

L. A. Sprague,
Shoe Fastener,
N^o 51,878. *Patented Jan. 2, 1866.*

Fig. 2.

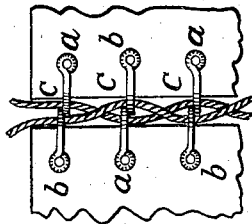


Fig. 1.



Witnesses
W. C. Smith
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UNITED STATES PATENT OFFICE.

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

IMPROVED SHOE-LACING.

Specification forming part of Letters Patent No. 51,878, dated January 2, 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-Lacing; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a section, and Fig. 2 a plan view, of my improvement.

This invention relates to that class of lacing-eyes for which Letters Patent of the United States were issued on the 6th day of January, 1863, to Jacob Autemeith; and it consists in a method of construction, and applying the same, whereby great economy of cost in the manufacture is attained, while admitting of their being more expeditiously or readily fastened to shoes or other articles to be laced, and presenting a neat finish without diminishing the strength of the material to which they are attached.

To enable others to make and use my said invention, I shall now proceed to describe the manner in which the same is or may be carried into effect.

The eyes are formed of brass or other suitable wire by means of dies and other suitable machinery, such as are well known to manufacturers of this class of hardware articles. One end of the wire is bent into a ring which is flattened and milled so as to give its upper face the appearance of an ornamented washer, *a*. The other end, *b*, of the wire is bent downward at right angles, the bent portion being of a length to exceed the thickness of the material to which the eye is to be attached and that of the washer before described by so much as will be necessary to form a rivet to clinch the eye, as will be hereinafter more fully explained. The wire whose ends are thus formed into a washer and clinching-pin is doubled up—that is, bent into a loop or lacing-eye, *c*, of requisite curvature or form. These lacing-eyes are made for attachment to, over, and around the edges of the article to be laced, as shown in the drawings. For instance, on shoes they are arranged in a line parallel with the edge of the laced portion,

each eye being fastened to the leather or material on a line back of the edge, and projecting therefrom to alternate with those from the opposite side. The end *b* may be sharp enough to pierce its own hole into the material when about being fastened, thus dispensing with tools for and labor of previously piercing the material for the reception of the lacing-eye.

To secure the eye in place I use a tool or clinching device which encompasses and holds the eyelet with the ends distended. With this tool the eyelet is brought and adjusted in its position, when, by operating the tool, (either by hand or otherwise,) the end *b* is forced through both the material and the washer and compressed. This compression of the point is effected by a die, which gives it the form of a head which is calculated to snugly fit and fill the central opening in the washer.

From the foregoing it will be seen that in point of view of construction of the eyelet proper it may be made as cheaply and expeditiously, or nearly so, as the ordinary eyes and hooks of ladies' garments, while to attach the same no additional piece or pieces are required, nor is the material pierced or perforated by holes which would at all affect its strength or resistance.

This invention, although relating more particularly to closed lacing-eyes, it will be understood that with but obvious modifications it may be applied to open hooks and eyes, both for lacing and hooking purposes.

Having thus described my said invention, I claim—

1. The lacing-eyelet constructed substantially as herein described, combining in one continuous piece, and without the employment of solder, the loop or eyelet proper, the washer, and clinching rivet or pin, all as hereinbefore set forth.

2. The method of fastening the lacing-eyelet, as herein described, onto the material to be laced, by piercing the said material and clinching it at one operation, as set forth.

L. A. SPRAGUE.

Witnesses:

A. POLLOK,
JAMES MALCOLM.