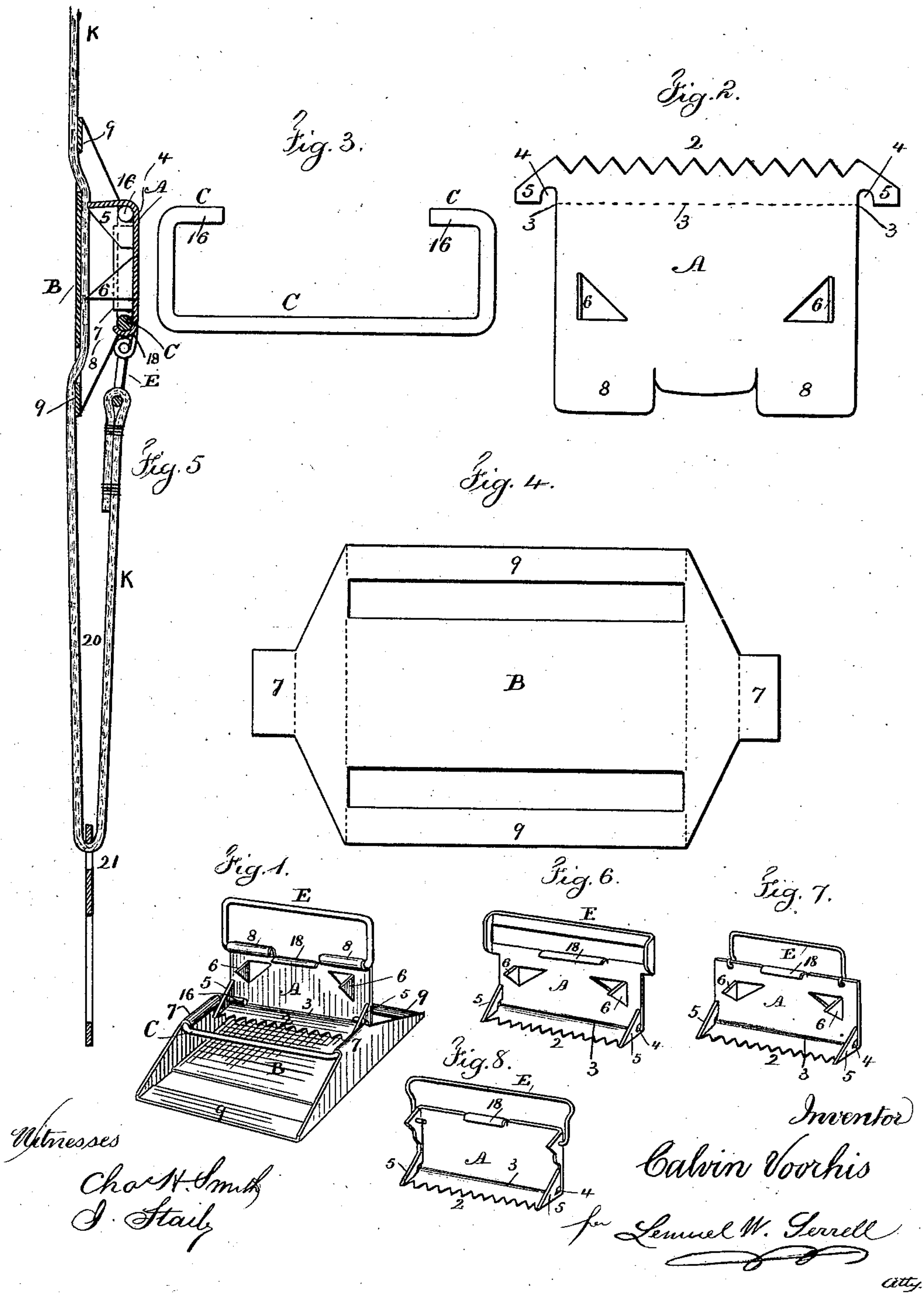


(No Model.)

C. VOORHIS.  
SUSPENDER BUCKLE.

No. 347,143.

Patented Aug. 10, 1886.





# UNITED STATES PATENT OFFICE.

CALVIN VOORHIS, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF AND  
ABRAHAM SHENFIELD, OF SAME PLACE.

## SUSPENDER-BUCKLE.

SPECIFICATION forming part of Letters Patent No. 347,143, dated August 10, 1886.

Application filed June 1, 1886. Serial No. 203,704. (No model.)

### *To all whom it may concern:*

Be it known that I, CALVIN VOORHIS, of the city and State of New York, have invented an Improvement in Suspender-Buckles, of which the following is a specification.

This buckle is especially adapted to suspenders; and the invention consists in the novel features of construction and combination, hereinafter set forth.

In the drawings, Figure 1 is a perspective view of the buckle complete as opened and without any suspender-webbing. Fig. 2 is a separate view of the clamping-lever. Fig. 3 is a detached view of the wire frame. Fig. 4 is a separate view of the blank plate for the body of the buckle. Fig. 5 is a sectional view of the buckle with the strap or suspender in it, Figs. 2, 3, 4, and 5 being in enlarged size, and Figs. 6, 7, and 8 are modifications of the clamping-lever and loop.

The lever portion A of the buckle is made of sheet metal cut out of the proper shape, with a row of teeth at 2, and it is bent at right angles at the line 3, so that the lever-plate A may be parallel, or nearly so, to the body-plate B, when the buckle is in use, and the teeth 2 will project into the fabric of the strap to hold the same. At C is the pivot-wire that is received into the angle or bend 3, and it passes through the notches 4 in the returned wings 5, that are cut out in the metal and extend beyond the ends of the row of teeth 2, and these wings are folded back at right angles to fill the end portions of the angle 3, and the edges of the metal adjacent to the holes formed by the notches 4 may be soldered to the inner face of the lever-plate A. This pivotal connection for the wire C, on which the lever A swings, is very strong.

The teeth 6 are made by triangular incisions in the plate A, the teeth being bent off at right angles to the plate, and of a length adapted to penetrate the fabric of the suspender; and, as the teeth are in line with the suspender-strap, they receive the strain edgewise of the sheet-metal, and hence are not liable to be bent, and said teeth come farther in upon the suspender-fabric than they do when the sheet metal at the edge of the lever is bent up to form such teeth as has heretofore been done.

The body B of the suspender-buckle is of

sheet metal, and it is cut out to shape, (see Fig. 4,) so as to be bent up at the sides into the form of a box, and the edges 7 7 of the sheet metal are rolled over to clasp and retain the rectangular wire frame c, that forms, at its ends 16, the pivots for the lever A, and at the opposite portion of this frame the wire C passes across from one of the sides of the body to the other, and beneath this wire the suspender fabric passes, and the parts 18 of the lever A are rolled over, so that when the lever A is closed down to clamp the suspender fabric the rolled-over parts 18 spring in below the wire C, and in so doing the buckle is held closed, and a portion of the strain upon the lever A is taken by the wire C, so that the strain is divided, and there is less strain upon the pivotal portions of the lever A.

In cases where the suspender-strap K is folded double, as at 20, for the suspender end or loop 21 to be connected thereto, I attach the other-wise loose end of the suspender-strap K to the loop E, which, in Figs. 1 and 5, is of wire, the ends of which pass into the rolled-over portions 8 of the lever A, and thereby the strain on the suspender-strap K and loop E tends to hold the lever A in place, and the loop E and the suspender-strap connected to the same aid in swinging the lever A open whenever the suspender-strap is to be loosened at the buckle.

The body B is slotted either above or below the pivots 16, or both, and these slots are for the suspender fabric to be passed through, and such fabric draws against the edges of the metal at the end cross-bars, 9 9, or either of them, when the strain comes upon the suspender-strap, thereby lessening the risk of the strap slipping through the buckle, and equalizing the strain.

If desired, the loop E may be formed of the sheet metal of the lever, as seen in Fig. 6, or the ends of the wire loop may be made as hooks or as eyes passing into or through holes in the sheet metal of the lever, as shown in Figs. 7 and 8, and when teeth are formed at the edges of the lever-frame, as in Fig. 8, the ends of the wire loop may pass through holes in such teeth.

In making the cross-bar or bars 9, it is preferable to have the sheet-metal connections between the ends of the bars and the body of the buckle sufficiently strong and to turn them up at right angles to the bar, (see Fig. 1,) so that



the buckle will be but little wider than the suspender-strap and the parts will be free from objectionable projections.

I claim as my invention—

5 1. The combination, with the buckle-body, of a clamping-lever of sheet metal bent at right angles at 3, and having a row of teeth, 2, and the wings 5 at the ends of the teeth, notched at 4 and bent up into the angle, and the pivot-wire 10 passing through the notches 4, substantially as specified.

2. The combination, with the body in a buckle, of a clamping-lever pivoted to the body and having triangular incisions and teeth bent 15 up in the sheet metal to take against the suspender fabric, substantially as set forth.

3. The combination, in a buckle, of a body turned up at the ends, and a wire frame clamped by the metal of the body and forming the pivots, the clamping-lever swinging upon such 20 pivots, and the rolled-over edge 18 to hook below and be supported by wire frame C, substantially as set forth.

4. The combination, in a buckle, of a body,

B, a clamping-lever pivoted to the body, and a 25 loop at the end of the clamping-lever to which the suspender is to be attached, substantially as set forth.

5. The combination, in a suspender-buckle, of a clamping-lever, a body to which the clamp- 30 ing-lever is pivoted, such body having one or more slots through which the suspender-fabric is to pass, substantially as set forth.

6. The combination, in a suspender-buckle, of a clamping-lever, a body to which the clamp- 35 ing-lever is pivoted, such body having a cross-bar at its top or bottom part, or both, with a slot or slots through which the suspender fabric passes, the sheet metal of the body and at the ends of the bars being bent up at right an- 40 gles, for the purposes substantially as set forth.

Signed by me this 29th day of May, A. D. 1886.

CALVIN VOORHIS.

Witnesses:

GEO. T. PINCKNEY,

WILLIAM G. MOTT.