

(No Model.)

G. L. CUMINE.  
LACING OF BOOTS AND SHOES.

No. 571,341.

Patented Nov. 17, 1896.

Fig. 1

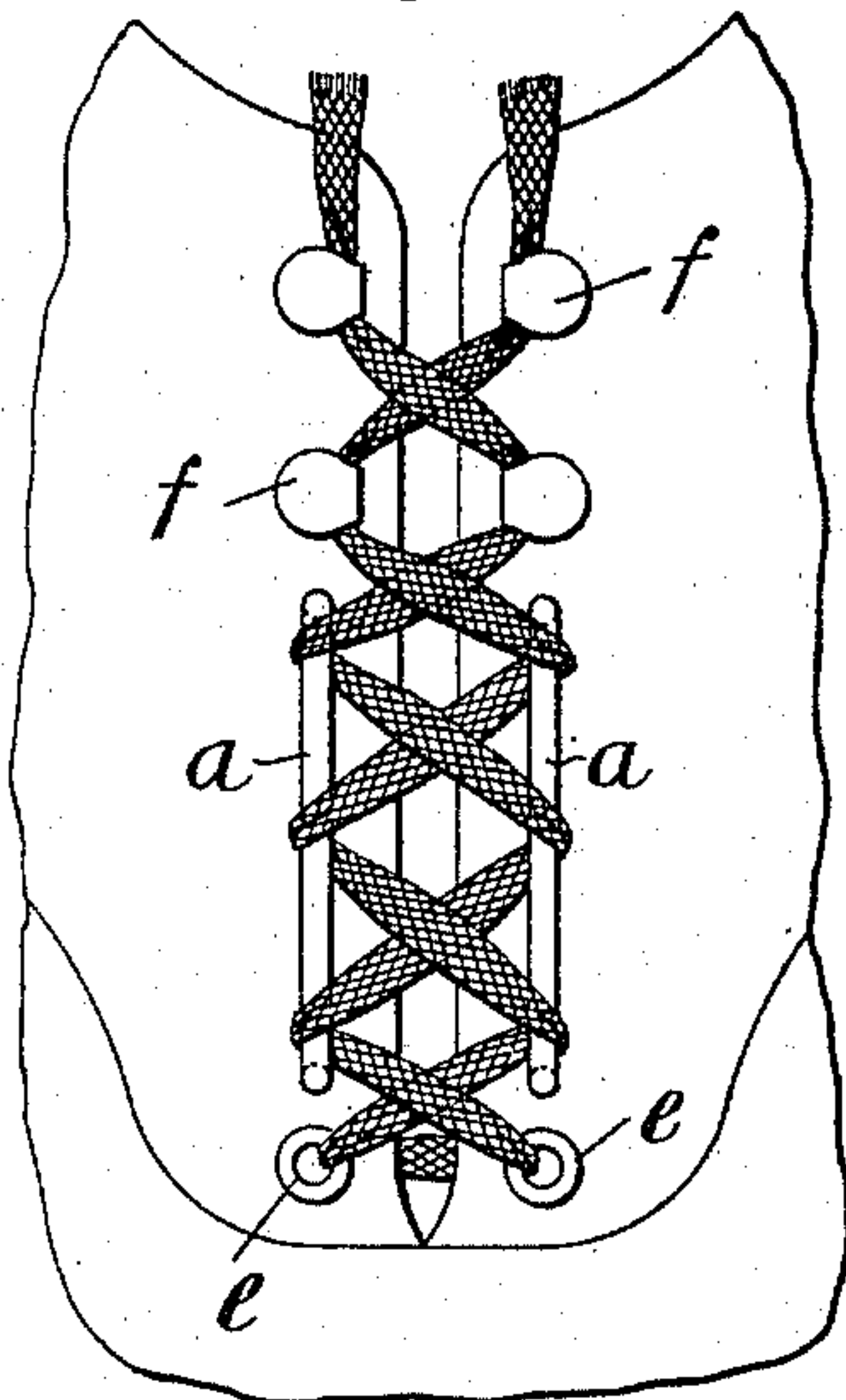


Fig. 2

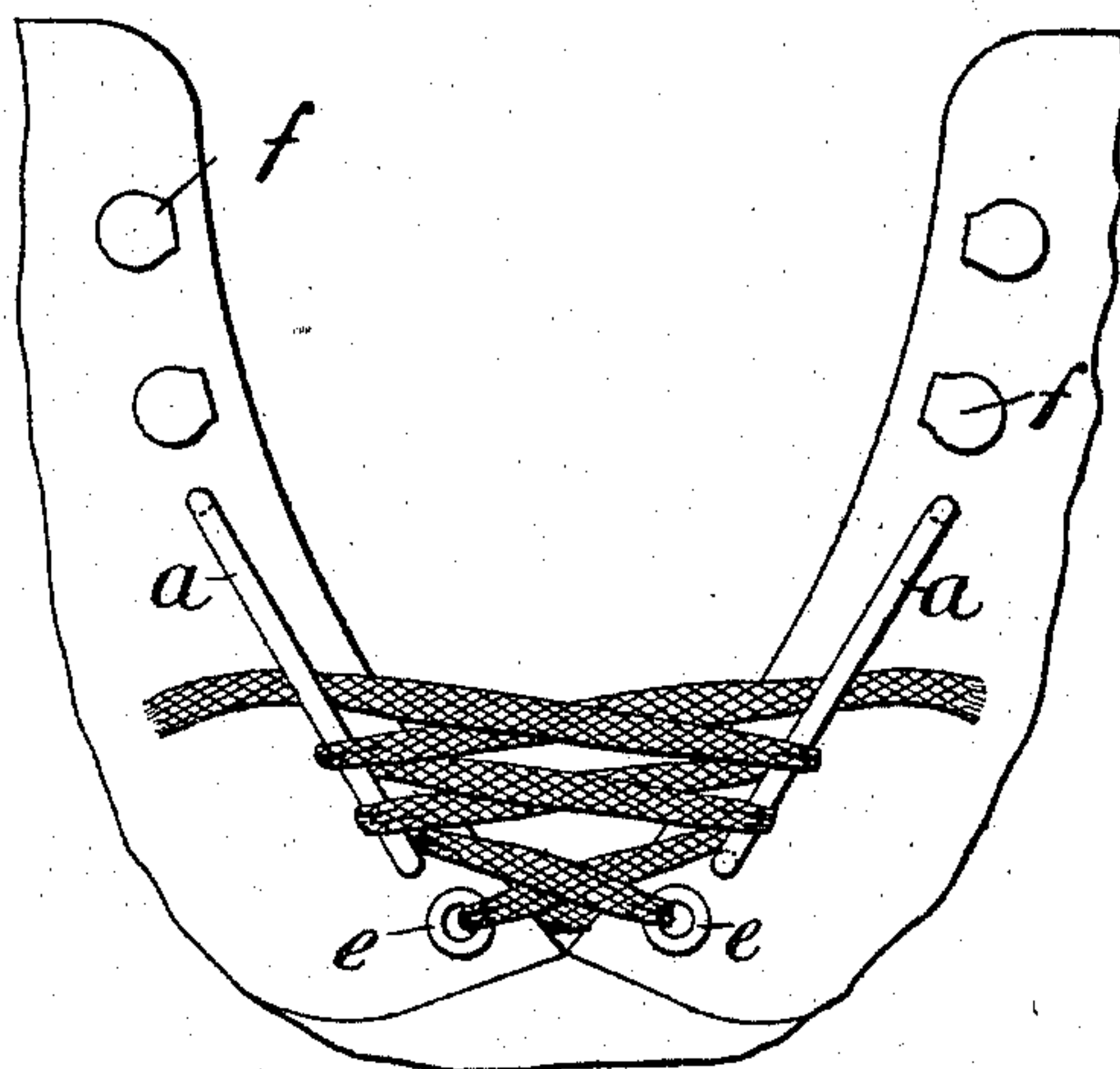


Fig. 3

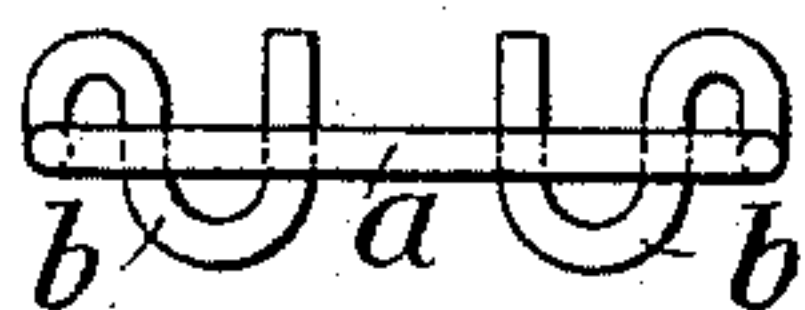


Fig. 4

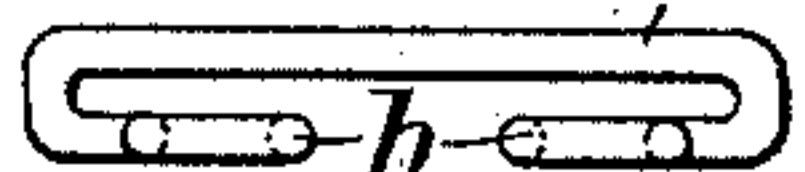


Fig. 5

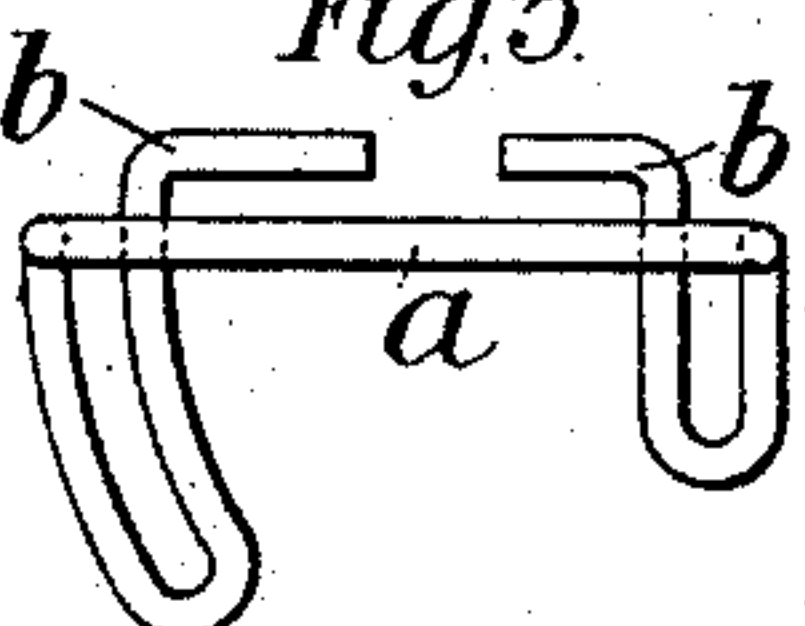


Fig. 6

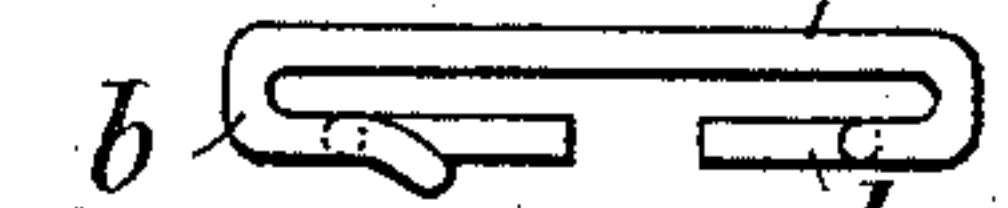


Fig. 7



Fig. 8

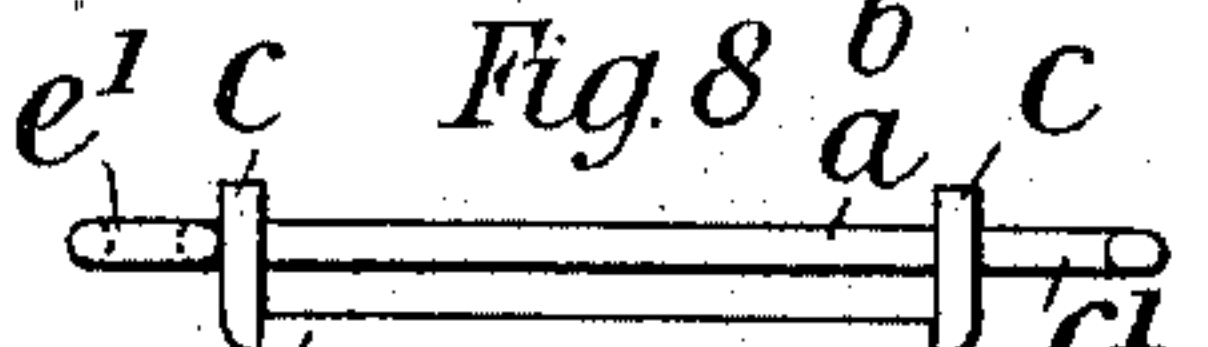


Fig. 9

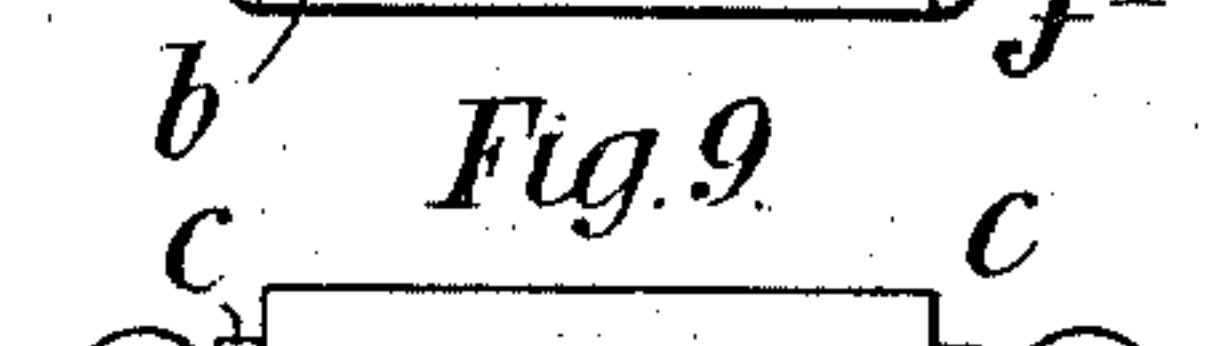


Fig. 10



Fig. 11

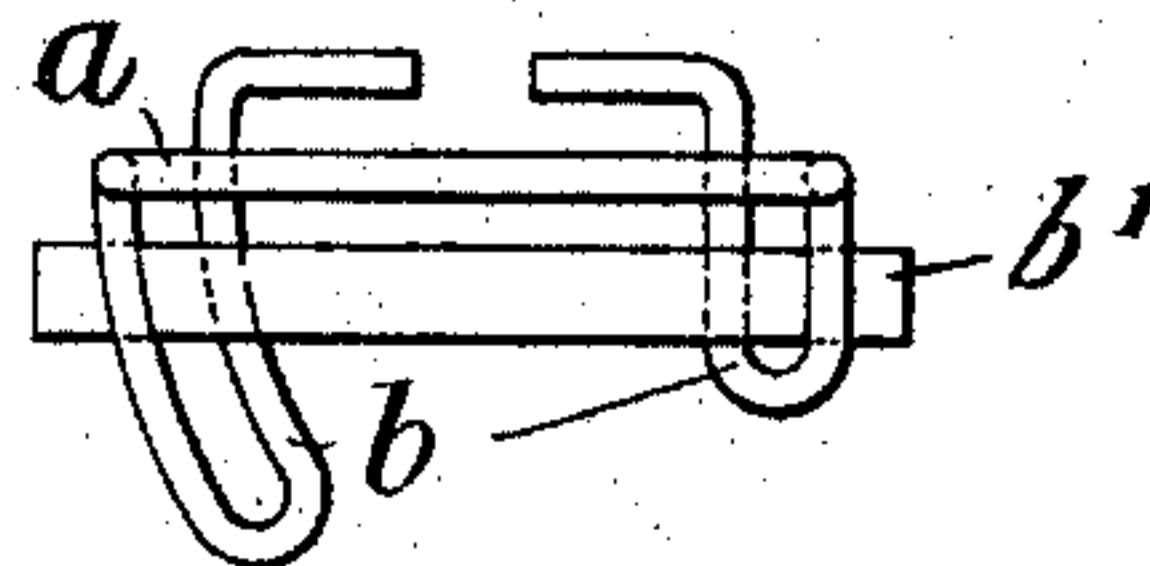


Fig. 12

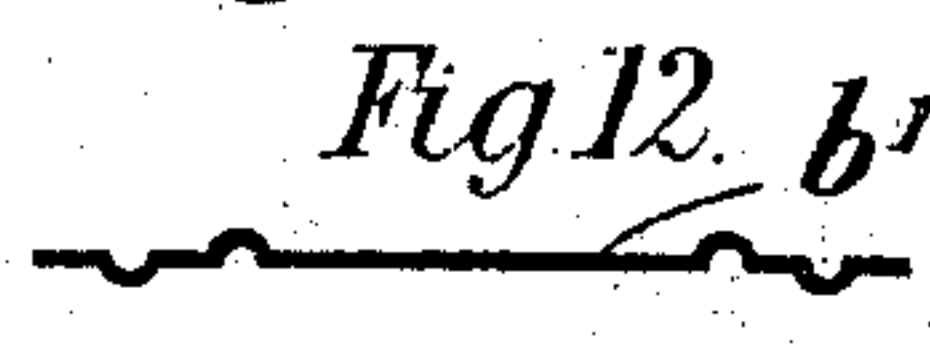


Fig. 13

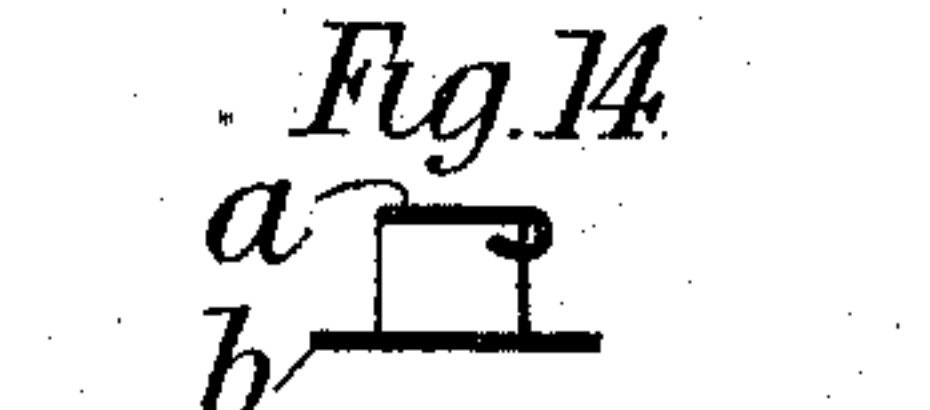


Fig. 14

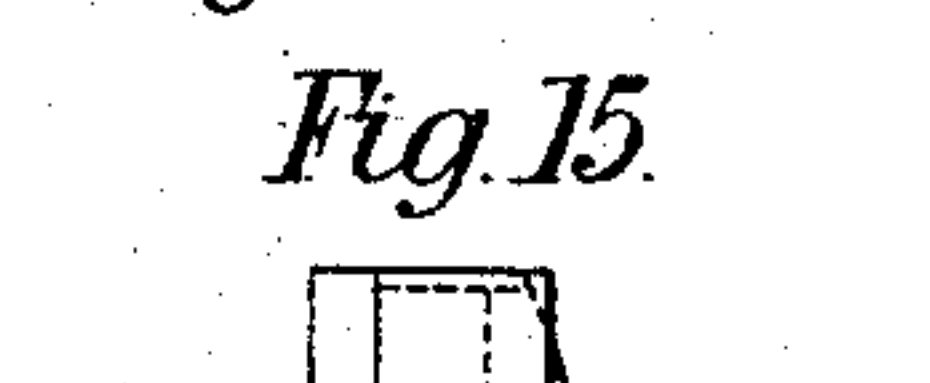
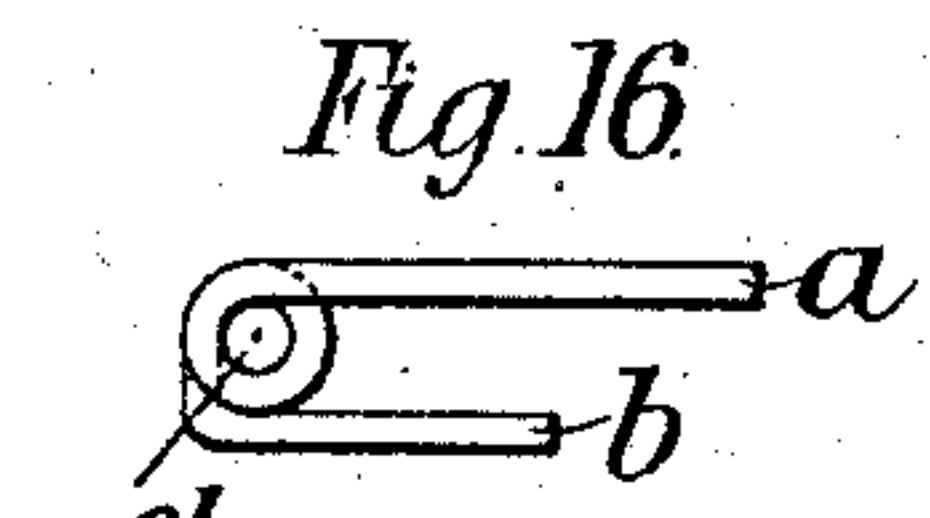


Fig. 15



Fig. 16



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# UNITED STATES PATENT OFFICE.

GEORGE L. CUMINE, OF LONDON, ENGLAND.

## LACING OF BOOTS OR SHOES.

SPECIFICATION forming part of Letters Patent No. 571,341, dated November 17, 1896.

Application filed July 29, 1896. Serial No. 600,901. (No model.) Patented in England October 22, 1895, No. 19,857.

*To all whom it may concern:*

Be it known that I, GEORGE LOUIS CUMINE, engineer, a subject of Her Majesty the Queen of Great Britain and Ireland, residing at Gold-  
5 ing's Farm, Netteswell Cross, London, in the county of Essex, England, have invented new and useful Improvements in or Relating to the Lacing of Boots or Shoes, (for which I have obtained a patent in Great Britain, No. 19,857,  
10 bearing date October 22, 1895,) of which the following is a specification.

The object of the present invention is to facilitate the tightening and loosening of the laces of boots and shoes. For this purpose,  
15 according to my invention, I propose to employ a pair of smooth bars of steel or other suitable material combining strength with elasticity in substitution for some or all of the usual eyelets or hooks, the laces being passed  
20 around these bars in lieu of through or around the said eyelets or hooks. The said bars are to be secured one along each of the edges to be closed in such manner as to permit the laces to pass around and slide freely along  
25 them, each bar occupying approximately the position of the row or the portion of the row of eyelets or hooks for which it is substituted. Each bar is provided with a base disposed at a little distance therefrom, so as to leave  
30 room for the lacing to pass freely between the bar and base. The said bases are suitably secured along the edges to be closed, preferably between two layers of the leather, and serve the double purpose of fixing the bars in posi-  
35 tion and of stiffening the edges to be closed, whereby gaping of the latter when the lacing is pulled tight is obviated. The said bases, which may either be made integral with the bars or formed separately and attached to the  
40 ends thereof, must be of such width or so formed as to resist the tendency of the lacing to pull the bars over sidewise and downward, which would obstruct the free sliding of the lacing on the bars.

45 I will now proceed to more particularly describe my invention and the manner of performing the same, having reference to the accompanying drawings, in which similar letters refer to corresponding parts in all the  
50 figures, and wherein—

Figures 1 and 2 illustrate the application

of my invention to a shoe. Figs. 3 and 4 represent in plan and side elevation, respectively, a convenient construction of bar and base. Figs. 5, 6, and 7 represent in plan, side  
55 elevation, and transverse section, respectively, a modified construction of bar and base. Figs. 8, 9, and 10 represent another modification in elevation, plan, and transverse section, respectively. Fig. 11 is a plan of  
60 another modification of bar and base. Figs. 12, 13, 14, 15, and 16 are details.

*a* indicates the bars, and *b* the bases thereof, which are secured along the edges to be closed, preferably between two layers of the  
65 leather, in any suitable manner, as by stitching. The said bases *b* also serve the purpose of stiffening the edges to be drawn together, as before mentioned.

The bars *a* may be of any suitable section,  
70 provided they be smooth, and rounded upon the side which takes the pull of the lacing. The bases *b* may also be made in various forms, but must be of sufficient width to resist the tendency of the lacing when pulled  
75 tight to pull the bars over sidewise and downward.

In Figs. 3 and 4 the bar and base are represented as formed from twisted wire, the necessary width of the base being attained  
80 by bending those portions of the wire constituting the same into serpentine form. In Figs. 5, 6, and 7, which also represent a bar and base formed from twisted wire, the base is shown as curved to fit the instep and con-  
85 form with the outline of the vamp.

In Figs. 8, 9, and 10 the base consists of a thin metal plate, curved so as to fit the instep and conform with the outline of the vamp, said plate having a standard *c*, bent up there-  
90 from at each end for receiving the wire bar *a*. The angles between the base *b* and standards *c* may, if desired, be stiffened with solder *d*. (See Fig. 13.) Fig. 11 represents a bar and base formed from twisted wire, the base being  
95 stiffened by a plate *b'*, which interlocks with the bends thereof. Fig. 12 is an edge view of this plate. Fig. 14 is a transverse section, and Fig. 15 is a part plan, of a bar and base formed from thin sheet metal, the rounded edge of  
100 the bar being produced by folding over one edge of that portion constituting the bar.



Where the base is formed from twisted wire, it would preferably be flattened by hammering, pressing, or otherwise.

The lace is held or retained at about mid-length by a pair of eyelets or hooks, (preferably eyelets.) In Figs. 1 and 2 a pair of ordinary eyelets *e* are shown as provided for this purpose in the edges of the opening beneath the lower ends of the bars *a*. The said eyelets (or hooks) may, however, be formed or provided on the lower ends of the bars *a*, as represented at *e'*, Figs. 8, 9, and 16. From the said eyelets *e* or *e'* the lacing is passed around the bars *a*, as illustrated in Figs. 1 and 2, and may then be passed around hooks *f'*, provided or formed at the upper ends of the said bars, Figs. 8 and 9, or around ordinary hooks *f*, fixed to the edges of the opening above the bars *a*, as represented in Figs. 1 and 2. When the lacing is drawn tight, the bars *a* should lie about parallel to one another, as shown in Fig. 1, but should never at any time touch one another.

The lacing being untied, it is only necessary to pull apart the edges of the opening in the boot or shoe, when the lacing will slide freely down the bars *a*, (see Fig. 2,) and the boot or shoe can then be readily removed from the foot. By pulling the lacing upward it will slide up the bars *a* into position again, and a further pull will then close the edges.

In applying my invention to a boot I prefer that the bars *a* should extend about half-way up the edges of the opening thereof, the edges of the upper part of the opening being provided with the usual hooks. The said bars,

however, being properly curved to fit the instep, may obviously, if desired, extend the entire length of such opening. It will also be obvious that the bars and bases may be made in many other forms than those represented by way of example in the drawings without in any way departing from the spirit of my invention, and I wish it to be clearly understood that I do not confine or limit myself to the precise details of construction illustrated in the drawings.

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

1. The combination with a boot or shoe, of smooth bars secured along the edges to be closed, the lacing being passed around said bars and being free to slide along the same, substantially as described and for the purpose set forth.

2. The combination with a boot or shoe, of smooth bars secured along the edges to be closed, the lacing being passed around said bars and being free to slide along the same, and base-pieces for said bars secured in position along the edges to be closed, substantially as described.

3. In combination with the bars *a*, and bases *b*, hooks *f'* at the ends of said bars, substantially as described.

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

GEORGE L. CUMINE.

Witnesses:

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H. W. KNOTT.