(No Model.)

L. A. SPRAGUE.

Buckle Lever.

No. 230,156. Patented July 20, 1880.

Fig. 1.

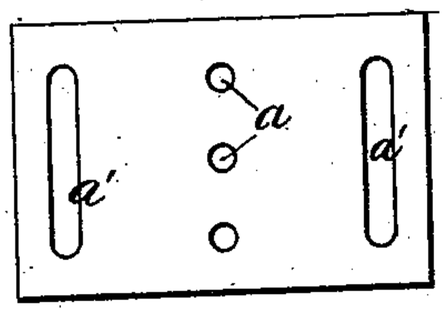


Fig. 2.

Fig. 3.

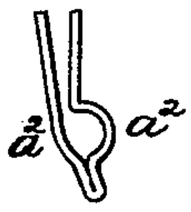


Fig. 5.

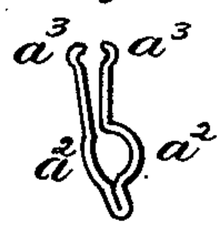
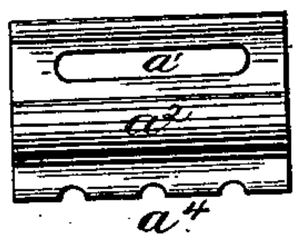


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

LEONARD A. SPRAGUE, OF BROOKLYN, E. D., NEW YORK.

BUCKLE-LEVER.

SPECIFICATION forming part of Letters Patent No. 230,156, dated July 20, 1880.

Application filed May 26, 1880. (No model.)

To all whom it may concern:

Be it known that I, LEONARD A. SPRAGUE, of Brooklyn, E. D., in the county of Kings and State of New York, have invented certain new and useful Improvements in Buckle-Levers; 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 is a view of the blank from which my improved buckle-lever is formed. Fig. 2 represents the blank after it has been bent into U shape. Fig. 3 represents an end view of the buckle-lever after the engaging-bit and the seat for the central bar have been formed. Fig. 4 is an elevation of the completed lever, and Fig. 5 is an end view of the same.

The object of this invention is to produce a buckle-lever from a single piece of metal doubled back upon itself and having a series of notches formed in that end which bites the strap upon the opposing bar of the frame, as will be hereinafter fully explained.

I propose to use in manufacturing my improved lever the machine patented by me on the 25th day of May, 1880, to which attention is directed in this specification, but which need not be described herein.

In Fig. 1 the blank is shown provided with a series of perforations, *a*, arranged transversely on a line which is equidistant from the ends of the blank, and also with slots *a'* near the ends to receive one end of one of the straps to which the buckle is to be applied. After the blank has been thus perforated, and, by preference, slotted, it is bent into U shape, as indicated in Fig. 2.

The next operation in the sequence of operations or process of manufacture is to swage or strike up the U-shaped blank into the form shown in Fig. 3 by means of dies, which form the lower portion into a lip or bit with the two thicknesses of metal in close contact with each other, and with a central seat consisting of two grooves, a^2 a^2, adapted to receive the central bar of the buckle-frame, as will be readily understood without further explanation.

The final operation, by which the buckle-lever is completed, consists in corrugating the extreme ends of the sheet of metal, as at a^3 a^3, (see Fig. 5,) in order to impart additional stiffness or strength to support the pull of the strap; but under some circumstances the corrugations may be dispensed with and the completed buckle-lever left in substantially the form shown in Fig. 3, although I prefer that shown in Fig. 5.

When the buckle-lever is completed the perforations form a series of notches, a^4, in the engaging end of the bit, as plainly shown in Fig. 4, in consequence of the blank having been bent upon a line intersecting the center of the holes *a*. (Shown in Fig. 1.)

From the above description it will be seen that by this method of manufacturing a buckle-lever I obtain a number of marked advantages over any process heretofore employed. For instance, I have found by experience that if I roughen, notch, or corrugate the bit of the lever by means of dies employed for swaging the U-shaped blank, Fig. 2, into the form shown in Fig. 3, those portions of the dies which make the notches or corrugations wear out very rapidly, and as soon as their faces begin to wear they fail to properly notch or corrugate the bit, whereas by punching the row of holes *a* before the bit is swaged into shape I not only insure that the forming-dies will last much longer, but also that the notches or corrugations shall have sharp and regular outlines.

I am aware that a buckle-lever has been formed from a single piece of metal bent or swaged into such shape that where the seat for the central bar is formed the engaging-lip shall consist of sharp points or spurs; but in this last-described construction these points consist each of a single thickness of metal, and are therefore not adapted to resist or support a heavy strain or pressure, whereas by my method or process of manufacture the lip or bit consists of two thicknesses of metal provided with any desired number of notches, with which the strap engages, and is also strong enough to resist a heavy strain or pressure by reason of its being double.

It will, of course, be understood that the blank shown in Fig. 1 may be formed into the

completed buckle-lever by means of a machine which is constructed very differently from that which is shown and described in my patent above referred to, or they may be bent into the desired shape by the use of two separate and distinct machines, for which reason the blank is especially adapted to be manufactured and sold as a new article of manufacture, it being the first blank of which I have any knowledge which is suitable to be subsequently manufactured into a buckle-lever like that shown in Figs. 4 and 5.

What I claim is—

1. The herein-described method of making a buckle-lever—that is to say, by punching a series of holes, *a*, centrally and transversely in the blank, and then doubling the blank upon itself upon a line substantially central to said holes, substantially as set forth.

2. The herein-described buckle-lever, consisting of a strip of metal doubled back upon itself and having its engaging-bit provided with a series of notches, a^4, formed in its folded edge, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand.

LEONARD A. SPRAGUE.

Witnesses:

ORLANDO SPRAGUE,

W. C. SNYDER.