

T. F. WHELAN.
FASTENING DEVICE FOR SHOE UPPERS.
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936,391.

Patented Oct. 12, 1909.

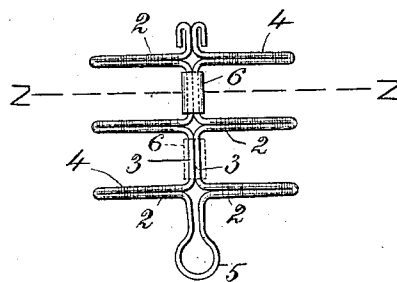


Fig. 1.

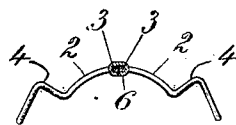


Fig. 2.

WITNESSES:

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UNITED STATES PATENT OFFICE.

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FASTENING DEVICE FOR SHOE-UPPERS.

936,391.

Specification of Letters Patent.

Patented Oct. 12, 1909.

Application filed December 21, 1907. Serial No. 407,450.

To all whom it may concern:

Be it known that I, THOMAS FRANK WHELAN, a citizen of the United States, and a resident of St. Louis, State of Missouri, have invented certain new and useful Improvements in Fastening Devices for Shoe-Uppers, of which the following is a specification.

My invention relates to devices for temporarily securing together the eyeleted edges of the uppers of lace shoes during the lasting and other processes, and is particularly intended to provide a simple and practical "lacer" for this purpose which may be quickly and easily applied to and detached from an upper, and will also be self-conforming to the contour of the various lasts with which it may be used. To this end I have devised a lacer which is characterized by having two side portions or members, one for each side of the upper, these members being hinged together along a longitudinal axis and provided on each side of this axis with eyelet-engaging devices, in combination with means for yieldingly holding said members in a predetermined angular relation to each other so that although the eyelet-engaging devices will be caused to hug closely against the sides of the last by the strain due to the process of lasting the shoe, they will assume their normal position when released from strain. By preference the two side portions of my lacer are made from a single piece of wire which is looped at one end of the lacer to provide a spring whereby the side portions are normally held in the predetermined position above referred to.

In the accompanying drawings, Figure 1 is a plan view of a lacer embodying my invention and Fig. 2 is a cross section on the line $x-x$ in Fig. 1.

The lacer illustrated in the drawing has two similar side portions each provided with laterally extending fingers 2 which are connected to one another at their inner ends by parallel portions 3, each of said fingers 2 being provided with suitable eyelet-engaging means. In the particular construction illustrated the eyelet-engaging means consist of the shoulders 4, the arrangement and mode of operation of which are the same as in what is known as the "Ellis lacer". The two side portions of the lacer are preferably made from a single piece of wire which is doubled to form each of the fingers

2 and is also bent into a loop 5 at one end of the lacer in such a manner as to bring the corresponding connecting portions 3 adjacent to one another, with the fingers 2 extending in opposite directions therefrom as shown in Fig. 1. The lacer may have any desired number of the fingers 2, and its two side portions are hinged together as by means of a metallic clip 6 wrapped around adjacent connecting portions 3, thereby preventing lateral separation of the side portions but permitting them to turn on the longitudinal axis of the lacer. A clip as 6 may be wrapped around each pair of adjacent connecting portions 3 if desired, another such clip being shown in dotted lines in Fig. 1, and two or more such clips or equivalent connections will ordinarily be desirable in case the side portions of the lacer are each provided with more than three of the fingers 2, in order to prevent the lateral separation of the side portions at any point under the strain imposed by the process of lasting, but for a three-fingered lacer such as is shown in the drawing the loop 5 may be made to serve the same purpose at the corresponding end of the lacer. In any case the flexibility of said loop will permit the fingers 2 and the edges of the upper in which the same are inserted to be drawn closely against the last, while the elasticity of said loop will act to restore said fingers to their normal position when released, and also to hold them in said position with sufficient firmness to enable the lacer to be inserted into or withdrawn from the eyelets of an upper much more quickly and easily than would be possible if the side portions of the lacer were merely hinged together and allowed to turn loosely on their longitudinal axis. The lacer above described also has a considerable degree of flexibility in the direction of the length of its axis, a feature which has been found to be desirable in such devices, and is applied to the upper and removed therefrom in substantially the same manner as the Ellis lacer described in United States Letters Patent No. 774,659, granted on the 8th day of November, 1904, on the application of W. E. Ellis, to which reference may be made for a full description thereof.

I claim as my invention:—

1. A device of the character described, comprising two side portions inseparably

hinged together along a longitudinal axis and provided respectively with eyelet-engaging means extending in opposite directions from said axis, and means yieldingly
5 maintaining said side portions in a predetermined angular relation.

2. A device of the character described, comprising two side portions inseparably hinged together along a longitudinal axis,
10 and provided respectively with eyelet-engaging means, and a spring connecting said side portions at one end of the latter and normally holding the same in a predetermined angular relation.

15 3. A device of the character described, comprising two side portions formed from a single piece of wire and inseparably hinged together along a longitudinal axis, said side portions being provided respectively with
20 eyelet-engaging means and said wire being bent to form a spring loop at one end of the device.

4. A device of the character described, comprising two side portions each formed
25 from a single piece of wire which is bent to provide laterally extending fingers con-

nected at their inner ends, each finger being provided with eyelet-engaging means, a metallic clip wrapped around corresponding connecting portions and forming a hinge, 30 and a spring loop connecting the two side portions and normally holding the same in a predetermined angular relation.

5. A device of the character described, comprising two side portions formed from a 35 single piece of wire and connected at one end of the device by a spring loop formed in said wire, each of the side portions being provided with laterally extending fingers formed from doubled portions of the wire 40 and having eyelet-engaging means, and means for inseparably hinging said side portions together at the inner ends of corresponding fingers.

In testimony whereof, I have hereunto 45 subscribed my name this seventeenth day of December, 1907.

THOMAS FRANK WHELAN.

Witnesses:

CHAS. E. GAFFNEY,
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