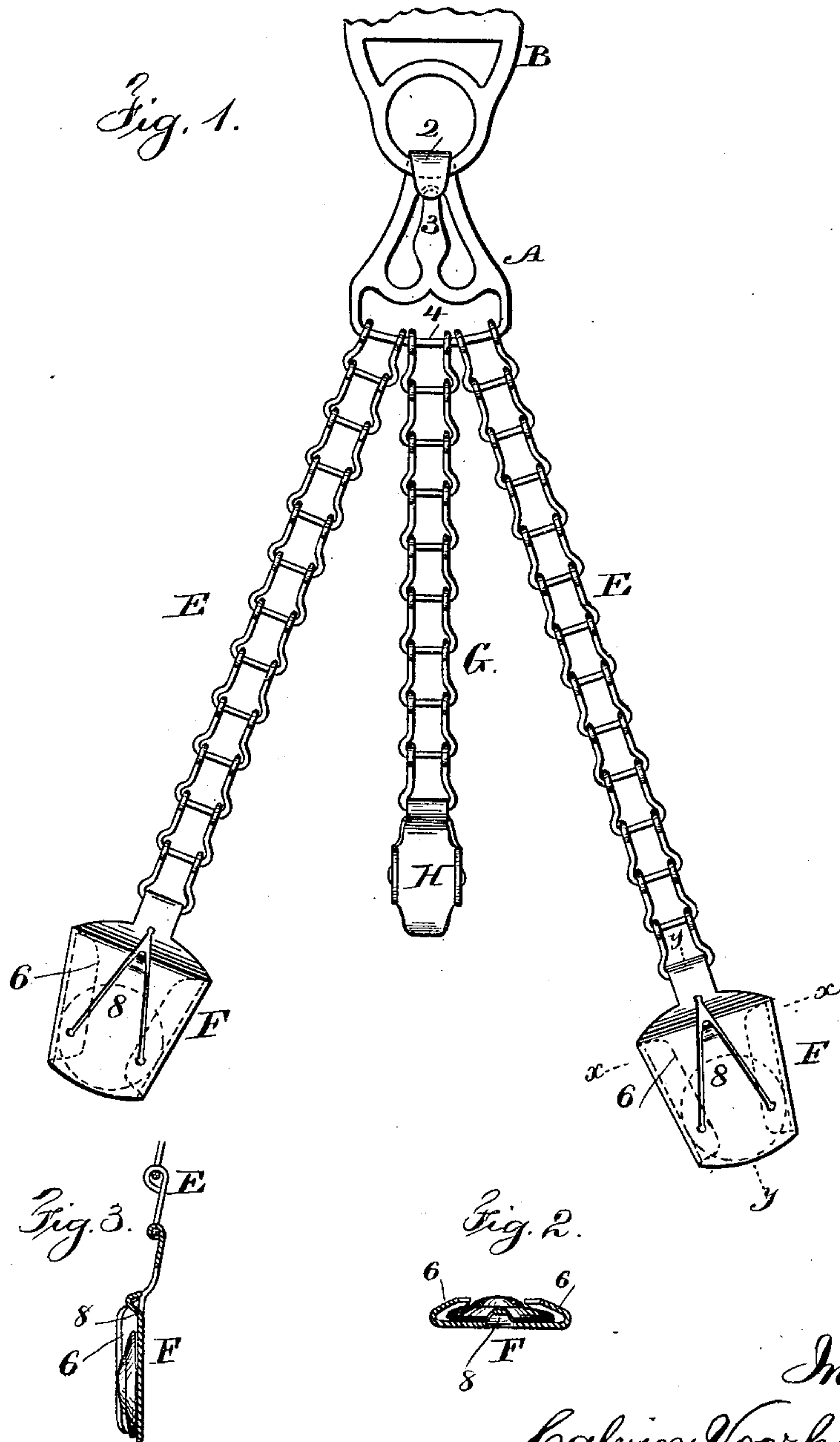


(No Model.)

C. VOORHIS.
SUSPENDER END.

No. 366,536.

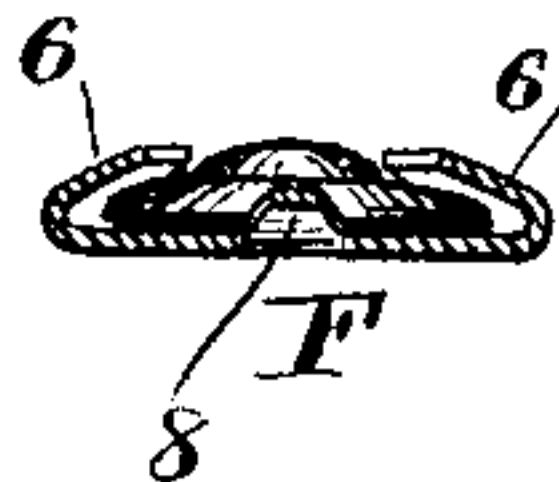
Patented July 12, 1887.



Witnesses

Chas. H. Smith
W. L. Serrell

Fig. 2.



Inventor

Calvin Voorhis.

For Lemuel W. Serrell

att.

UNITED STATES PATENT OFFICE.

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

SUSPENDER-END.

SPECIFICATION forming part of Letters Patent No. 366,536, dated July 12, 1887.

Application filed March 5, 1887. Serial No. 229,743. (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-Ends, of which
5 the following is a specification.

Suspender-ends have been made of cord, and also of chains, with button-hole loops at the ends of the cords or chains; but the button-hole loop or fastening is liable to turn partially around and the chain to twist; hence
10 the button-hole loop will not always occupy the correct position to the button.

My invention relates to a suspender-end made of wire, in the form of a ladder-chain,
15 that is connected by a metal loop at the upper end to the suspender buckle or fastening, so as to lie flat and not become twisted, and at the bottom end there is a spring-clip for grasping the button on the pantaloons.

20 In the drawings, Figure 1 is an elevation of the suspender-end formed with wire ladder-chains and sheet-metal button-clips at the lower ends. Fig. 2 is a cross-section at the line *x x*, and Fig. 3 is a section at the line *y y*.

25 At the lower end of the suspender-end is a loop or clip for the reception of the button, and at the upper end a connection for the buckle or other attaching device upon the suspender itself. These parts may be of any
30 desired character. I have, however, shown a clasp, A, connecting the upper parts of the suspender-ends to the suspender, which clasp is preferably cut out of sheet metal, with a hook, 2, to catch over a ring or loop upon the
35 buckle B, and with a spring-tongue, 3, that prevents the hook separating from the buckle until the tongue is pushed back and the cross-bar portion 4 receives the upper ends of the ladder-chains E, composing, with the button-
40 hole loops F, the suspender-ends, and it is usual to provide a third ladder-chain, G, and a loop or clasp, H, for grasping the band of the drawers.

45 In Letters Patent No. 221,474, granted November 11, 1879, a button-hole loop for a suspender-end is shown as made of a folded piece of flat braided cord received at its ends into a clasp of sheet metal. This may be used at the bottom of the ladder-chain suspender-ends;
50 but I have shown and prefer to use the sheet-metal button-clasp represented in the drawings, the same being an improvement upon that set forth in Letters Patent No. 353,893,

granted to G. W. Stewart December 7, 1886. In this sheet-metal button-clasp the wings 6, 55 that are folded over, form a tapering recess, into which the button passes, the widest end being upward, so that the clasp is drawn up over the button from below, and the tension of the suspender keeps the clasp, with the 60 button, toward the narrowest lower portion; but in some instances where the suspender-end becomes loose, from the person sitting down or leaning forward, the button-loop may slip down and become disconnected from the 65 button. To prevent this, I cut in the sheet metal two diverging slots, forming between them the spring-tongue 8, that can be set backwardly to any desired extent, so that the tongue presses against the face of the button 70 to hold the same by friction between the converging wings, and the extreme upper end of this tongue is to be bent outwardly, so that the point of the tongue will be inclined, and it will be pressed back by contact with the 75 button as the sheet-metal clasp is drawn up over the said button, and this tongue will spring back over or against the button to hold the same in position within the clasp.

It will be apparent that the peculiar chain 80 made use of by me is not liable to wind or twist, because there are two eyes at the upper end of each chain, that are closed around the cross-bar 4 and keep the chain in proper position, so as to lie flat against the clothing. 85

I claim as my invention—

1. The suspender attachment herein described, consisting of the spring-hook having a cross-bar, 4, at the lower part, the ladder-chains, each having its two end eyes around 90 the cross bar, and a clasp at the lower end for the button, substantially as specified.

2. The combination, in a suspender-end, of a button-hole loop of sheet metal, having the wings 6, that receive the button between 95 them, and the spring-tongue 8, with its upper end bent backwardly, to spring over the button and hold the same in position, substantially as set forth.

Signed by me this 24th day of February, 100 1887.

CALVIN VOORHIS.

Witnesses:

GEO. T. PINCKNEY,
WILLIAM G. MOTT.