(No Model.)

J. EVERDING & A. v. OLSZEWSKI.

SHOE FASTENING.

No. 348,727. Patented Sept. 7, 1886.

Fig. 1

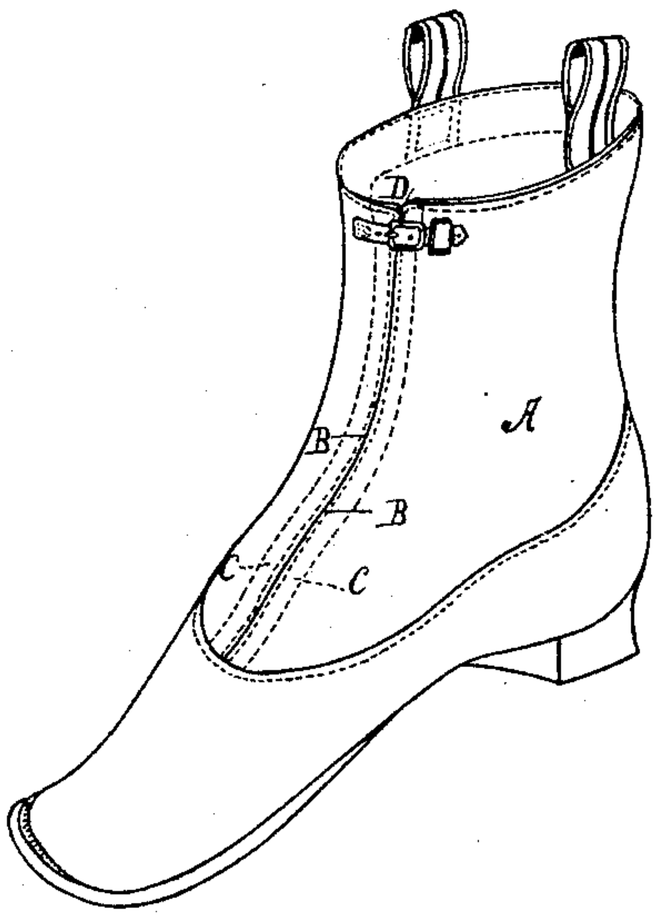


Fig. 2

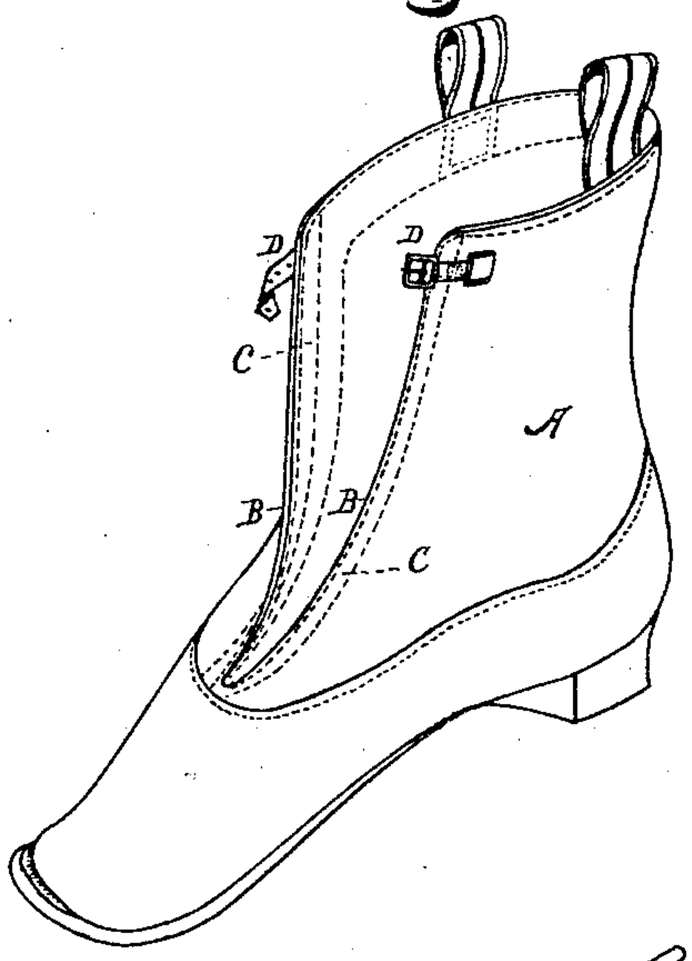


Fig. 3

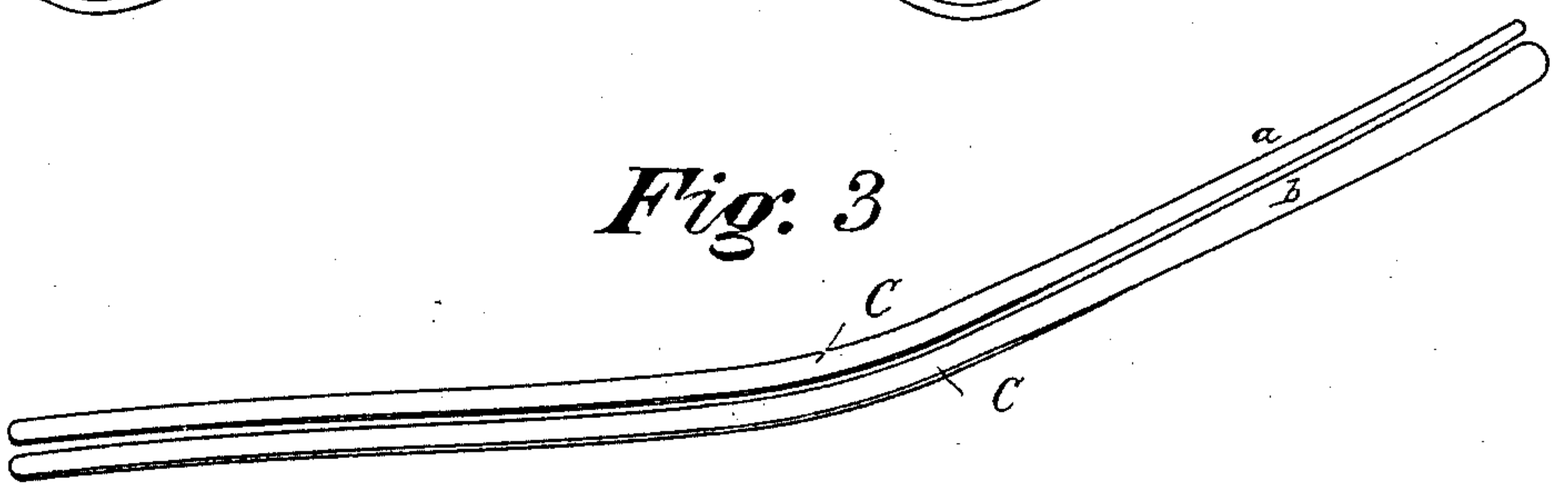


Fig. 4

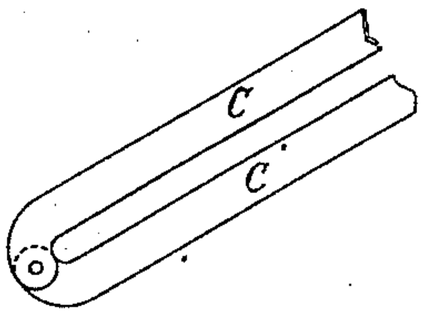


Fig. 5

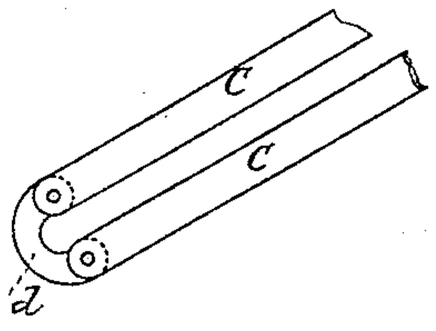
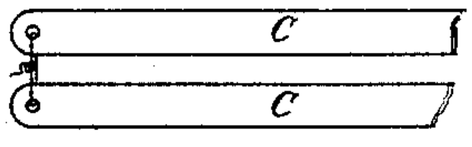


Fig. 6



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN EVERDING AND ALEXANDER V. OLSZEWSKI, OF NEWARK, N. J.

SHOE-FASTENING.

SPECIFICATION forming part of Letters Patent No. 348,727, dated September 7, 1886.

Application filed February 1, 1886. Serial No. 190,458. (No model.)

To all whom it may concern:

Be it known that we, JOHN EVERDING and ALEXANDER V. OLSZEWSKI, citizens of the United States, and residents of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Shoes, of which the following is a specification.

The invention relates to improvements in shoes, and particularly to a novel means to be used in lieu of the usual lacing or buttons for securing the meeting edges of the shoe-upper upon and around the foot.

The invention consists in the application of metallic stays or springs to said meeting edges down the front of the shoe-upper, one being rigidly secured at each edge, and their arrangement being such that they conform as nearly as may be to the top of the foot, and operate as torsional springs to bring said edges together after the same have been separated and the foot introduced into the shoe. After the meeting edges of the upper have been thus brought together down the front of the foot, the upper end of said edges will be connected by a small strap and buckle or other suitable means.

There are many advantages derived from the invention sought to be protected hereby, and among them may be mentioned the ease and rapidity with which the shoe may be secured on the foot, the entire discarding of the troublesome lacing-cord and buttons, the increased comfort to the wearer, and the fact that the springs offer no resistance to the foot during the act of walking, and at the same time do not bulge apart at their center.

The invention will be more clearly understood from the detailed description hereinafter presented, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of a shoe having the meeting edges of its upper closed down the front by means of the present invention, the springs being shown by dotted lines. Fig. 2 is a like view of same, illustrating the meeting edges of the upper spread apart for the reception of the foot. Fig. 3 is a perspective view of the pair of springs detached from the shoe and shown in about the same relation to each other they occupy when the shoe-upper is closed over the foot; and Figs. 4, 5, and 6 are detached views of the lower end of the pair of springs, illustrating various methods of connecting them together.

In the drawings, A denotes the shoe-upper; B B, the meeting edges of same, adapted to come together down the front of the foot; C C, the springs or stays, one being applied to each of said meeting edges, and D the strap and buckle at the upper end of said edges. The stays C C may be of any suitable flexible spring metal, and fastened in, to, or upon the meeting edges B B in any suitable manner and by any convenient means; but we prefer to construct them of thin tempered sheet-steel, and to secure them in position between the usual inner and outer parts of the shoe-upper by rows of stitching on either side of each of them, about on the dotted lines along the meeting edges. (Shown in Figs. 1 and 2.) The stays or springs C C should be sufficiently thin to yield to the foot during the act of walking, and of proper width to resist any pressure tending to bulge them open at their center after the strap and buckle or other fastening D has been secured. The stays or springs C C should be tempered to conform as nearly as possible to the top of the foot, and their upper portions—say that part above the instep—may be given a slight twist in opposite directions in the line of the upper opposite sides of the front part of the foot, as indicated in Fig. 3, wherein *a b* designate the oppositely-twisted portions of the stays. The lower ends of the springs or stays C C should be secured in a substantially rigid relation to each other, so as not to be affected by the twisting or torsional action of the upper part of the stays during the opening and closing of the shoe-upper, and this may usually be accomplished by the customary means employed in the manufacture of shoes for preventing the lower ends of the edges B B from tearing away from the lower part of the shoe. The additional strength and rigidity usually given to that part of the shoe where the ends of the edges B B meet the lower part of the article will, as a rule, be found to give sufficient firmness to the lower ends of the springs C C with regard to their relation to each other for the purposes of the invention. In instances, however, where supplemental means for connecting the lower ends of the springs C C together are necessary, they may be employed, and in Figs. 4, 5, and 6 we illustrate several

expedients that may be adopted for this purpose without prejudice to either the form or comfort of the shoe. In Fig. 4 the ends of the stays are shown curved toward and beyond each other and pivoted together. In Fig. 5 said ends are illustrated as pivoted to a connecting-strip, *d*, and in Fig. 6 we indicate the two ends simply connected by a piece of wire.

We do not limit the invention to any special means for connecting the lower ends of the stays; but those we have shown will usually be found effective and satisfactory. The normal position of the edges B B, when provided with the stays C C, is closed, and said edges are pressed apart at their upper portion during the insertion of the foot into the shoe, the effect of which movement is to give the springs or stays a twist outward from opposite sides of the foot between their upper ends and lower firmly-secured portion, and to thus create in them a torsional tension to return to their normal condition, which they speedily do as soon as the foot has been seated in the shoe, thereby closing the edges B B around the foot, after which the fastening D will be secured. The fastening D, when the shoe is in use, effectually retains the upper ends of the springs C C in positive relation to each other, and, as aforesaid, the lower ends of the springs are substantially rigid in their position; hence the springs will yield to the forward bend of the foot, but not to any lateral pressure, for the reason that, their ends being secured, said pressure would act on their edges and directly in line with their width. Under this condition a very light spring is capable of resisting great strain, and we have determined that a thin spring is amply sufficient to prevent the bulging apart of the edges B B. The stays C C may be coated with leather or celluloid, or otherwise treated as to their appearance or finish, as may be preferred, and hence this, together with the methods pursued in applying them to the shoe and the style of shoe in connection with which they are to be used, are matters which will be regulated according to the facilities or wish of the manufacturer.

By the term "shoe," as herein employed, we mean to embrace all kinds of foot-wear to which the invention would be applicable and prove of practical benefit.

What we claim as our invention, and desire to secure by Letters Patent, is—

A shoe having the meeting edges of its upper along the top of the foot, and provided with a fastening device, D, and along said edges with the flexible spring metallic stays C C, which conform in their length to the shape of the top of the foot, and are held in their flat position at their lower ends, said stays being applied so as to be, when normal, substantially parallel to each other, with said edges of the shoe closed, and to return to their normal position by their torsional action after that portion of them above their lower ends has been opened to admit the foot by being twisted and pressed apart in opposite directions from each other, substantially as set forth.

Signed at New York, in the county of New York and State of New York, this 30th day of January, A. D. 1886.

JOHN EVERDING.
ALEXANDER V. OLSZEWSKI.

Witnesses:
CHARLES C. GILL,
EDWARD WOLFF.