(No Model.)

D. L. SMITH.

BUCKLE.

No. 385,578. Patented July 3, 1888.

Fig. 1

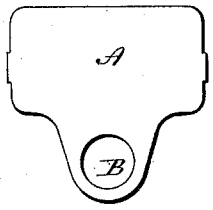


Fig. 2

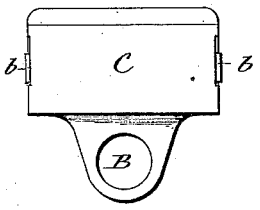


Fig. 3

Fig. 4

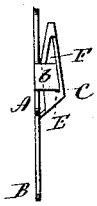


Fig. 5

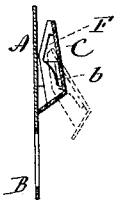


Fig. 6

Fig. 7

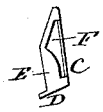


Fig. 8

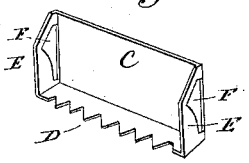
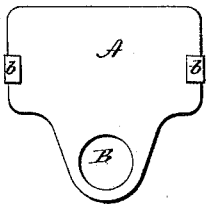


Fig. 9



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Inventor
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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. 385,578, dated July 3, 1888.

Application filed May 21, 1888. Serial No. 274,477. (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 under side view looking toward the jaw; Fig. 4, an end view; Fig. 5, a vertical central section; Fig. 6, a longitudinal section through the trunnions; Fig. 7, an end view of the jaw detached; Fig. 8, a perspective view of the jaw detached; Fig. 9, a rear view of the frame, the jaw removed.

This invention relates to an improvement in that class of buckles in which the frame is of tubular shape—that is, consisting of a front and back connected at their ends, so as to form a tube through which the strap passes. In the usual construction of this class of buckles an L-shaped lever or clamp is hung in either the back or front, and so that the jaw working within the tubular frame will engage or disengage the strap, accordingly as the lever is turned.

The object of my invention is to attain the advantages of the tubular frame, yet avoid to a very great extent the expense of making such tubular frame; and it consists in the construction as hereinafter described, and particularly recited in the claim.

A represents the frame, which in this illustration is the front of the buckle, and is provided at its lower edge with an eye, B, or other suitable means for attaching the braces, or whatever it may be desired to connect the buckle with. At each end of the plate ears *a a* are formed, which are turned backward at right angles to the plate, and then turned inward to form trunnions *b b*. (See Figs. 6 and 9.) C is the jaw-plate, which is made of substantially L shape in transverse section, the arm or side D serrated or otherwise constructed to suitably engage a strap which may be introduced through the buckle. The ends E E of the jaw-plate are turned inward at right angles, as seen in Fig. 8. The jaw-plate may be struck complete from a blank of sheet metal, or it may be cut from sheet metal and the ends and jaw portion bent into the required shape. The extreme length of the jaw-plate corresponds substantially to the distance between the ears *a a*. Through the ends E of the jaw-plate slots F are formed, through which the trunnions *b b* of the frame extend, as represented in Fig. 6, but so as to leave the jaw-plate C free to move thereon. The slots F are longer than the width of the trunnions *b*, so as to permit an up-and-down movement of the jaw-plate, as from the position in Fig. 5 to that seen in broken lines, same figure, and return.

The inner sides of the slots F are of cam shape, as seen in Fig. 7, but the outer side is substantially parallel with the plate C. Near the jaw the slots correspond in width to substantially the thickness of the trunnions; but toward the opposite edge of the jaw-plate the opening increases in width to produce the cam shape, as seen in Fig. 7, and so that, the parts being assembled as seen in Figs. 4 and 6, if the jaw-plate be raised to bring the narrower portion of the slots F to the trunnions, the jaw will be forced toward the front or plate A, as seen in Figs. 4 and 5; but if the jaw-plate be moved downward, as seen in Fig. 5, to take the broader portion of the slot to the trunnions, then the jaw-plate may be turned so as to throw the edge of the jaw away from the plate A, as seen in broken lines, Fig. 5. In this open condition the strap is passed through between the jaw-plate C and the plate A, as in tubular-frame buckles. Then the jaw-plate is moved upward, and in such movement the cam-shaped side of the slots F operates against the trunnions to force the jaw against the strap, and so as to clamp the strap between the edge of the jaw and the plate A, as represented in Fig. 5. This sliding movement is easily produced for the adjustment of the strap—that is to say, by holding the plate or frame A in one hand and pulling down upon the strap with the other hand, the engagement of the strap with the jaw necessarily takes the jaw downward into its disengaging position, in which position

the strap may be adjusted as desired, and then returned, as before described, to bring the jaw into engagement with it at the new point.

The jaw-plate forms a close back, and the plate A forms the usual front, corresponding to the front and back of a tubular buckle-frame, and so that the buckle possesses the smooth and finished character of a tubular buckle; but the buckle is produced at a very considerably less expense than a tubular buckle with the jaw-lever hung therein.

By the terms "front and back" and "up and down" I do not wish to be understood as indicating any positive position of the buckle, as the plate A may be the back and the jaw-plate the front, if desired; or the buckle may be inverted so as to bring the jaw above, should the use of the buckle require such position.

I claim—

The herein-described buckle, consisting of the frame or plate A, constructed with ears *a* at its ends, the said ears turned inward to form trunnions *b b*, combined with the jaw-plate C, of substantially L shape in transverse section, the ends E E of the plate turned inward at substantially right angles to the plate, and the said ends constructed with elongated slots F, the inner edge of the said slots of cam shape, the said jaw-plate arranged upon the plate A, with the trunnions *b b* of the said plate extending into said elongated slots F in the ends of the jaw-plate, substantially as described, and whereby the said jaw-plate is permitted a vertical movement on said trunnions, the said cam-shaped sides of the slots F operating, in connection with said trunnions, to force the jaw toward the plate A, or permit it to swing therefrom, according to the movement of said plate on said trunnions.

DWIGHT L. SMITH.

Witnesses:

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