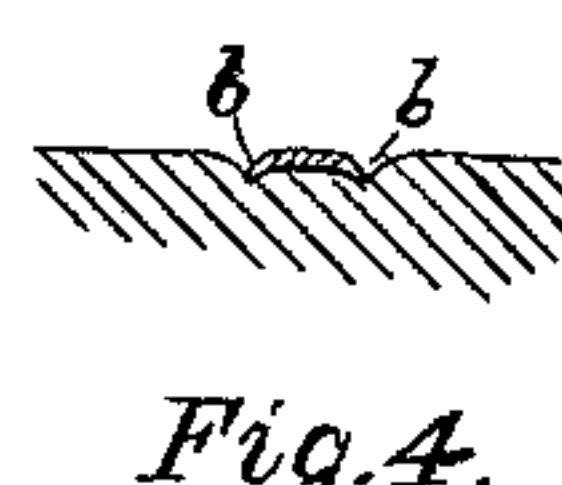
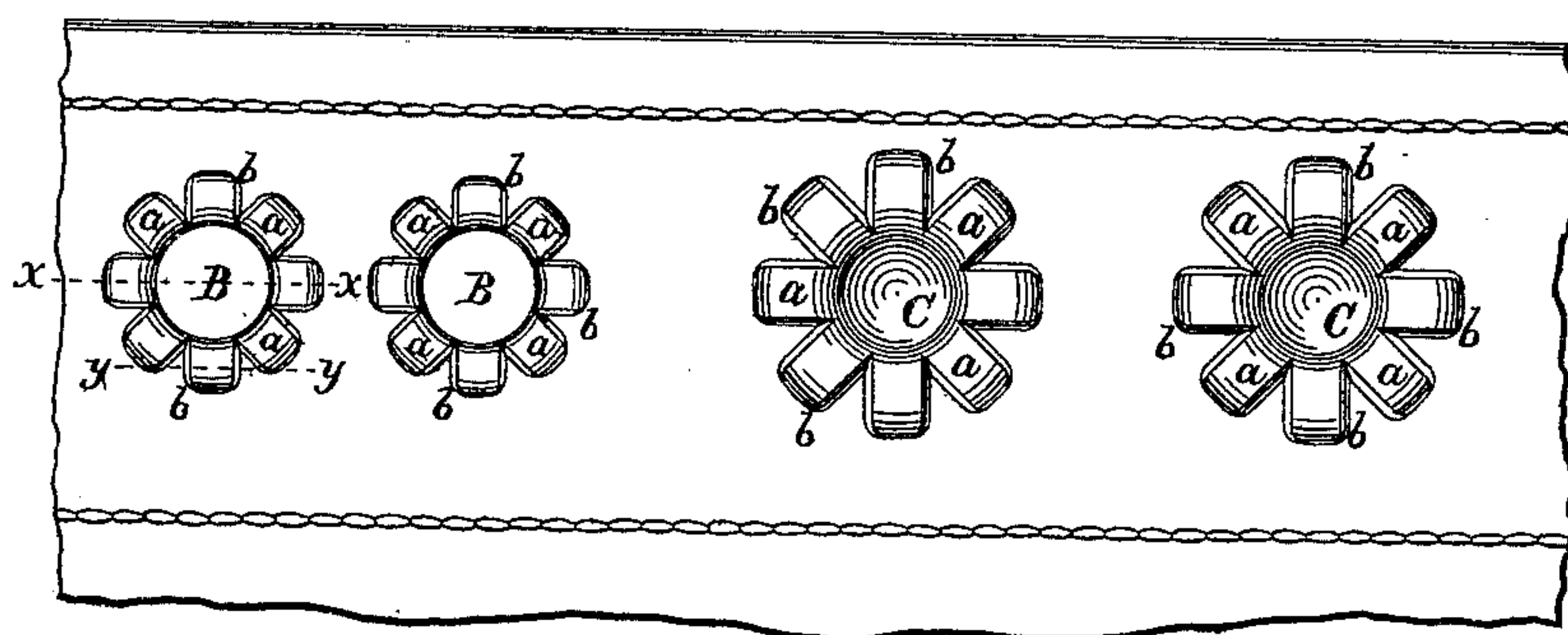
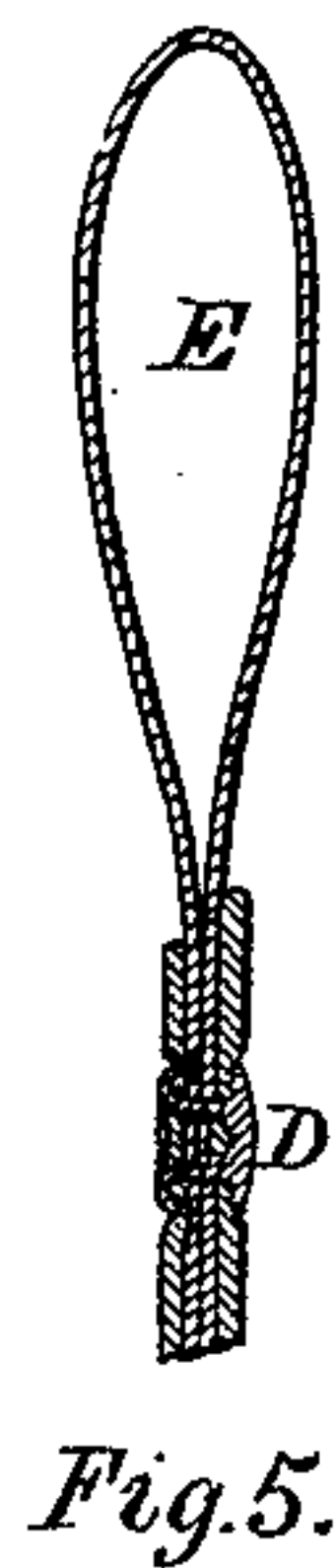
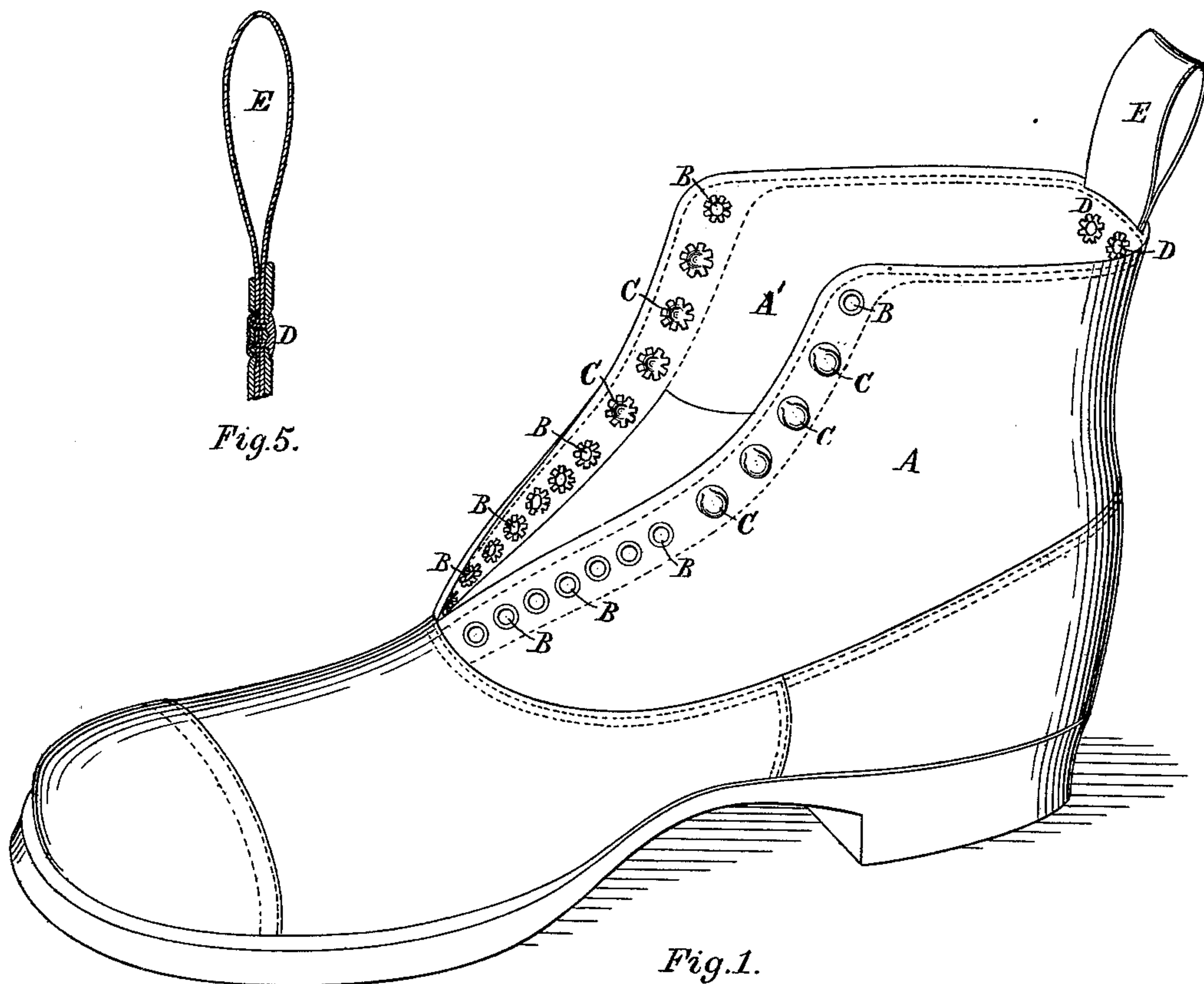


A. B. EDMANDS.
Setting Eyelets and Tubular Rivets.
No. 214,030. Patented April 8, 1879.



Witnesses;
E. A. Hemmenway
C. H. Dodd.

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UNITED STATES PATENT OFFICE.

ARTEMAS B. EDMANDS, OF MILFORD, MASSACHUSETTS.

IMPROVEMENT IN SETTING EYELETS AND TUBULAR RIVETS.

Specification forming part of Letters Patent No. 214,030, dated April 8, 1879; application filed December 16, 1878.

To all whom it may concern:

Be it known that I, ARTEMAS B. EDMANDS, of Milford, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Setting Eyelets and Tubular Rivets, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to improvements in setting eyelets and tubular rivets in shoes, corsets, and other articles; and has for its object greater strength of attachment to the article to which it is applied, and the removal of all sharp or ragged corners, which are liable to come in contact with other articles of wearing-apparel or the person of the wearer, and chafe and injure the same.

In setting the common eyelet, as heretofore practiced, the clinched end almost invariably splits one or more times, presenting, when set, sharp ragged corners or edges along the line of division, which are very injurious to the articles with which they come in contact while in use.

Other eyelets have been made, and perhaps used to a limited extent, in which the unflanged end was split into several divisions, and then the eyelets were set in the same manner as the common eyelet is set. These eyelets, though not presenting as ragged corners as the eyelet that is split accidentally, when set as heretofore practiced, do present sharp angular corners or edges which, on coming in contact with the stocking or other articles of wearing-apparel, injuriously chafe or tear the same.

To obviate these objections is one of the purposes of my present invention; and it consists in splitting the unflanged end of the eyelet or tubular rivet, while in the act of setting the same, into a series of divisions, turning said divisions over onto the material, and embossing all of said divisions by pressing their edges or corners inward upon the material and causing them to be embedded therein, as will be described.

To this end I employ setting tools or dies of peculiar construction, which form the subject of another application filed in the Patent Office

November 16, 1878, and of which this application is a division.

Figure 1 of the drawings is a perspective view of a lace-shoe illustrating my invention. Fig. 2 is an inside elevation of a portion of the shoe-quarter, showing two eyelets and two shoe-studs illustrating my invention. Fig. 3 is a section through one of the eyelets on line *x x* on Fig. 2; and Fig. 4 is a transverse section through one of the divisions of the flanged end on line *y y* on Fig. 2.

In Fig. 1 of the drawings, *A A'* represent the upper portions of the shoe-quarters, along the outer edges of which are set eyelets *B B*, lacing hooks or studs *C C*, and tubular rivets *D D*, each illustrating my invention, the exterior elevation of the eyelets and studs being seen in *A*, and the inner or clenched end in *A'*.

The tubular rivet *D* is shown in Figs. 1 and 5 as a means of strengthening the attachment of the strap *E* to the shoe, and is used quite extensively in the manufacture of coarse shoes or brogans to strengthen the seam which connects the counters to the vamp, and in various other articles of manufacture in common use.

My invention is equally applicable to setting eyelets, tubular rivets, or shoe-lace studs, which have tubular shanks, and are therefore tubular rivets provided with hook-shaped heads.

In carrying out my invention, I use the common eyelet, tubular rivet, or shoe-stud having a tubular shank, without previous preparation or change in its form, and by the use of setting tools or dies of peculiar form I split the unflanged end of the tube of the eyelet, rivet, or stud while in the act of setting, turn the several sections *a a* thus formed over radially onto the material, as clearly shown in Figs. 2 and 3, and emboss said sections *a a*, by pressing their outer edges or corners, both along their ends and sides, inward upon the material, and embedding them therein, thereby removing all exterior sharp angular projecting corners, and forming thereon rounded or beveled corners, as shown at *b b* in Figs. 2 and 4. This may all be done at one operation by the use of the tools described in my former application heretofore cited; or the tube may be

split and turned over onto the material at one operation, and the embossing may be done subsequently; or the tube may be split prior to the setting—say, in the manufacture of the eyelet, rivet, or stud—and the setting may be done with the tools now in common use, and the embossing be performed by a separate operation, though I prefer to use the unsplit tube and perform all of the operations at one and the same time.

I do not claim, broadly, an eyelet set in a shoe or other useful article having its clenched end divided into a series of sections turned over radially onto the material in which it is set, as I am aware that eyelets have been so set before; neither do I claim, broadly, splitting the unflanged end of an eyelet-tube while in the act of setting or clinching the same, as described in the English provisional Patent No. 2,244 of 1858.

My invention may be usefully applied in the manufacture of shoes, as shown and described; also in the manufacture of corsets, harnesses, shawl-straps, and various other articles, without changing in the least the principles of operation.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The improved process of setting eyelets or tubular rivets, consisting in separating their clinching ends into sections, turning said sections over upon the material in which the eyelets or rivets are inserted, and embossing each of said sections by pressing its outer peripheral end and radial edges inward, and causing them to be embedded in the material, substantially as and for the purposes described.

2. In combination with a shoe, corset, or other useful article made of flexible material, an eyelet or tubular rivet set therein, having its clinched end divided into sections and embossed, as described, to embed the ends and radial edges of the separate sections into the material, substantially as and for the purposes described.

Executed at Boston this 12th day of December, A. D. 1878.

ARTEMAS B. EDMANDS.

Witnesses:

N. C. LOMBARD,
E. A. HEMMENWAY.