(No Model.)

F. S. McKENNEY.

LACING STUD.

No. 478,521. Patented July 5, 1892.

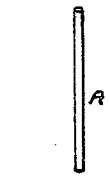

Fig. 1.

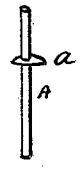

Fig. 2.

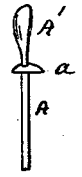

Fig. 3.

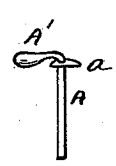

Fig. 4.

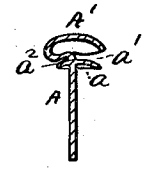

Fig. 5.

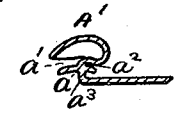

Fig. 6.

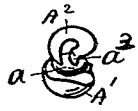

Fig. 7.

Fig. 8.

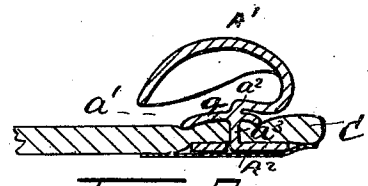

Fig. 9.

Witnesses
John Schuman.
John F. Miller

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By his Attorney
Newell S. Wright.

UNITED STATES PATENT OFFICE.

FRANKLIN S. McKENNEY, OF DETROIT, MICHIGAN.

LACING-STUD.

SPECIFICATION forming part of Letters Patent No. 478,521, dated July 5, 1892.

Aplication filed February 27, 1891. Serial No. 383,031. (No model.)

To all whom it may concern:

Be it known that I, FRANKLIN S. McKENNEY, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in a Hook and Fastening; and I 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, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to certain new and useful improvements in a hook and fastening for gloves, shoes, and other articles, and has for its objects to produce a hook and fastening of superior construction and of increased durability, simplicity, and economy.

I carry out my invention as hereinafter specified and claimed, and illustrated in the accompanying drawings, which show the successive steps taken in the formation of the device.

Accordingly, Figure 1 is a view in side elevation of a piece of wire simply cut to desired length for the formation of the device therefrom. Fig. 2 is a similar view showing a modification wherein the wire is formed with a shoulder, which is the next step in the process of manufacture. Fig. 3 is a similar view showing an additional modification wherein the top of the wire is shaped into concavo-convex form to constitute a head or hook. Fig. 4 is a similar view showing a further modification wherein the head is shown bent over adjacent to the shoulder. Fig. 5 is a vertical section showing another modification wherein the head is given an additional bend to that shown in Fig. 4 to form a hook. Fig. 6 is a vertical section of a further modification in the process of construction, showing the lower end of the wire bent adjacent to the shoulder. Fig. 7 is an additional modification wherein the lower end of the wire shown in Fig. 6 is further bent around to form a flat spiral or open base. Fig. 8 is an inverted view showing the base of the device when applied to a glove or other article. Fig. 9 is an enlarged view in vertical section of the completed device, showing the same attached to a glove or other article.

The present invention is an advance on a device of this class over that embodied in my pending application, Serial No. 377,823, filed January 15, 1891, the fastening therein specially shown being formed of sheet metal, whereas in my present specification I contemplate more particularly the construction of the device from wire.

In the drawings, A, Fig. 1, represents a piece of wire cut from the stock of suitable length. This wire A by suitable means well known to those skilled in the art is formed next in order with a shoulder a, preferably integral with the wire, which may be accomplished by striking or pressing downward a sufficient quantity of metal from the upper end of the wire. In this operation of forming the shoulder the pressing down of the metal therefor shortens the length of the wire from that possessed when first cut and illustrated in Fig. 1. I prefer that the shoulder should be formed upon the wire of eccentric form, the wire projecting above and below the shoulder to one side of the center of the shoulder, as shown, the shoulder being constructed to form a projecting bearing upon the fabric beneath entirely around the engagement of the shank and stem therewith. The shoulder is shaped concavo-convex form or dished on its under side. After the formation of the shoulder a the top of the wire is shaped to form a head A′, which is in hooked form and concavo-convex in cross-section. When shaped to form a hook, the head is bent over adjacent to the shoulder a in one direction, as shown in Fig. 4. Afterward the head is bent again in the opposite direction, as shown in Fig. 5, leaving a passage between the under side of the hook and the upper side of the shoulder, as shown at a', in which a lacing-cord may be engaged. The head thus formed is supported upon a shank a^2. By making the head of concavo-convex form when fashioned into a hook it has a very neat and tasteful appearance.

To properly form the base of the device, the lower end of the wire shown in Figs. 1 to 5 is then bent, as shown in Fig. 6, at substantially right angles near to the shoulder a, but leaving a stem a^3 beneath the shoulder. In this last operation the lower extremity is also preferably flattened. After this the lower

extremity of the wire is bent or coiled about into a flat spiral form to constitute an open involute base A^2.

Fig. 7 shows the spiral base partially formed to show more distinctly the stem a^3.

Fig. 8 shows the more complete formation of the spiral.

When engaged upon a glove or other article C, the outer point of the spiral base is inserted through the article, when the device may simply be turned about until the stem a^3 is engaged in the article, the spiral base being thus engaged on the one side of the article and the shoulder a adjacent thereto on the other side of the article. When this engagement has been accomplished, I prefer to clamp the base and the shoulder toward each other and upon the intermediate portion of the article to effectually hold the device in place. Fig. 9 shows the base and the shoulder so clamped upon the article between them. As so constructed it is evident there is no waste of material in the process of manufacture.

The device may be formed, if desired, of plated wire, dispensing with the necessity of plating it after completion. It will be evident that the article to which it is attached is only punctured the size of the stem a^3, so that it is not materially weakened thereby. It will also be seen that the parts are so constructed as to completely conceal and protect the point of entrance.

By flattening the lower extremity of the device it is obvious that not only is a flat spiral formed, but also a spiral that has a flat seat against the article to which it is applied, enabling it to set down snugly upon the article.

What I claim as my invention is—

A lacing-hook for gloves, shoes, and other articles of wearing-apparel, of wire, consisting of a head, an inverted-cup-shaped shoulder a, formed from the wire, a stem a^3, projecting downward from said shoulder, and a flat spiral A^2, projecting laterally from said stem.

In testimony whereof I sign this specification in the presence of two witnesses.

FRANKLIN S. McKENNEY.

Witnesses:
N. S. WRIGHT,
JOHN F. MILLER.