No. 791,332. PATENTED MAY 30, 1905.

L. DUVAL.

SHOE FASTENING.

APPLICATION FILED JULY 29, 1904.

Fig. 6.

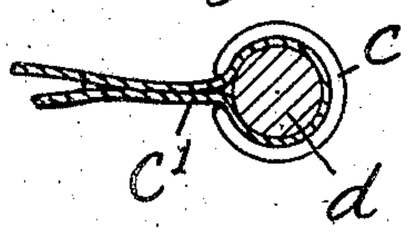
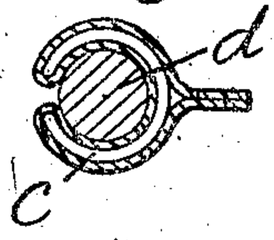


Fig. 7.



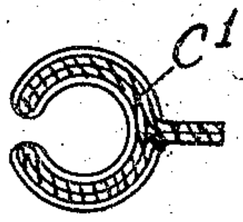


Fig. 8.

Fig. 1.

Fig. 9.

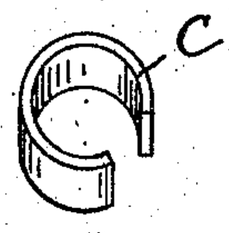
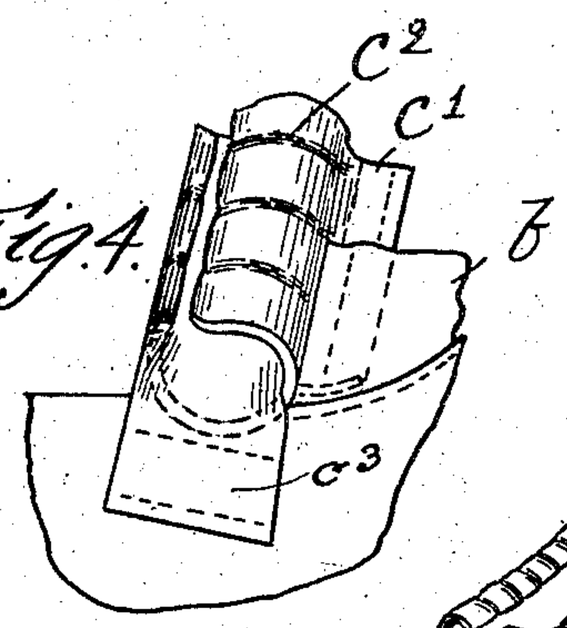


Fig. 5.

Fig. 4.



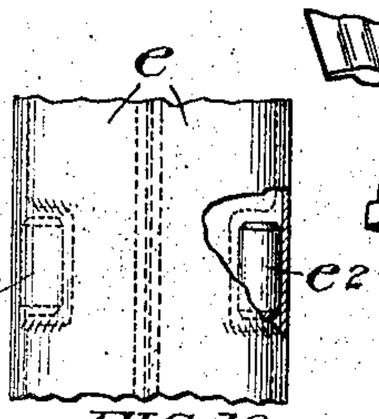


FIG. 10.

Fig. 2.

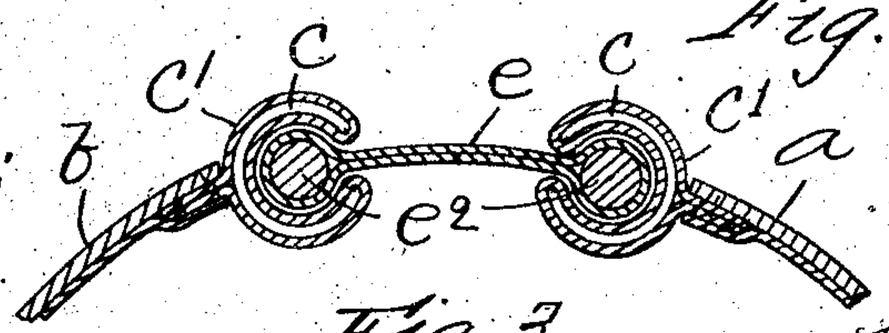


Fig. 3.

Witnesses:
H. B. Davis.
Maud M. Piper.

Inventor:
Louis Duval
by Bayne & Harriman.
Attys.

No. 791,332. Patented May 30, 1905.

UNITED STATES PATENT OFFICE.

LOUIS DUVAL, OF NEWTON, MASSACHUSETTS.

SHOE-FASTENING.

SPECIFICATION forming part of Letters Patent No. 791,332, dated May 30, 1905.

Application filed July 26, 1904. Serial No. 218,606.

To all whom it may concern:

Be it known that I, LOUIS DUVAL, of Newton, county of Middlesex, State of Massachusetts, have invented an Improvement in Shoe-Fastenings, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

This invention relates to improved shoe fastenings adapted to be employed in lieu of the usual strings, buttons, &c., and has for its object to construct a fastening which may be easily and quickly operated, is exceedingly flexible for the ease and comfort of the wearer, and securely holds the quarter-pieces of the shoe together.

Figure 1 shows in perspective a shoe having a fastening embodying my invention. Fig. 2 is a similar view, the fastening being withdrawn or undone. Fig. 3 is a transverse section of the fastening, taken on the dotted line 3 3, Fig. 1. Fig. 4 is an enlarged detail of the tongue-retaining strip. Fig. 5 is a view of one of the incomplete rings employed in forming the tongue-retaining strip. Figs. 6 and 7 are sectional details representing the manner of making the tongue-retaining strip. Fig. 8 is a sectional detail of the tongue-retaining strip, taken at a point between two of the incomplete rings. Fig. 9 is a detail of one of the small pieces which is inclosed in the tongue to form one of the projections thereon. Fig. 10 is a detail showing a portion of the tongue.

a and *b* represent the usual quarter-pieces of the shoe. To the front edge of each quarter-piece a flexible tongue-retaining strip is secured, which extends from the top of the shoe or its quarter-piece to the lower end of the usual front opening. The tongue-retaining strips are made alike, or substantially so. The tongue-retaining strip herein shown consists of a series of small incomplete rings *c*, entirely inclosed within a strip *c'* of leather or other suitable material, the openings of said rings being arranged all at the same side of the strip and all in alinement to thereby provide a retaining groove or guideway. The retaining-strip may be made in many different ways and yet embody my invention; but as a simple way of making it the strip *c'* of leather is placed upon a rod or bar *d*. (See Fig. 6.) Then the incomplete rings *c* are slipped onto said bar endwise. Then the free edges of the strip *c'* are turned back and over the rings, (see Fig. 7,) and said free edges are then stitched together, thereby entirely inclosing the rings and providing a retaining-strip with a longitudinal groove which extends from end to end of the retaining-strip. The strip, with the inclosed rings, is then removed or withdrawn from the bar (see Fig. 8) and is ready to be applied to the shoe by attaching the stitched edges of the strip to the front edge of one of the quarter-pieces *b*, as shown in Fig. 4, and by attaching the lower end c^3 of the strip to the vamp. To hold the several rings separated substantially equal distances apart, one or more stitches c^2 may be passed through the material of the strip between the rings. The retaining-strip thus constructed is exceedingly flexible, as a flexible joint is formed between each ring and the rings are arranged quite close together.

I do not limit my invention to the precise form shown, as I desire to include such modifications as come within the scope of my invention.

The tongue *e* is made as an independent piece—that is to say, it is not attached to the shoe-upper and it is provided along each side edge with a series of projections *e'*, (see Fig. 10,) adapted to be drawn into the groove or guideway of the tongue-retaining strip, the ends of the tongue forming tabs adapted to be engaged by the wearer for the purpose of pulling the tongue up or down. The tongue may be provided with as many of these projections as desired; yet they are made short, so that a large number may be employed, in order that the tongue will be perfectly flexible throughout its length. The projections are formed by placing small pieces e^2 of wood or other material between the two layers of material composing the tongue and holding them in place by stitches passing through the tongue around the pieces, or they may be otherwise held in place. The pieces e^2 are thus entirely inclosed between the layers composing the tongue. The upper end of the tongue is first drawn into the lower end of the two

tongue-retaining strips, so as to hold it in place, and the shoe is then drawn onto the foot. Then the tongue is pulled up, the projections thereon following along in the grooves or guideways of the tongue-retaining strips until the upper end of the tongue is brought up to the upper end of the retaining-strips. The tongue is held in the retaining-strips by friction.

It will be seen that the shoe may be fastened by merely drawing up the tongue or unfastened by drawing it down.

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

1. A shoe-fastening comprising a pair of flexible tongue-retaining strips attached to the shoe-upper, each strip comprising a series of incomplete rings, entirely inclosed within a covering and held separated and in alinement to present a tongue-receiving groove or guideway, and a flexible tongue having projections along its edges adapted to enter the groove or guideway in said strips, substantially as described.

2. A shoe-fastening comprising a pair of flexible tongue-retaining strips attached to the shoe-upper, each having a longitudinal tongue-receiving groove or guideway, and a flexible tongue having along each side edge a series of pieces entirely inclosed by the material composing the tongue which form projections, adapted to enter said grooves or guideways, substantially as described.

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

LOUIS DUVAL.

Witnesses:
B. J. NOYES,
MAUD M. PIPER.