L. A. Sprague,

Shoe Fastening.

No. 55,923. Patented June 26, 1866.

Fig. 1.

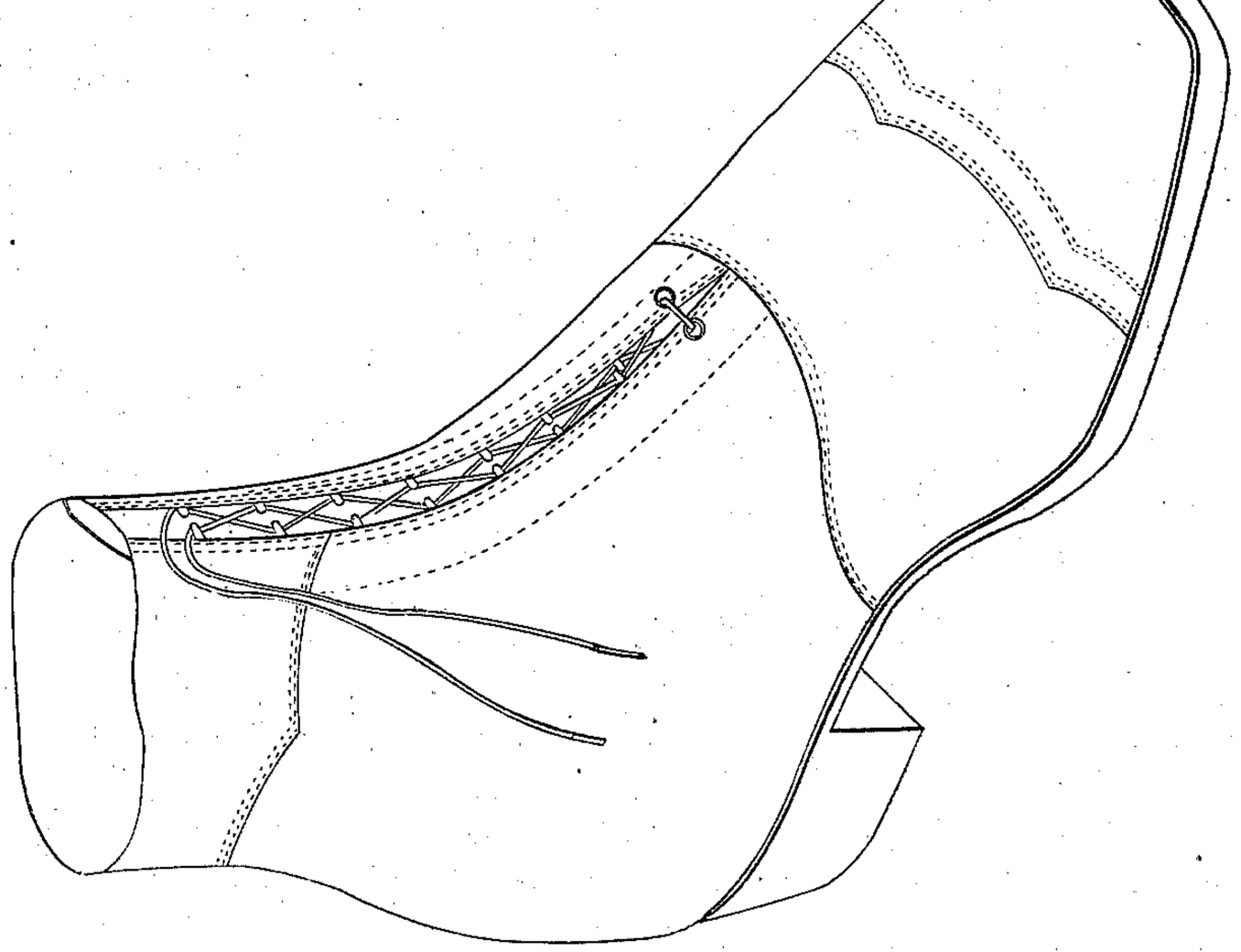

Fig 2.

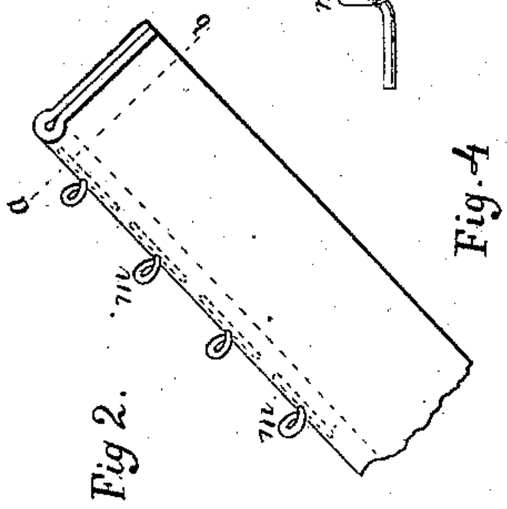

Fig. 3.

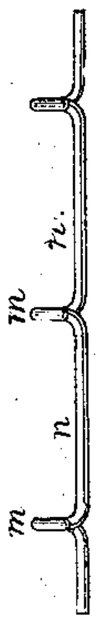

Fig. 4

Fig. 5.

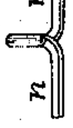

Fig. 6.

Witnesses
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UNITED STATES PATENT OFFICE.

LEONARD A. SPRAGUE, OF NEW YORK, N. Y.

IMPROVED LACING FOR BOOTS AND SHOES.

Specification forming part of Letters Patent No. **55,923,** dated June 26, 1866.

To all whom it may concern:

Be it known that I, LEONARD A. SPRAGUE, of New York, in the county and State of New York, have invented certain new and useful Improvements in Shoe-Lacings; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings.

My invention relates to that method of shoe-lacing for which Letters Patent were issued to Jacob Autenreith, on the 6th of January, 1863, and reissued to Charles Goodyear, Jr., on the 20th February, 1866; which invention consists in the arrangement of the eyelets whereby the lacing-cord is run through the same without traversing or being in contact with the shoe; and the object of my invention is to provide a simple and effective means of accomplishing this result, so that the lacing device may be readily applied to and secured in the welt.

My improvements consist in making the lacing eyelets or rings and the device by which they are held in the welt or binding of a single piece of wire.

I take a piece of wire of suitable length, and bend the ends of the wire so as to form each of the said ends into a ring or eyelet which shall stand at right angles to the wire and transversely to its length, the rings being bent so as to have the same relative position to the wire. The bent ends thus form the eyelet-rings, and the wire between the two ends which is unbent is the link connecting them. The length of the wire between the two rings should be equal to the distance which usually separates one eyelet-hole from another in a shoe or boot.

Instead of forming two eyelets, any desired number may be formed on the wire, for, provided it be sufficiently long, the wire may be bent and twisted at the proper intervals, as above explained, along and throughout its entire length, care being taken that the rings thus formed shall have the same relative position to each other and to the wire, and that each shall be so formed as to be at right angles and transverse to the length of the wire.

When but one eyelet is to be formed the wire, cut to the proper length, may be twisted or bent midway between its ends, so as to form the eyelet-ring in the middle, and leaving unbent the two ends by which the eyelet may be held in position.

In practice it will be found that the wire on which but one or two eyelets have been formed is best adapted for use, as, on account of its shortness, it is less liable to press against and hurt the foot when the boot is laced.

The lacing device thus constructed is placed between two thicknesses of leather, or in a welt or binding, in whose edge incisions should be made at intervals corresponding to the distance between the rings. The eyelets are inserted in and pushed through these incisions until the straight wire or link by which they are connected comes in contact with the leather which forms the fold of the welt or binding. The folds of the welt are then brought together and sewed, so as to cover and completely hide from sight all parts of the lacing device excepting the rings or eyelets which extend out from the incisions in the edge of the welt. The line of sewing by which the folds of the welt are bound together runs near enough the edge to hold firmly in place the part of the lacing device which is inclosed within the folds.

The lacing device thus constructed is adjusted with facility to the welt or binding, as the eyelet-rings and the wire by which they are connected, being made in one piece, are immovably held together, and on that account are more easily fitted to the welt than would be the case if it were necessary to secure each eyelet separately. The lacing-eyelet is also held in place without the use of rivets or other fastening devices, as that part of the wire which connects the eyelets is placed between the folds of the welt or binding, and is held by the fold of the welt.

To enable others to make and use my invention, I will now proceed to more fully set forth its nature, and the manner in which it may be carried into effect, by reference to the drawings, in which—

Figure 1 represents a shoe with my lacing device applied. Fig. 2 is a perspective view of a portion of a welt to which the lacing device is fitted, the parts of the device between the folds of the welt being represented in red lines. Fig. 3 is an elevation, on an enlarged scale, of the lacing device, the wire being bent so as to form three rings or eyelets. Fig. 5 is

an elevation, showing the device when formed of two eyelets. Fig. 4 is a plan view of a ring or eyelet, illustrating the manner in which the wire is bent in order to form the eyelet. Fig. 6 is a section of the welt, with lacing device, on the line *a b*, Fig. 2.

The wire shown in Fig. 3 is bent in the middle and at each end, in order to form the three eyelets *m*. (Represented in the figure.) In Fig. 5 the wire is of such length that it is bent only at the ends. That part of the wire *n* between the eyelets *m* constitutes the link which connects the eyelet-rings.

When the lacing device is to be applied to the welt or binding, it is placed between the two folds *p p'* of the welt, which are as yet loose and not sewed together. The eyelet-rings *m* are then inserted in the corresponding incisions in the edge of the welt, as above explained, (shown at *x*, Fig. 2,) and are pushed through until the links or connecting part of the device *n* comes against the folded edge of the welt. It will be seen that when in this position any strain upon the eyelets will be resisted by that part of the fold between the eyelets which holds and retains in place the connecting-wire *n*. The folds *p p'* of the welt are then brought together and are sewed in such manner that the line of sewing may at the same time support and hold in position the eyelets, as above explained.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The lacing-eyelet in which the lacing-eye is formed in one piece with the fastening device, substantially as herein shown and described.

2. The combination of two or more lacing-eyes with intermediate links, when the same are formed of one piece of wire, substantially as herein shown and described.

3. The method of fastening lacing-eyelets, substantially as described, by confining the shanks or links thereof in the folds or between two thicknesses of leather or other material to which the lacing is attached.

In testimony whereof I have signed my name to this specification before two subscribing witnesses.

LEONARD A. SPRAGUE.

Witnesses:

CHAS. T. DEFOREST,

C. R. SHERWOOD.