(No Model.)

C. VOORHIS.

SNAP HOOK FOR SUSPENDER BUCKLES.

No. 345,819. Patented July 20, 1886.

Fig. 1.

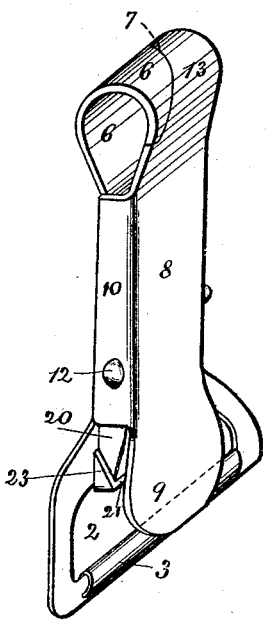


Fig. 2.

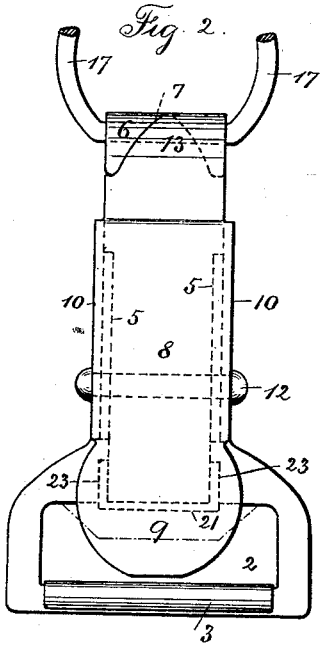
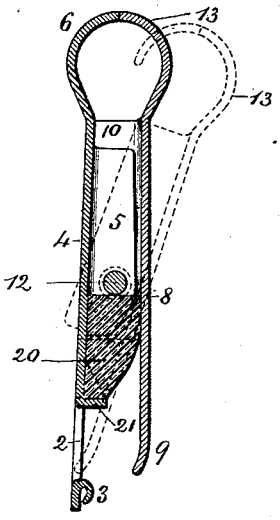


Fig. 3.



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UNITED STATES PATENT OFFICE.

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

SNAP-HOOK FOR SUSPENDER-BUCKLES.

SPECIFICATION forming part of Letters Patent No. 345,819, dated July 20, 1886.

Application filed April 23, 1886. Serial No. 199,890. (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 Snap-Hooks for Suspender-Buckles, &c., of which the following is a specification.

Hooks have heretofore been made for suspender-buckles in which there is a transverse slot for the reception of the suspender-end or the head to the same, and at the other end there is a rigid hook, into which is passed the ring or loop of the suspender-buckle, and this rigid hook has been closed by a swinging lever-plate that is acted upon by a spring. Under some circumstances the spring is liable to become bent or set so that it does not retain the plate in its proper position against the hook, and the ring or loop of the suspender-buckle is liable to become detached. I make use of a compound hook formed of two parts, each hook having an inclination at one edge, so that when the two inclined parts of the hook are brought together a complete catch is formed for the ring or loop upon the suspender-buckle, and should these two parts of the hook become partially separated the ring will tend to draw the parts together in consequence of the two parts of the hook catching in different directions upon the ring.

In the drawings, Figure 1 is a perspective view of the snap-hook complete. Fig. 2 is an elevation of the same, and Fig. 3 is a vertical section through the hooks. These figures are all in enlarged size.

The body of the hook is made of a metal plate having a mortise at 2 for the reception of the suspender end or strap, which passes around the bar 3 in the ordinary manner, and this metal plate forms the back 4 of the snap-hook, and there are side flanges, 5, bent up at right angles to the back 4, and the end of this plate terminates as a hook, 6, one edge of which is in a plane at right angles to the back 4, and the other edge of the said hook is in a diagonal line passing across from the point of the hook to the opposite edge of the back 4, as at 7.

The second portion of this snap-hook is a plate having a body, 8, with a thumb-piece, 9, at one end, side flanges, 10, that pass down outside of the flanges 5, and through which flanges the pivot-pin 12 passes. The end of this plate is formed as a hook, 13, the counterpart of the hook 6, one edge of said hook being in a plane at right angles to the plate 8, and the other edge of said hook is in a diagonal line passing across from the point of the hook to the other edge of the plate 8, so that said hooks 6 and 13 set together and form a loop adapted to the reception of a ring or loop upon the buckle or suspender. A portion of said ring or loop is represented at 17, Fig. 2.

When the thumb-piece 9 is pressed upon, the hook 13 is swung away from the hook 6, and a space is left between the two hooks for the insertion of the ring or loop 17.

Under the ordinary circumstances of use the ring or loop 17 catches in both the hooks 6 and 13, and the tension upon the suspender tends to close the hooks and draw them into the position shown in Figs. 1 and 2. It is, however, preferable to make use of a spring that tends to press the hooks together. Such spring may be a coil of wire around the pivot 12, with the diverging ends acting against the inner faces of the plate 4 and thumb-piece 9, respectively, such spring being similar to the spring made use of in snap-hooks and stocking-supporters; but I prefer to make use of a block of rubber, 20, held in place between the flanges 5 and the lip 21, that is formed by bending up a portion of the sheet metal in forming the mortise 2, and there may be triangular wings 23 at the ends of the lip 21, to steady the end of the rubber block at this part. This rubber block 20 is preferable to the coil-springs, as it acts upon the inner face of the plate 8 and thumb-piece 9, and it is not liable to be injured by the pressure upon the same.

I claim as my invention—

1. The combination, with the plate 4 and its hook 6, having a beveled edge, of the plate 8, hook 13, having a beveled edge and the respective flanges 5 and 10, and the pivot-pin 12, substantially as set forth.

2. The combination, in a snap-hook, of two

metal plates with flanges turned up on their edges, a pivot-pin passing through said flanges, interlocking hooks with diagonal edges at the ends of the plates, and a spring to close the hooks, substantially as set forth.

3. The combination, in a snap-hook, of two plates with flanges on their edges, a pivot-pin passing through the flanges, similar hooks with diagonal edges adjacent to each other, a block of rubber forming the spring, and the lips of sheet metal for retaining such block of rubber, substantially as set forth.

Signed by me this 20th day of April, A. D. 1886.

CALVIN VOORHIS.

Witnesses:
GEO. T. PINCKNEY,
WILLIAM G. MOTT.