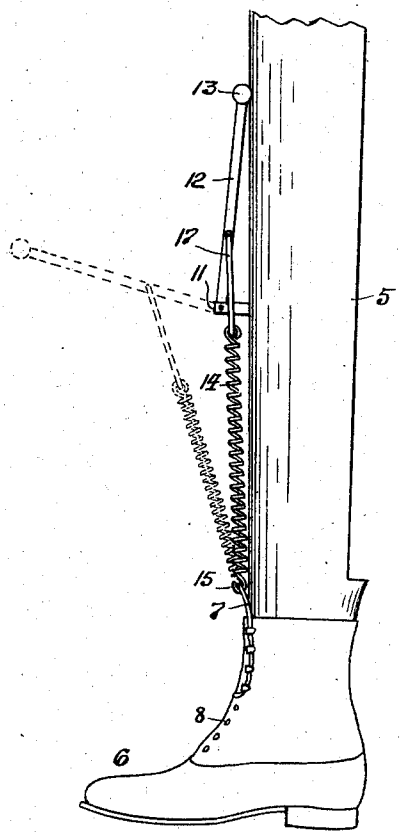


Fig. 2.



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LACING ATTACHMENT FOR SHOE-TREES.

No. 878,581 Specification of Letters Patent. Patented Feb. 11, 1908.

Application filed April 4, 1906. Serial No. 309,927.

To all whom it may concern:

Be it known that I, JUSTIN A. WALLACE, a citizen of the United States, residing at Mishawaka, in the county of St. Joseph and State of Indiana, have invented new and useful Improvements in Lacing Attachments for Shoe-Trees, of which the following is a specification.

The object of the present invention is to provide an improved device for lacing a shoe on a shoe-tree preparatory to being ironed or otherwise treated to remove the wrinkles; such lacing serving to augment the stretching and smoothing actions of the process.

With these ends in view the invention comprehends a practically instantaneous lacing of the shoe on the tree. The lacing not only extends entirely around the vent of the shoe but also acts to equally distribute the tension over the upper; and further the invention embodies constructions which, when operated to lace the shoe will be effective in retaining the shoe in such condition without further attention on the part of the operator.

The invention is illustrated in the accompanying drawings in which:—

Figure 1 is a front elevation of the lacing and stretching device applied to a tree on which the upper of a shoe is shown; the operating mechanism being shown in lowered position by full lines and in raised position by dotted lines. Fig. 2 is a side elevation showing the parts in a raised and locked position by full lines and in another position by dotted lines.

Making renewed reference to the drawings 5 designates a shoe-tree of the usual construction, and 6 indicates a shoe applied thereto.

My improved lacing for the shoe consists of a lace or tape 7 which may either extend down through the eyelets 8 and around the lacing hooks 9 or only around the hooks. In the latter case the tape is preferably endless and applied to the lacing hooks by looping it over them on each side of the vent 10, as shown in Fig. 1. By this form of lacing, the upper of the shoe is engaged at many different points and the tension is equally distributed, drawing the leather taut at the ankle as well as at the top of the upper.

The lace or tape is drawn taut by specially devised instrumentalities which are mounted on the tree above the upper. These are preferably supported by a stud or arm 11 which projects from the front of the tree as shown. To the end of the stud is pivoted a lever 12 provided with a right angular bent handle 13 at its free end. This lever is connected to the tape through the medium of two articulated elements one of which compensates or cushions the stretching action on the leather, and the other of which coöperates with the lever to form a locking toggle therefor, which prevents the parts from being accidentally released and the shoe from being unlaced. The compensating element comprises a coil spring 14 having a hook 15 at its lower end for engagement with the lace or tape at a point above the upper edge of the shoe. The upper end of the spring is secured to the lower end of the locking toggle 17 which is pivotally connected at its upper end with the lever 12 at a point intermediate the ends of the latter but preferably nearer the fulcrumed end thereof so that it may swing around and on opposite sides of the fulcrum of the lever, which is limited in its movement in one direction by abutting with the tree of the shoe, as shown in full lines in Fig. 2. In this position the lever is slightly inclined from the perpendicular and its pivotal connection with the toggle or link 17 is therefore on one side of the center of gravity which tends to hold the free end of the lever against the tree and the parts in locked position. This locked position of the parts is augmented by the spring 14 which exerts a downward pull on the toggle and lever. The toggle is shown as consisting of a U-shaped or bifurcated link the upper forked ends of which engage opposite sides of the lever so that the link may straddle the lever and the supporting arm 11.

In use, the shoe is first fitted to the tree and the lever 12 is lowered to the position shown in full lines in Fig. 1. The tape 7 which hangs from the spring is then looped around the lacing hooks 9 and the lever is raised. As it swings outwardly to the position indicated by dotted lines in Fig. 2 the toggle 17 is drawn upwardly and forwardly and the upper of the shoe is likewise acted upon, causing it to tightly envelop the tree. When the lever reaches the positions indicated by full lines in Fig. 2 and by dotted lines in Fig. 1, the parts are locked as heretofore pointed out, and the spring not only tends to maintain this locked condition but also cushions the stretching action of the leather.

Having thus described my invention, what

I claim and desire to secure by Letters Patent is:—

1. The combination with a shoe-tree, of a lacing tape adapted for engagement with the upper of the shoe entirely around the vent thereof, and instrumentalities connected with the tape for drawing it taut to stretch and lace the shoe upon the tree.

2. A shoe tree provided with a lever pivotally secured thereto, means for engaging the upper of the shoe at a plurality of points on opposite sides of the vent therein, a spring secured to said means and a toggle connection between the spring and the lever.

3. In a device of the class described, the combination with a shoe-tree, and a tape for lacing the shoe thereon, of means for operating on said tape comprising a lever secured to the tree adapted to have its free end rest against the shoe-tree and its pivoted end project in front of the shoe-tree, and connections between the tape and the lever, having pivotal connection with the latter.

4. A shoe-tree provided with a forwardly projecting supporting arm, a lever pivoted on the end of said arm, a lacing tape, and connection between the tape and the lever, said connections being pivoted to the lever intermediate its ends.

5. A shoe-tree provided with a lever secured thereto and arranged to swing vertically and stand in an inclined position with its free end resting against the tree, a lacing tape, a spring secured to the lacing tape, and a locking toggle connected with the spring and pivoted to the lever intermediate its ends.

6. The combination with a shoe tree, of means for engaging the shoe at a plurality of points on opposite sides of the vent therein, a lever mounted upon the tree, and a locking toggle having connection with the above mentioned means and said lever.

7. The combination with a shoe tree, of a lacing tape adapted for engagement with the lacing studs of the shoe, a lever carried by the tree, a toggle secured to the lever, a spring secured at one end of the toggle and engaging the tape at the other end at a point substantially in alinement with the vent in the shoe to stretch the shoe on the tree.

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

JUSTIN A. WALLACE.

Witnesses:
GEORGE OLTSCH,
W. E. FULLER.