

No. 830,902.

PATENTED SEPT. 11, 1906.

H. B. KELLER.
LACING EYELET.
APPLICATION FILED AUG. 22, 1905.

Fig. 1.

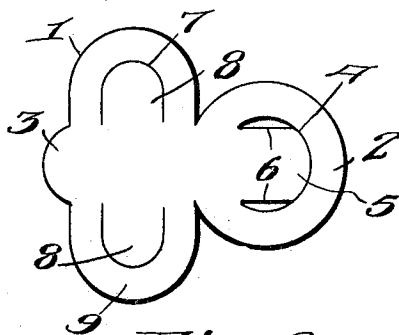


Fig. 2.

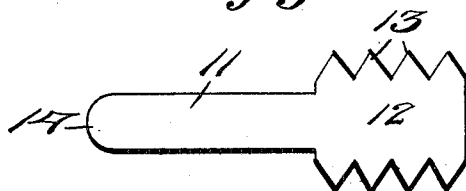


Fig. 3.

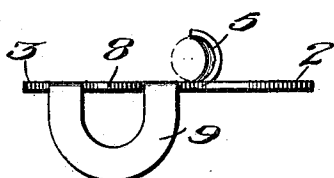


Fig. 4.

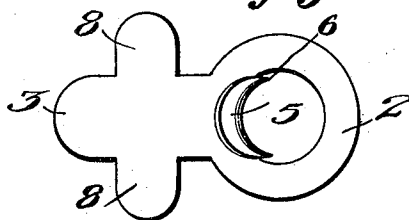


Fig. 5.



Fig. 6.

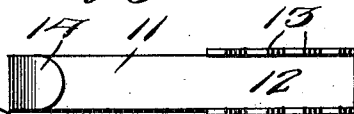
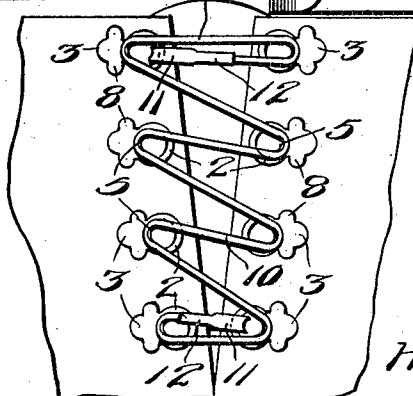


Fig. 7.



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HENRY B. KELLER, OF PHILADELPHIA, PENNSYLVANIA.

LACING-EYELET.

No. 830,902.

Specification of Letters Patent.

Patented Sept. 11, 1906.

Application filed August 22, 1905. Serial No. 275,309.

To all whom it may concern:

Be it known that I, HENRY B. KELLER, a citizen of the United States of America, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented new and useful Improvements in Lacing-Eyelets, of which the following is a specification.

The invention relates to an improvement in laces, hooks, and eyes, and particularly to a combined hook and eye made from a single piece of material.

The main object of the present invention is the production of a combined hook and eye constructed from a single piece of material and arranged to permit the convenient use of either the hook or eye for lacing.

The preferred details of construction will be described in the following specification, reference being had to the accompanying drawings, wherein—

Figure 1 is a plan view showing the initial cut of the blank forming a hook and eye. Fig. 2 is a similar view of a blank shaped to provide the lace-hook. Fig. 3 is a side elevation of my improved hook and eye. Fig. 4 is a plan view of the same. Fig. 5 is a side elevation of the lace-hook. Fig. 6 is a top plan of the same; and Fig. 7 is a view in elevation, illustrating the application of my invention.

Referring to the drawings, my combined hook and eye is made from a single piece of material shaped and cut, as shown in Fig. 1, in the single operation of a suitable die. As illustrated, the article after such operation of the die presents in outline an elliptical portion 1, from which projects a circular or eye portion 2. A semicylindrical projection 3 extends from the elliptical portion 1 directly opposite the eye portion 2. The material of the article within the eye portion is cut out on a circular line, as 4, extending approximately three-quarters of the circular dimension of the eye portion, said cut being concentric with the outline of the eye portion and spaced from said outer edge thereof a sufficient distance to provide for desired thickness of material to form the eye. A tongue 5 is thus formed within the eye portion, being connected therewith at the rear edge, and by preference the side edges of the tongue are cut off in parallel lines, as at 6. The elliptical portion of the article is also formed near each end with a U-shaped incision 7, formed concentric with the contour of the elliptical portion. By this construc-

tion tongues 8 are provided at each end of the elliptical portion which are freed from the material except at their inner ends, thus leaving approximately semicircular projections 9 practically equal in width to the width of the circular portion of the eye member.

In completing the article the tongue 5 is formed concavo-convex in section and bent upwardly on its juncture with the eye portion, being curved rearwardly from said juncture to provide a hook projecting at right angles to the face of the eye portion. By thus forming the hook the central portion of the eye member 2 is freed of its material, thereby providing an eye immediately forward and connected to the hook. The semicylindrical projections 9 of the elliptical member are turned downwardly to the normal plane of said member, being bent on lines extending from the juncture of the projection 3 to the connection of the eye member and elliptical member, this construction leaving the tongues 8 and projection 3 extending in the plane of the eye and forming approximately a cross in rear of said eye member, as clearly shown in Fig. 4.

In use the depending projections 9 are passed through suitably-arranged incisions in the material until the projections 3 and 8 contact with said material, after which the projections 9 are bent outwardly into a position approximating their normal position. This movement of the projections 9 will bind the material through which they are passed between said projections and the edges of the tongue 8, thus firmly clamping the combined hook and eye in place without additional fastening means.

My combined hook and eye is preferably designed for use in connection with an elastic lace 10, terminally provided with hooks struck from a single blank, as shown in Fig. 2. In forming the hook the blank is cut to provide a tongue 11 and a body 12 of greater width than the tongue and connected thereto at the rear end, the side edges of the body being serrated or provided with teeth 13. In applying the hook to the lacing the teeth 13 are bent upwardly at right angles to the plane of the blank and the lace terminally inserted therebetween, after which the hooks are bent downwardly upon and into engagement with the material of the lace, thereby binding the latter within the hook member. The free terminal of the tongue 11 is bent to provide a hook 14, which may be of any di-

mensions or length commensurate with the size of the tongue.

In use one of the terminal hooks of the lacing, which is preferably of elastic material, is engaged with the eye of the combined hook and eye and the lacing engaged with the hooks of the successive hook and eye members, the hook 14 of the other terminal of the lace being engaged with the eye of the adjacent hook and eye member after said lace has been properly applied.

It will thus be seen that I have provided a combined hook and eye member arranged for convenient coöperation with the lace and adapting the latter for terminal engagement with any one of said hook and eye members as a final holding means, whereby the lace may be readily applied with one hand and may be tight or loose, as desired, each hook and eye member being readily adapted to receive the lacing in coöperation with its hook member and also to provide a holding means for the hook-terminal of said lacing.

It will be noted that the combined hook and eye member of my invention is produced in a single operation and from a single piece of material and that when secured to the material it is effectively clamped thereto without additional securing means and that it provides a hook for the usual lacing and also an eye for such lacing, it being readily appar-

ent that if desired the eye members of the combined hook and eye may be utilized for lacing the shoe rather than the hook members.

Having thus described the invention, what is claimed as new is—

1. A fastening of the character described comprising a sheet-metal body formed of integral elliptical and circular portions, the elliptical portion being provided with tongues and projections to engage opposite sides of the opening of a shoe-upper, the circular portion having a portion displaced therefrom to form an eye and said displaced portion being bent to form a hook.

2. A fastener of the character described comprising a sheet-metal body portion composed of integral elliptical and circular members, the said elliptical member being formed with projections and U-shaped portions to engage opposite sides of the opening of a shoe-upper, and the circular member having an opening therein and a portion bent up to provide a hook.

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

HENRY B. KELLER.

Witnesses:

J. CLIFFORD ALLISON,
A. H. KELLER.