

No. 640,609.

Patented Jan. 2, 1900.

H. O. WHYMAN.  
LACING HOOK.

(Application filed May 1, 1899.)

(No Model.)

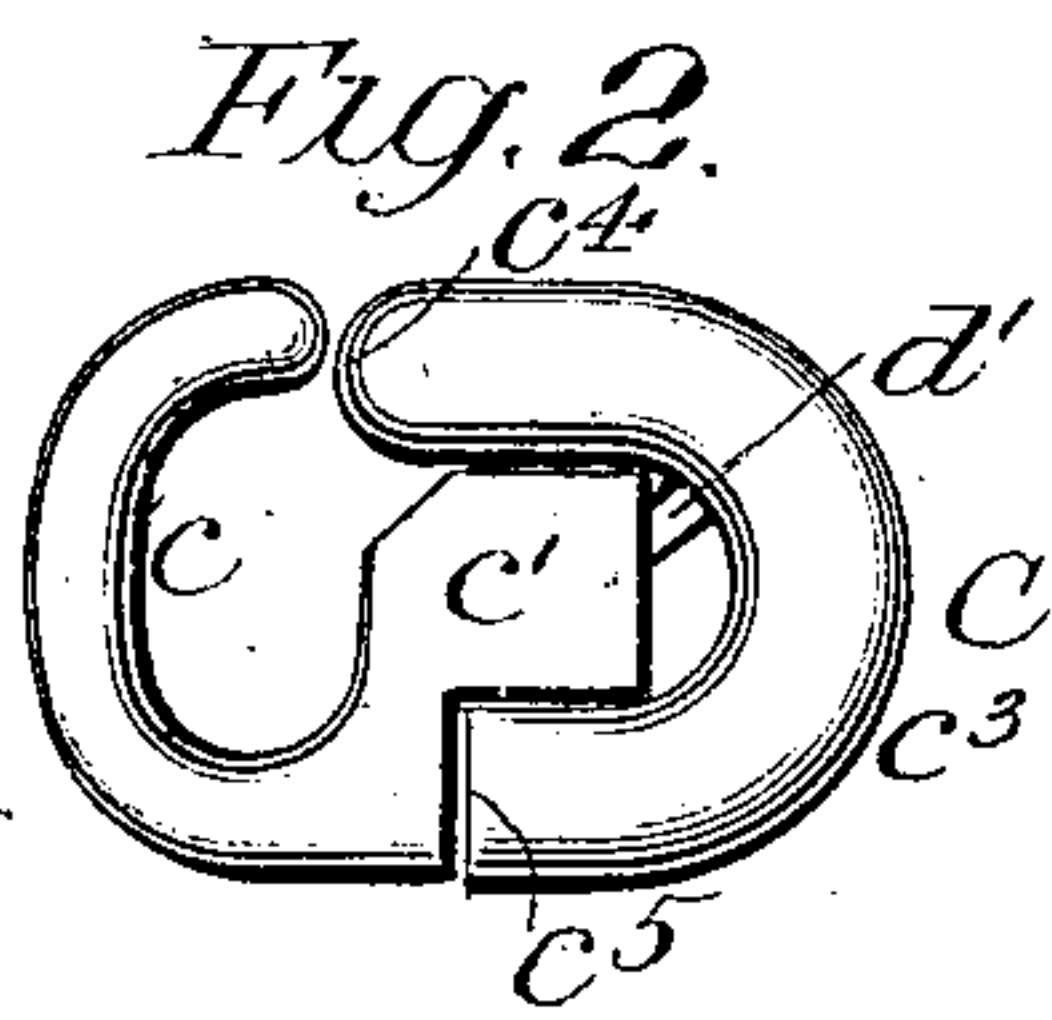


Fig. 1.

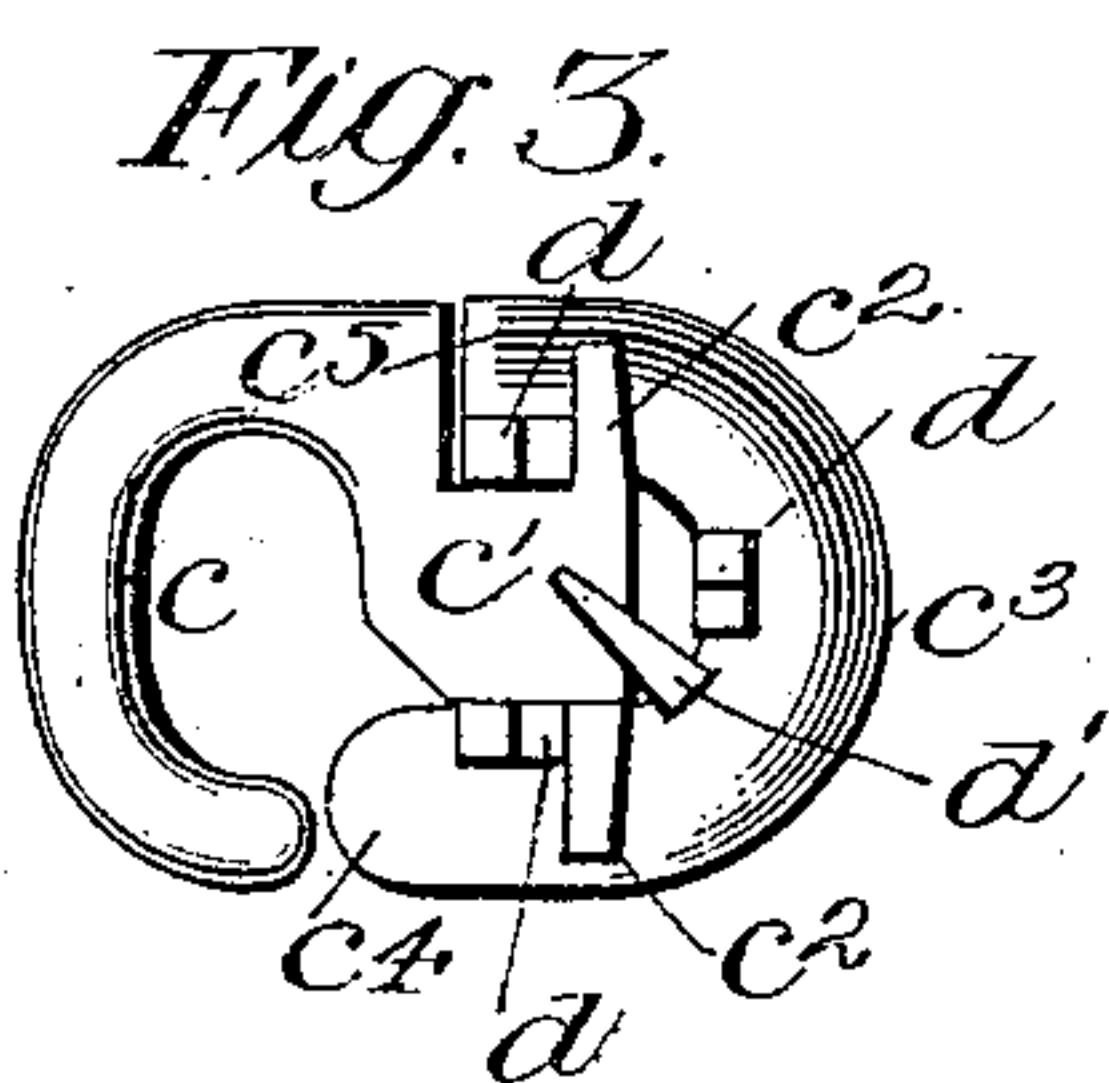


Fig. 4.

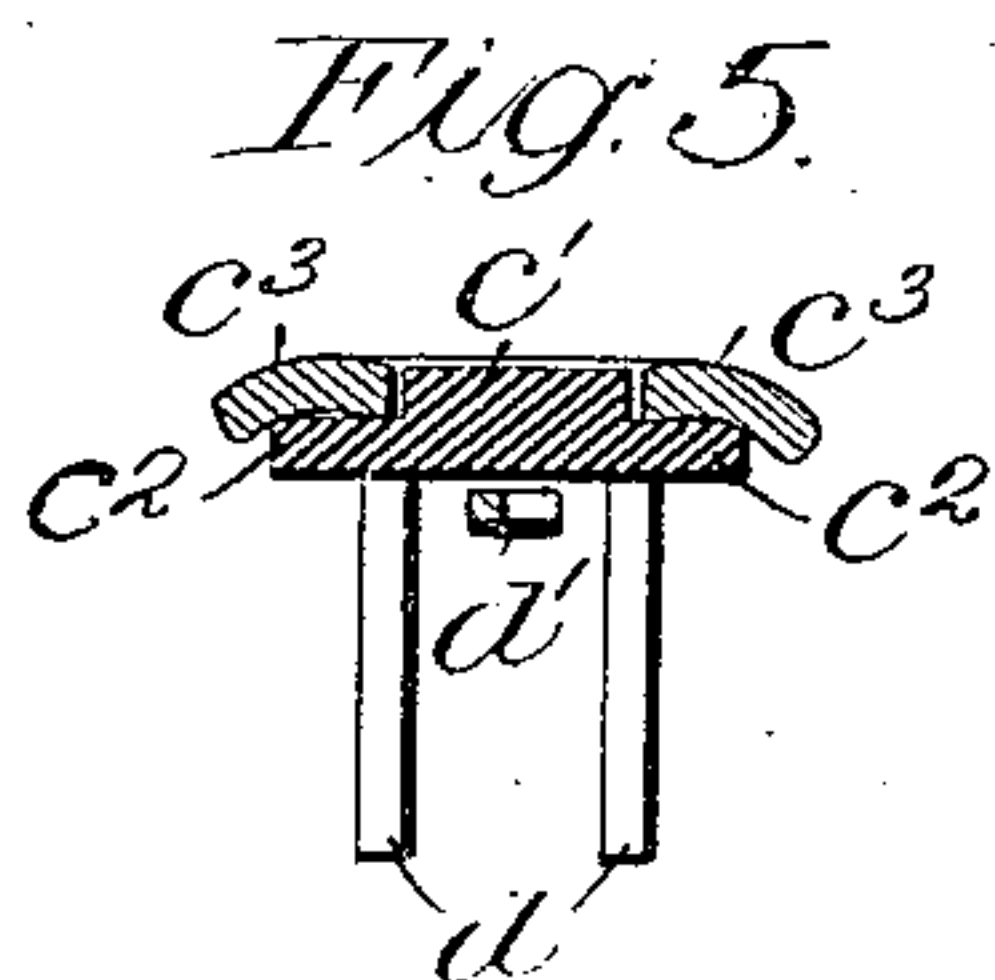
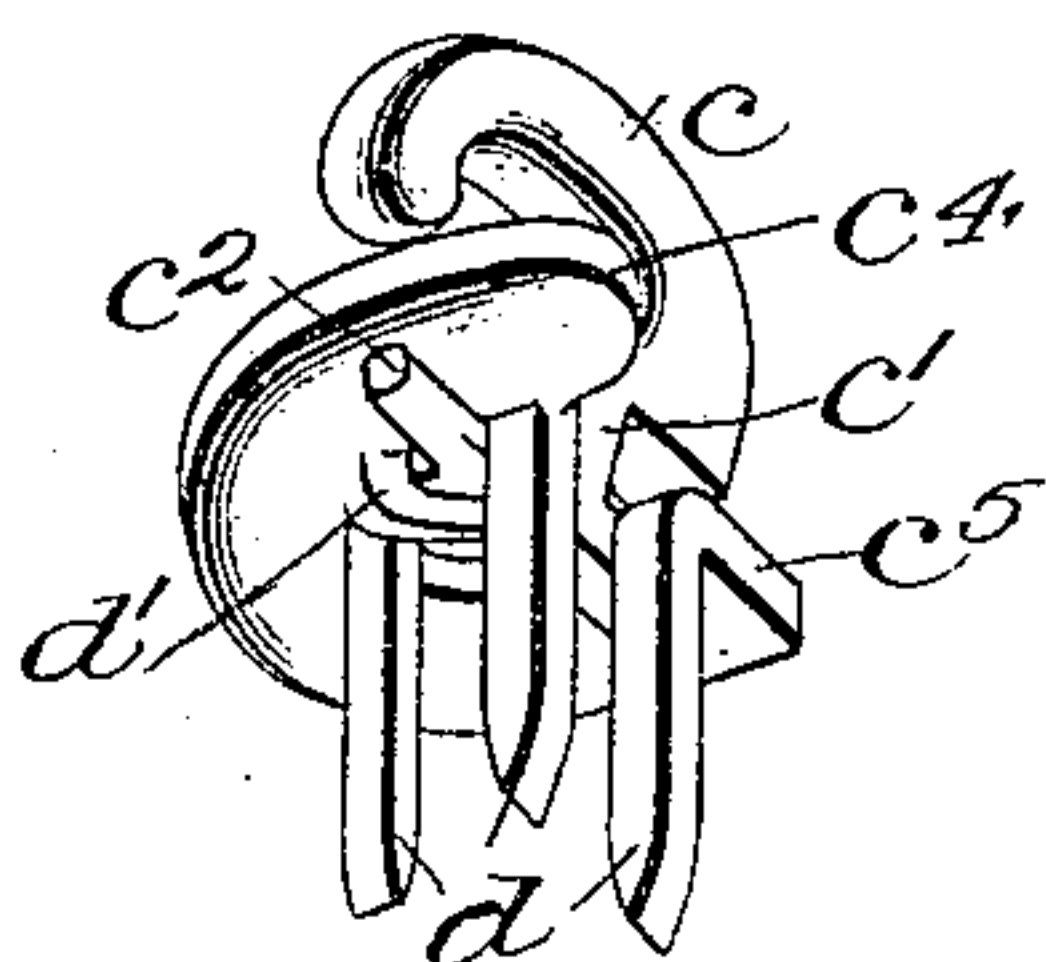
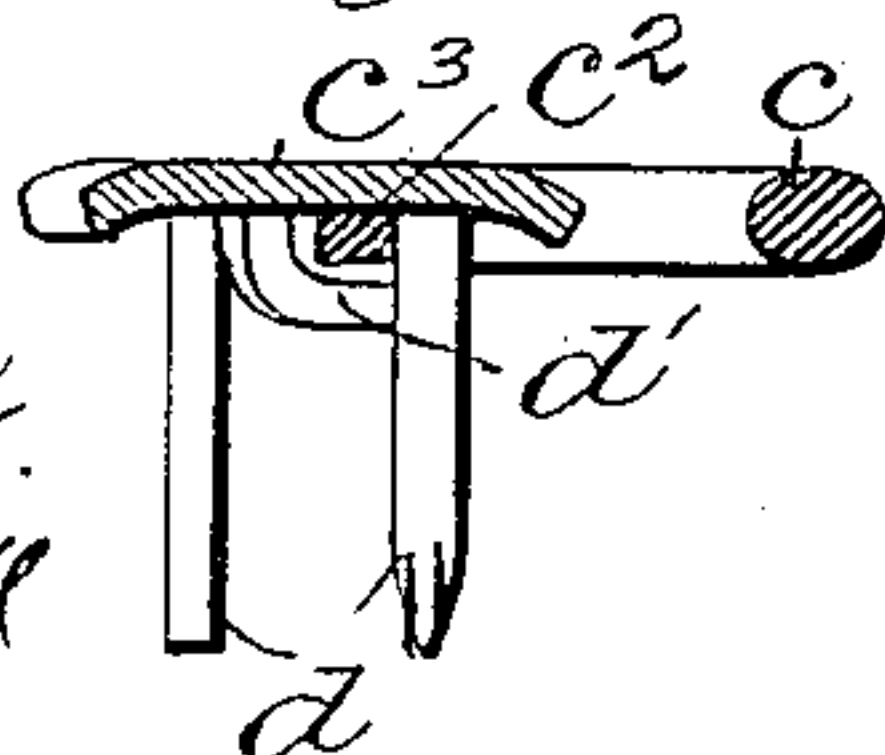
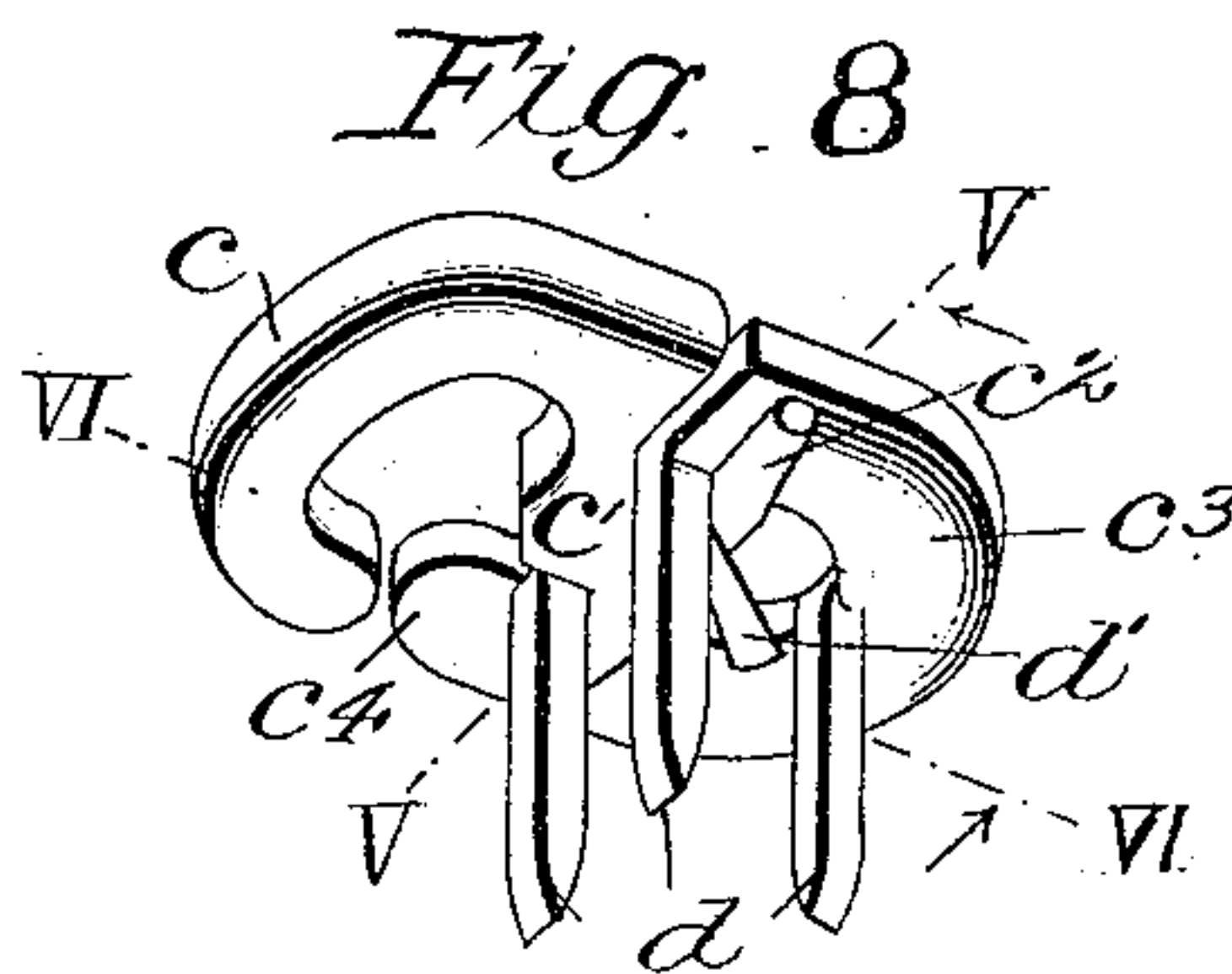
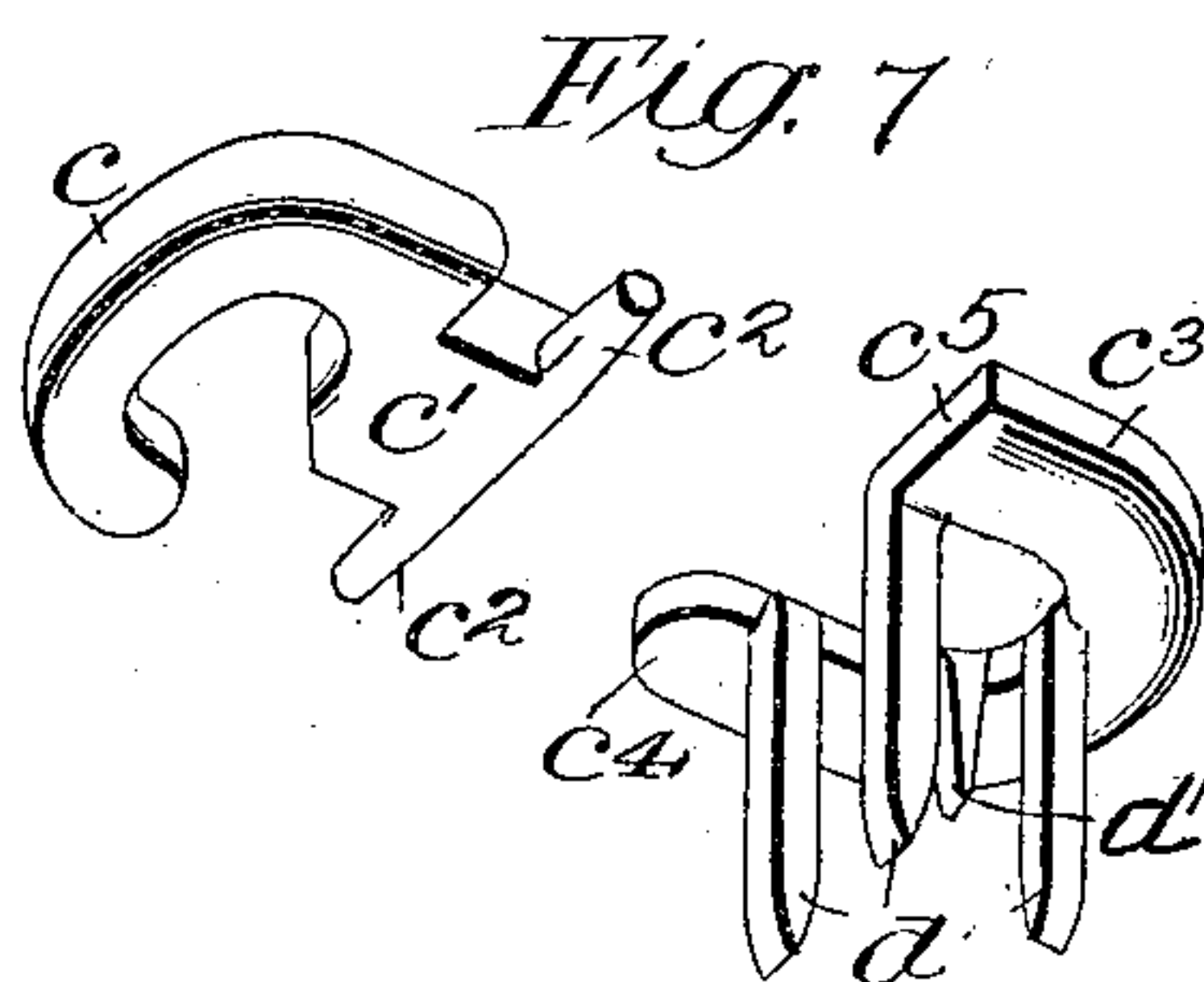
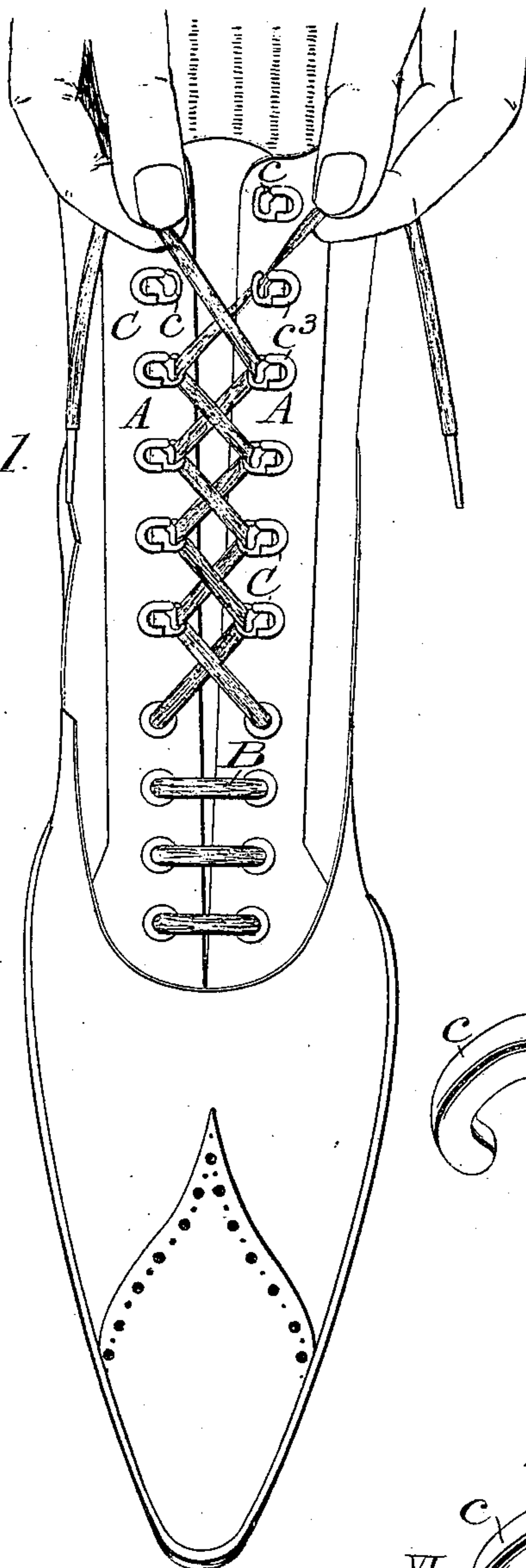


Fig. 6.



Witnesses  
Jos. C. Stack.  
Reginald H. Howell



Inventor  
Horatio O. Whyman  
By Julian C. Dowell  
His Attorney



# UNITED STATES PATENT OFFICE.

HORATIO O. WHYMAN, OF AURORA, ILLINOIS, ASSIGNOR TO THE WHYMAN LACING HOOK COMPANY, OF SAME PLACE.

## LACING-HOOK.

SPECIFICATION forming part of Letters Patent No. 640,609, dated January 2, 1900.

Application filed May 1, 1899. Serial No. 715,170. (No model.)

*To all whom it may concern:*

Be it known that I, HORATIO O. WHYMAN, a citizen of the United States, residing at Aurora, in the county of Kane and State of Illinois, have invented certain new and useful Improvements in Lacing-Hooks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to lacing devices for boots, shoes, and other articles of the character illustrated and described in Patent No. 625,483, granted to me May 23, 1899.

The objects of my present invention are to simplify the construction, reduce the cost of manufacture, and increase the efficiency of such devices, and, further, to provide a simple and efficient attaching member for securing the lacing-hook proper to the article on which the hooks are to be used and to adapt it to serve as a means for forming a pivotal connection between the same and the lacing-hook, so as to dispense with sockets or eyes or other auxiliary devices such as are usually employed in forming the pivotal connection between two pivotally-connected parts.

The invention will first be hereinafter more particularly described with reference to the accompanying drawings, which form a part of this specification, and then pointed out in the claims at the end of the description.

In the drawings, in which similar letters of reference are used to denote corresponding parts in different views, Figure 1 represents a perspective view of a lady's shoe having its confronting or opposite edges secured together by means of a suitable lace and lacing-hooks embodying my invention. Fig. 2 is a plan of a lacing-hook embodying my invention, showing the same on an enlarged scale. Fig. 3 is an inverted or bottom plan view of the parts shown in Fig. 1. Fig. 4 is a perspective view of the same, showing the lacing-hook proper raised or turned outward on its pivot away from the point of attachment. Fig. 5 is a transverse sectional view on the line V V of Fig. 10 looking in the direction of the arrow adjacent to said line. Fig. 6 is a sectional view of the same on the line VI VI of Fig. 10 looking in the direction

of the arrow adjacent to said line. Fig. 7 is a perspective view of the two members of the lacing device in position to be connected together, the attaching member being shown in the form in which it is bent in the third step of said method. Fig. 8 is a perspective view of the two parts assembled and coupled together, showing the shorter intermediate prong of the attaching member bent over onto the shank or pintle of the hook so as to clasp or embrace the same and form a pivotal connection therewith.

The reference-letters A A in the drawings designate the shoe uppers or quarters, the lower portions of which are provided with the usual eyelets with which a lace B is engaged, and above said eyelets is shown a series of lacing devices C, with which the lace is connected, as indicated in Fig. 1. Each of these devices consists of a lacing-hook proper and an attaching member pivotally connected together, as shown, so that the hook may lie flat against the shoe-upper, said hook being disposed flatwise of the attaching member.

The lacing-hook proper consists, preferably, of an oblong portion *c* and a flat shank or tang *c'*, shaped to conform to the opening or slot between the two arms of the attaching member, to be presently described, and forming a flat lacing-hook which is adapted to lie flatwise on the material of the shoe or other article to which it is attached, said tang being formed or provided with a pivot-pin or pintle *c<sup>2</sup>* for pivotal engagement with the attaching member. The attaching member consists of a substantially U-shaped body portion or strip *c<sup>3</sup>*, the arm *c<sup>4</sup>* of which extends slightly beyond the arm *c<sup>5</sup>*, and on the inner edge thereof are formed a series of pendent preferably equidistant prongs *d d* and an intermediate preferably shorter prong *d'*. The shorter arm *c<sup>5</sup>* of the attaching member is preferably cut square across, so as to form a shoulder or abutment for contact with a correspondingly-shaped shoulder on the lacing-hook, the tang of which, carrying the pintle, is fitted in the opening or slot formed by or between the two arms of the attaching member, with its pivot-pin or pintle resting on the under side thereof, and is pivotally connected therewith by turning down the short prong



*d'* so that it may overlap and clasp or embrace the rear portion of the tang or the pintle thereon in such manner as to pivotally connect the two parts thus assembled.

5 As shown more clearly in Figs. 7 and 8, each arm of the attaching member or strip *c*<sup>3</sup> is provided with a prong on the inner edge thereof, equidistant from a third prong in the rear, one prong *d* being flush with the terminus of  
10 the arm *c*<sup>5</sup> and the other arm *c*<sup>4</sup> extending slightly beyond the opposite prong *d*, while the third prong depends from the edge of the strip, at the rear side of the opening or slot therein. The shorter prong occupies a posi-  
15 tion between one of the front prongs and the prong at the rear.

In assembling the two parts constructed as hereinbefore described they are brought to the position shown in Fig. 7, and thereupon  
20 the shank of the hook proper is fitted into the slot or opening between the two arms of the attaching member, with the pivot-pin or pintle thereon resting against or on said arms adjacent to the two outermost or front prongs,  
25 whereupon the short prong is bent over so as to overlap and clasp or embrace the tang or pivot-pin in such manner as to pivotally connect and secure the two members together, the front prongs serving to prevent the with-  
30 drawal of the tang and consequent separation. Thus assembled the lacing device is adapted for attachment to the confronting edges of the shoe-uppers or other article to which such de-  
35 vices are to be applied by inserting the prongs through the material and clamping the same on the opposite side. When attached, as indicated in Fig. 1, the material will serve in like manner as does the short prong to pre-  
40 vent separation of the parts. Hence said short prong is used principally for convenience in assembling the parts and retaining them in assembled position ready for attachment to the article on which the device is to be used.  
45 While two prongs are preferable for engaging the front side of the pintle, a greater or less number might be made to serve the purpose.

It will be seen that as thus constructed the lacing-hook proper is arranged to normally  
50 lie flatwise on the surface of the material to which the attaching member is secured and in the same plane as the body portion thereof, while the hook and its pivot lie substantially in the same plane, and for all practical pur-  
55 poses they are in the same plane, the upper surface of the hook being flush with the surface of the attaching member.

The lace can be very readily engaged with the hooks when the latter stand outwardly at an angle to the eyelets or attaching members,  
60 as they can be readily caused to do by movement on their pivots. In unlacing, the hooks are naturally thrown outwardly and they are apt to maintain that position, so that no ad-  
65 justment of them is necessary in lacing; but if they should not be in such position as to readily receive the lace they may be easily thrown out with the lace. The outward move-

ment of the hook is limited by the side edges of its shank coming against the curving interior edges of the attaching member, so that  
70 there is no possibility of its being thrown outwardly appreciably beyond a perpendicular position or falling backward, and it will readily return to its normal position when engaged  
75 by the lace. If it could move much beyond such perpendicular position, the lacing operation might be hampered.

With the hook standing out from the eyelet, as shown in Fig. 4, the lace can be easily  
80 passed through the throat of the hook and into the latter, and when beyond the toe of the hook and inclosed by the same the lace can be brought back over the hook, with its flat side drawing on the latter, as shown in  
85 Fig. 1. In unlacing, the string or lace can be pulled through in the ordinary way and there will be no danger of stripping the metal tips, as frequently occurs when pulling the shoe-strings through eyelets. The unlacing of  
90 course can be accomplished by a movement directly the reverse of that pursued in lacing.

While I preferably employ a hook of the described construction, other forms may be employed, and the form of the attaching mem-  
95 ber may be modified without departing from the spirit of my invention.

The advantages of my improvement will be apparent to those familiar with the uses thereof and the objections which are incident  
100 to the use of such devices as have heretofore been proposed for similar purposes, caused by projections on the latter catching the garments of the wearer and tearing or causing wear thereof.

Having thus fully described my invention, what I claim as new, and desire to secure by  
105 Letters Patent of the United States, is—

1. A lacing device comprising a substantially U-shaped attaching member having a series of prongs projecting therefrom at an  
110 angle thereto and a hook having a shank or tang adapted to fit between the arms of said member and provided with a pintle which is seated on said arms with one or more of said prongs in front and in rear thereof; one of  
115 said prongs adapted to be bent over so as to embrace said tang or pintle and pivotally connect said hook and attaching member, substantially as described.

2. A lacing device comprising a substan-  
120 tially U-shaped attaching member having a series of prongs projecting at right angles thereto from its inner edge and a hook having a shank or tang adapted to fit between the arms of said member and provided with  
125 a pintle which is seated on said arms with one or more of said prongs in front and in rear thereof; one of said prongs being bent over so as to embrace said tang or pintle and pivotally connect said hook and attaching  
130 member, substantially as described.

3. An attaching member for lacing-hooks consisting of a substantially U-shaped strip or body portion having a series of prongs pro-



jecting at right angles thereto from its inner curved edge, one of said prongs being adapted to be bent over so as to embrace the tang of the hook proper and pivotally connect the same with the attaching member, while the other prongs serve as a means for securing the device to the article to be laced, substantially as described.

4. A lacing device comprising a substantially U-shaped attaching member having one or more prongs for securing it to the material of the shoe or other article; and a flat lacing-hook pivotally held to said attaching member by means of the said prong or prongs.

5. A lacing device comprising a substantially U-shaped pronged attaching member; and a flat lacing-hook pivotally connected to said attaching member with a tang or shank between the arms of the latter and also a pintle engaging the prongs and confined thereby.

6. A lacing device comprising a flat lacing-hook adapted to lie flatwise on the material of the shoe or other article and having a pin-

tle; together with an attaching member having a slot or bifurcation to receive the shank of the said hook, said attaching member being pronged for engagement with the pintle of the hook and also for anchorage in the material of the shoe or other article, substantially as described.

7. A lacing device comprising a flat lacing-hook having a shank for pivotal connection with an attaching device, together with an attaching member having arms which embrace said shank and which are provided with prongs which serve as the attaching means and also hold said shank in pivotal engagement with said attaching member, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

HORATIO O. WHYMAN.

Witnesses:

CHARLES E. RIORDON,  
OSGOOD H. DOWELL.