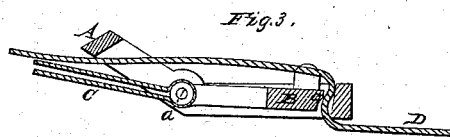
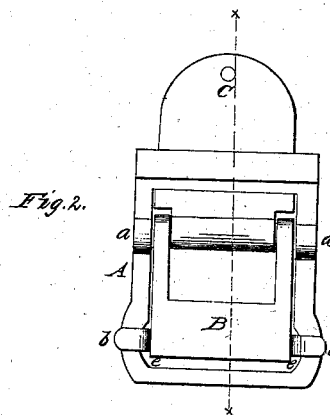
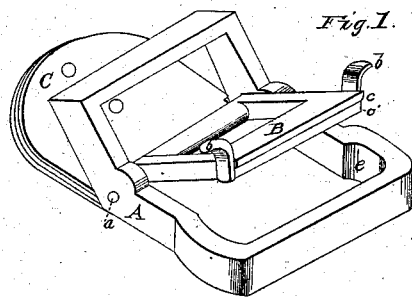


H. W. Warner
Lever Buckle.

N^o 48,121.

Patented June 6, 1865.



Witnesses.
Chas. H. Kane
P. T. Dodge

Inventor
H. W. Warner
By Smith & Dodge
Attorneys

UNITED STATES PATENT OFFICE.

H. W. WARNER, OF GREENFIELD, MASSACHUSETTS.

IMPROVED LEVER-BUCKLE.

Specification forming part of Letters Patent No. 48,121, dated June 6, 1865.

To all whom it may concern:

Be it known that I, H. W. WARNER, of Greenfield, county of Franklin, and State of Massachusetts, have invented certain new and useful improvements in Lever-Buckles; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, and to the letters of reference thereon—

Figure 1 being a perspective view, Fig. 2 a top plan view, and Fig. 3 a sectional view, taken in the line of *x x* of Fig. 2.

To enable others skilled in the art to construct and use my invention, I will proceed to describe it.

The general construction and use of lever-buckles are so well known that a description thereof is deemed unnecessary in this specification, and is therefore omitted.

In the drawings, A represents the metallic frame of a lever-buckle, which may be either cast or stamped from sheet metal, as desired, and according to the size and strength required. This frame is enlarged or made wider at its front portion, either on one or both sides, as may be preferred, whereby a recess, *e*, is formed therein, as clearly shown in Figs. 1 and 2.

B represents the tongue or lever, which is pivoted nearly midway of the frame A at *a*, as clearly shown in Figs. 1, 2, and 3. The front end of lever B is constructed as shown in Figs. 1 and 2, in which the lower portion is represented as being cut away or recessed, whereby two bearing-edges, *c* and *c'*, are provided to impinge upon and grip the strap D when the latter is properly inserted between the end of lever B and the inner front wall of frame A, as shown in Fig. 2, by which means the strap is more securely held and prevented from slipping.

C represents a piece of sheet metal of suitable size and form, which is also pivoted upon the same rod with B, and provided with holes for riveting or otherwise securing it to the shoe, skate, strap, or other article on which it is to be used. The inner front wall of frame A is beveled, as shown in Fig. 3, so that when the strap D is inserted and the lever B pressed down into position, as there shown, it shall be wedged in between said wall and the end of

lever B, and be thereby held firmly and securely in place, the length of lever B being such that when the strap is inserted said lever cannot be drawn or forced through the opening in frame A.

In lever-buckles as ordinarily constructed, especially when applied to shoes and skates, for which purposes they are generally used, it is found to be difficult to release them, for the reason that the strap is necessarily drawn up very tight; and the strap and buckle lying close down upon the shoe or other object, it is impossible to insert the finger under the lever B for the purpose of lifting or forcing it up, it of course being held down very tight by the pulling or drawing of the strap D thereon, and the tighter the strap is drawn the greater this difficulty becomes, and when superadded to this difficulty is that of the benumbed fingers of the operator the operation is rendered still more difficult. To obviate this evil I attach to the sides—one or both—of lever B, near its front end, the projections *b*, which are so formed as to fit within the recesses *e e* and project outward over the top of frame A, as shown in Fig. 2. These projections *b* thus constitute handles by which the lever B can be raised, and the strap at once released. If but one projection be provided, the thumb-nail, or a knife-blade, or any similar object can be readily inserted underneath it for prying up the lever B. If two are provided, they can be readily grasped between the thumb and finger, and the lever thus released; or, if too tightly held down to be thus raised, any suitable implement can be used to pry it up, as already described.

It is obvious that in making buckles with my improvements, especially those of small sizes, the lever B may be stamped or cut from sheet metal with the projections *b* thereon all in a single piece, the projections being suitably bent or curved, either at the time of cutting them out or by a separate operation thereafter, as may be most desirable. It is also further obvious that the recesses *e* in the frame A may be omitted in such cases, provided the projections *b* are made to spring up from the lever at a point within the line of its sides or edges, so as not to come in contact with the inner sides of frame A and prevent the lever from dropping down a sufficient dis-

tance to secure the strap. These, however, are mere modifications, which may be used to a greater or less extent, as may be found desirable, without at all affecting the nature or principle of my invention. By these means I am enabled to produce a buckle possessing all the advantages of the lever-buckle, and at the same time rendering it far more convenient to use and removing the objections which have hitherto prevailed with this class of buckles.

Having thus described my invention, what I

claim as new, and desire to secure by Letters Patent, is—

The projections or handles *b*, one or more, in combination with the tongue of a lever-buckle, substantially as and for the purpose herein set forth.

HENRY W. WARNER.

Witnesses:

ALMON BRAINARD,
JONA. M. MANN.