

J. S. HANSEN.

SHOE TREE.

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1,021,834.

Patented Apr. 2, 1912.

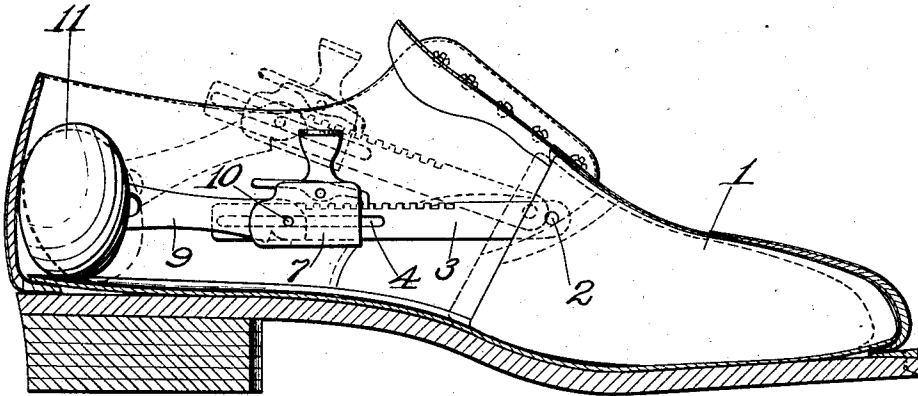


Fig. 1.

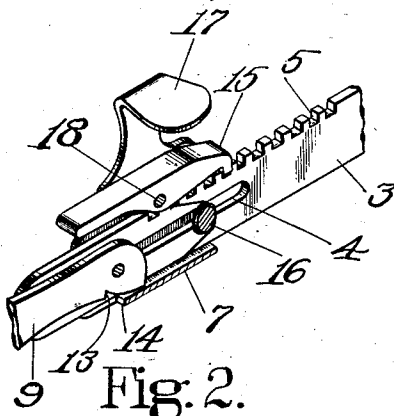


Fig. 2.

WITNESSES.

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SHOE-TREE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN S. HANSEN, a citizen of the United States, residing at Brockton, in the county of Plymouth and State of Massachusetts, have invented certain Improvements in Shoe-Trees, of which the following description, in connection with the accompanying drawings, is a specification, like reference characters on the drawings indicating like parts in the several figures.

This invention relates to improvements in shoe-trees, and similar devices.

An object of the invention is to produce a shoe-tree with an improved form of adjusting device to adapt it to different sizes and styles of shoes, and which will be simple and durable in construction, inexpensive to manufacture, and easy of adjustment in the shoe.

With this and other objects in view, a feature of the invention consists in the provision, in connection with the fore part and the heel part of a shoe tree, of a member connected with each of said parts, and a connection between the members arranged to permit relative pivotal movements of the members to thereby form a toggle, and to permit sliding movements thereof to adjust the tree for different sizes of shoes, together with means independent of such connection for holding the members in adjusted position.

Other features of the invention, including improved details of construction and combinations of parts, will be hereinafter more particularly described and claimed.

In the drawings: Figure 1 shows, in side elevation, a shoe-tree embodying my invention in position in a shoe, the shoe being shown in section, and the position of the parts of the tree during its insertion and removal appearing in dotted lines. Fig. 2 is a detail view, in perspective, illustrating the adjusting device on a slightly enlarged scale.

In the illustrated embodiment of the invention the numeral 1 indicates the fore part which may be constructed of wood, metal, or any other suitable substance. The rear portion of the fore part may, as shown, be provided with a vertical kerf to receive one end of a toggle lever 3, which is, preferably, pivotally connected with the fore part by a pin 2, the lever being provided

upon one of its edges with a series of recesses, 5, and having between its upper and lower edges a slot 4.

The heel part, 11, of the tree may be conveniently formed of rounded, or ellipsoidal form, as shown, and connected therewith is an arm, 9, which is pivoted to a slide 7, by a pin 10, or other suitable means. As herein shown, the slide 7 is in the form of a casing, having two sides and a bottom portion, one of its sides being preferably extended and then bent laterally to constitute a finger-hold, or handle member, 17, to facilitate the insertion of the shoe-tree in a shoe, and also its removal therefrom.

The forward end of the arm 9 and the rear portion of the lever 3, are received between the side walls of the slide 7, the end portions of the arm and lever being arranged side by side, and the pin 10, which connects the arm pivotally with the slide, also passes through the slot 4 of the lever and thereby serves to pivotally connect the arm and lever so that said parts constitute a toggle. The pin also acts, in conjunction with the walls of the slide, to hold the slide and lever together and to guide these parts relatively to each other as they are moved longitudinally in opposite directions to adjust the length of the shoe tree for different sizes of shoes. A pawl, 15, is located between the sides of the slide 7, immediately over and in position to engage the recesses 5, and is pivotally connected with the slide by a pin 18, which passes through said sides and the pawl. The lower or bottom wall of the slide is cut away to form a shoulder, 14, and the lower edge of the rear portion of the arm 9 is notched to form a shoulder, 13, which shoulders are arranged to engage when the toggle lever 3 and arm 9 are raised to the position shown by dotted lines in Fig. 1, and thereby serve to limit the extent of movement of these parts when the toggle is broken. Preferably, a spring, 16, is coiled about a pin or stud within the slide 7, and has bearing at one of its ends against the handle of the pawl 15, and at its other end against a wall of the slide, in order to yieldingly hold the pawl in engagement with any one of the recesses 5.

In order to adjust the tree, the toggle is first broken, and the rear end of the pawl is engaged by the thumb or finger, and pressed

to raise the tooth of the pawl out of any one of the recesses which it may occupy. The slide is then moved along the lever 3 to the proper point thereon where it is to be located, and the pawl then released and its tooth permitted to enter another one of the recesses. The toggle may then be straightened to separate the fore and heel parts of the tree and force them against the toe and heel parts of the shoe, into the position shown in full lines in Fig. 1.

While these improvements are shown and described as embodied in a shoe tree, or form, it will be obvious that they may be applied as well to a last, if desired, and the invention is not limited to the details of construction shown and described herein, other than as defined by the terms of the claims hereto annexed.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of United States is:—

1. A shoe-tree having, in combination, a fore part and a heel part, a member connected with each of said parts, means comprising a slot in one member and a pin in the other member to constitute a pivotal and adjustable connection of said members, and means additional to such connection to hold the parts in adjusted position while permitting the free pivotal movement of the parts through said connection.

2. A shoe-tree having, in combination, a fore part and a heel part, a lever pivotally connected with one of said parts and provided with external recesses and a slot, a slide arranged for adjustment along the lever and carrying a pawl to engage said recesses, an arm connected with the other of

said parts, and pivotal means for connecting said arm and slide and arranged to pass through the slot in said lever.

3. A shoe-tree having, in combination, a fore part and heel part, a lever pivotally connected with one of said parts, a slide arranged for movement along the lever and provided with means to secure it in different positions of adjustment thereon, an arm having one end connected with the other of said parts and its other end pivoted to said slide, said lever and arm being arranged to form a toggle connection, and cooperating means on the slide and arm constructed and arranged for mutual engagement to limit the movement of said parts when the toggle is broken.

4. A shoe tree, having in combination, a forepart, a heel part, an arm projecting from one of said parts, a lever pivoted to the other part, said lever having a slot formed therethrough and a series of teeth or recesses formed in one edge thereof, a slide having two sides and a bottom, one of said sides being extended and bent over to form a handle, a pin extending through the sides of the slide, the slot in said lever and the arm to pivotally connect the lever and arm, a pawl pivoted within said slide and a spring acting upon said pawl to hold it normally in position to engage the teeth on the lever.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN S. HANSEN.

Witnesses:

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