



# UNITED STATES PATENT OFFICE.

DWIGHT L. SMITH, OF WATERBURY, CONNECTICUT, ASSIGNOR OF ONE-HALF  
TO EARL A. SMITH, OF SAME PLACE.

## BUCKLE.

SPECIFICATION forming part of Letters Patent No. 523,550, dated July 24, 1894.

Application filed March 28, 1892; Serial No. 426,769; (No model.)

*To all whom it may concern:*

Be it known that I, DWIGHT L. SMITH, of Waterbury, in the county of New Haven and State of Connecticut, have invented a new Improvement in Buckles; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a front view of the buckle complete; Fig. 2, a rear view of the same; Fig. 3, an end view of the same; Fig. 4, a vertical section cutting on line  $x-x$  of Fig. 1; Fig. 5, the frame detached; Fig. 6, the lever detached; Fig. 7, the clip by which the frame is hinged to the lever; Fig. 8, the blank for the swinging jaw; Figs. 9 and 10, modifications.

This invention relates to an improvement in that class of buckles especially designed for suspenders, and in which the buckle is made from wire, having a depending hook, or similar device from the lower side to which the loop of the suspender ends may be conveniently attached, and particularly to that class in which a swinging frame is provided adapted to clamp the suspender strap against a presser-bar in the lever, the object of the invention being a simple construction, and one which will permit the convenient adjustment of the suspender-strap, and the invention consists in the construction as hereinafter described, and particularly recited in the claims.

The buckle-lever is made from wire, and is represented in Fig. 6. The wire is doubled at the center, the doubled portion bent to form the depending hook A, the two branches B C above the hook are bent to the right and left to form the lower side D, of the lever, thence the wire is turned upward to form the ends E E, and then bent inward to form the upper side F, parallel with the side D. Preferably a depression is made in the upper side F, by turning the branches of the wire downward toward the side D, as at G G, and thence inward about midway between the two sides F and D, as at H H, and so that the depressed portion of that side may form a presser-bar or support for the presser-bar. The frame

portion of the buckle is also made from wire, as seen in Fig. 5, the wire is doubled to form a loop I, corresponding to the hook of the lever, the two branches J K, bent to the right and left to form a side L, thence turned upward to form ends M M, and thence bent inward to form a side N, parallel with the side L, the ends of the wire meeting on the side N, that side is reinforced by the usual tube, as a means for securing the two ends together. The length of the sides of the frame corresponds substantially to the length of the sides of the lever.

Across the frame a clip-bar O, Fig. 7, is placed, the bar made from sheet metal, and the ends P P of the bar bent and closed around the ends M M of the frame about midway between the two sides L N of that frame, and so as to firmly secure the bar O, to the frame. The bar is constructed with downwardly projecting tongues Q, which are closed around the upper side F, of the lever, as seen in Figs. 1 and 2, and so as to hinge the frame to the lever. This hinges the frame to the side F, of the lever midway between the two sides L N, of the frame, and so that the side N, of the frame stands above the side F, of the lever, while the side D, of the frame stands below that side F, of the lever.

The relation of the loop I, of the frame to the hook A, of the lever, is such that when the frame is turned into a plane substantially parallel with the plane of the lever, the loop will pass over the hook from the front rearward, and the length of the loop upon the inside is slightly less than the downward projection of the hook, and so that as the loop passes over the bend of the hook, the frame will yield slightly, and so that the reaction will draw the bend of the loop up at the rear, and so as to interlock the hook and loop, but yet so that the loop may be readily withdrawn when it is desired to turn the frame from its normal position. The interlocking of the hook and frame as described, is a common device.

The presser-bar of the lever, as before described, stands midway between the two sides D E, of the lever, and so as to correspond substantially, to the lower bar D, of the frame.

On the presser-bar formed by the depres-

sions H H, of the lever, a jaw is provided, with which the lower side of the lever may co-operate, to engage the suspender when adjusted. As here represented this jaw is adapted to swing, and is made from sheet-metal, as represented in Fig. 8, its length corresponding substantially to the length of the depression formed in the upper bar of the lever, and by which depression the parts H H, are produced to form the presser-bar. The jaw is serrated upon one edge, and at the ends from that edge projecting tongues R, are formed, which are adapted to be bent around the projections H H, or presser-bar proper, and so that the jaw may swing thereon upon a hinge. The serrated edge is bent inward to form the part S, of the jaw, while the part T may serve as a handle by which the jaw may be turned upon the presser-bar or pintle H, to which it is hung, and so that the jaw may swing as from the position seen in Fig. 4, to the position in broken lines in the same figure.

The buckle is opened for the introduction of the suspender by drawing the frame forward, as indicated in broken lines Fig. 3, then the suspender is passed through from the rear below the upper side N, of the frame and over the bar O, thence returned over the lower bar L, of the frame below the presser-bar, and rearward through above the lower side of the lever, which brings the suspender between the presser-bar of the lever and the lower side L, of the frame, and as indicated by the broken lines U, Fig. 3, then the frame is returned, the lower side L, of the frame clamping the strap against the jaw of the presser-bar, and so as to hold the suspender firmly, the frame interlocking with the hook or lever below.

If in use, while the suspender ends are attached, it is desirable to readjust the suspender without detaching the ends from the trousers, the presser jaw may be turned upon its pintle, as represented in broken lines Fig. 4, so as to disengage the jaw from the suspender, and so that the suspender may be extended or contracted, and then the jaw returned.

While the swinging jaw of the presser-bar is desirable for the adjustment of the suspender, as described, it is not essential to the invention that the jaw of the presser-bar

should be adapted to swing. The swinging jaw may be omitted, and a stationary jaw applied to the depressed presser-bar of the lever, as seen in Figs. 9 and 10.

While it is preferred to construct the lever with a depending hook upon its lower side, and the frame with a corresponding depending loop upon its lower side, the hook may be on the frame and the loop on the lever, a common expedient in this class of buckles, too well known to require illustration.

I claim—

1. A buckle consisting of a lever and frame, the lever composed of two sides parallel with each other, and the frame also constructed with two sides substantially parallel with each other, the frame hinged to the lever at a point midway between the two sides of the frame, the side of the lever to which the frame is hung depressed to form a presser-bar midway between the two sides of the lever, and corresponding to the lower side of the frame, the presser-bar provided with a jaw adapted to impinge upon the one side of the suspender, while the lower side of the frame impinges upon the opposite side of the suspender, the lever and frame the one constructed with a depending hook and the other with a corresponding loop, substantially as described.

2. A buckle consisting of a lever and frame, the lever composed of two sides parallel with each other, and the frame also constructed with two sides substantially parallel with each other, the frame hinged to the lever at a point midway between the two sides of the frame, the side of the lever to which the frame is hung depressed to form a presser-bar midway between the two sides of the lever, and corresponding to the lower side of the frame, a jaw hinged to said presser-bar of the lever with its edge turned forward and corresponding to the lower side of the frame, substantially as and for the purpose described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

DWIGHT L. SMITH.

Witnesses:

H. L. SLAUSON,  
G. E. MINTIE.