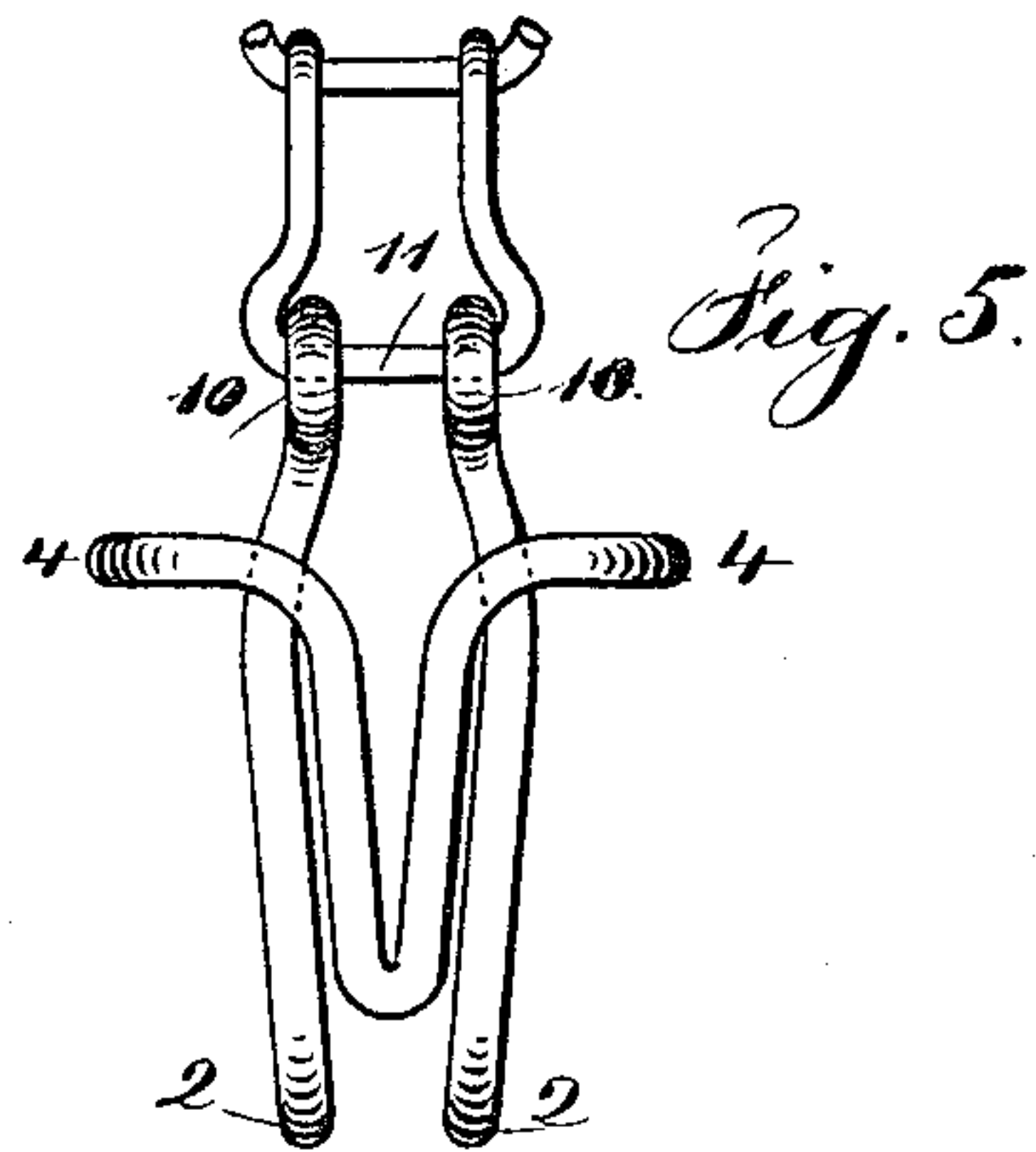
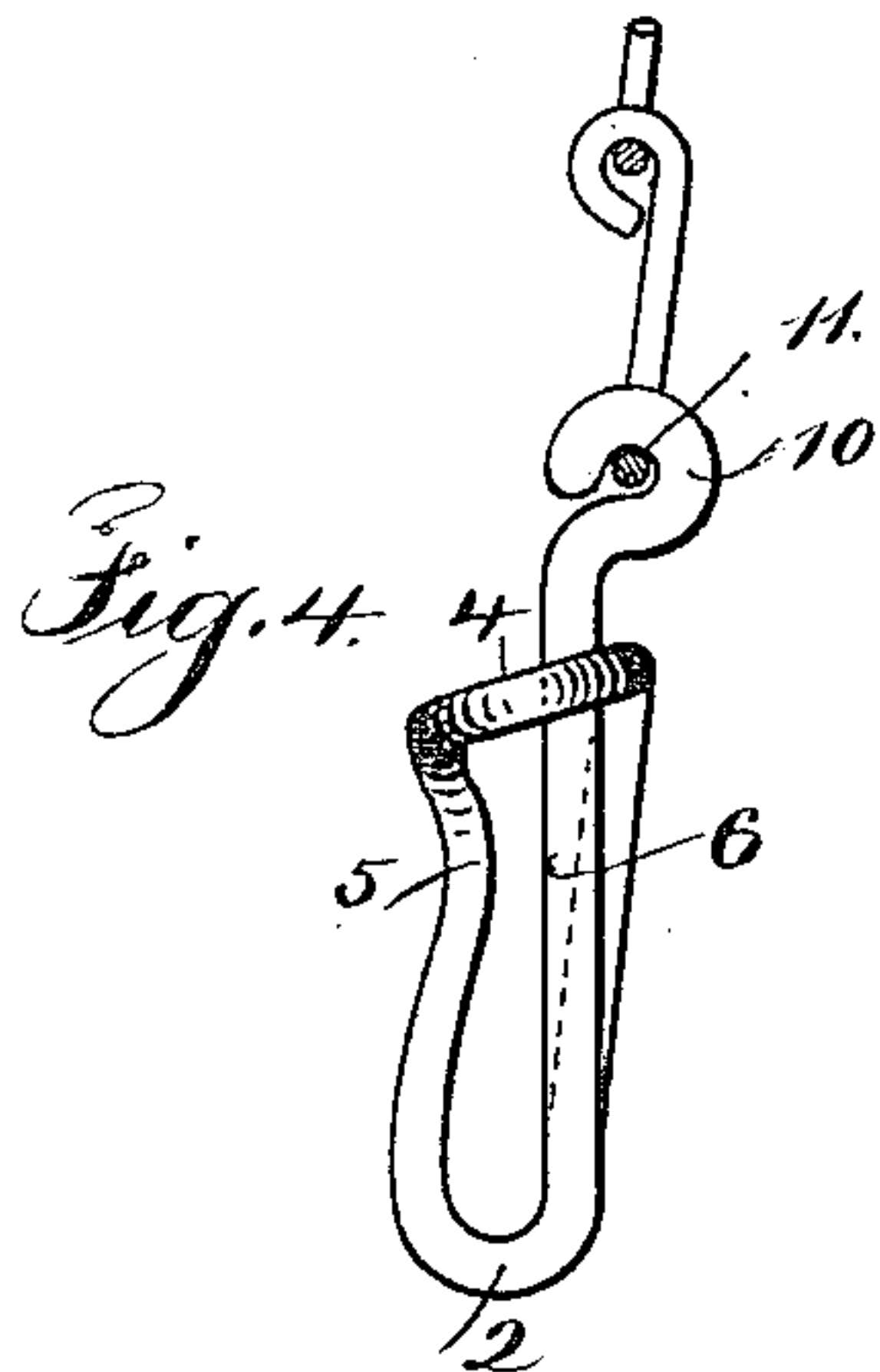
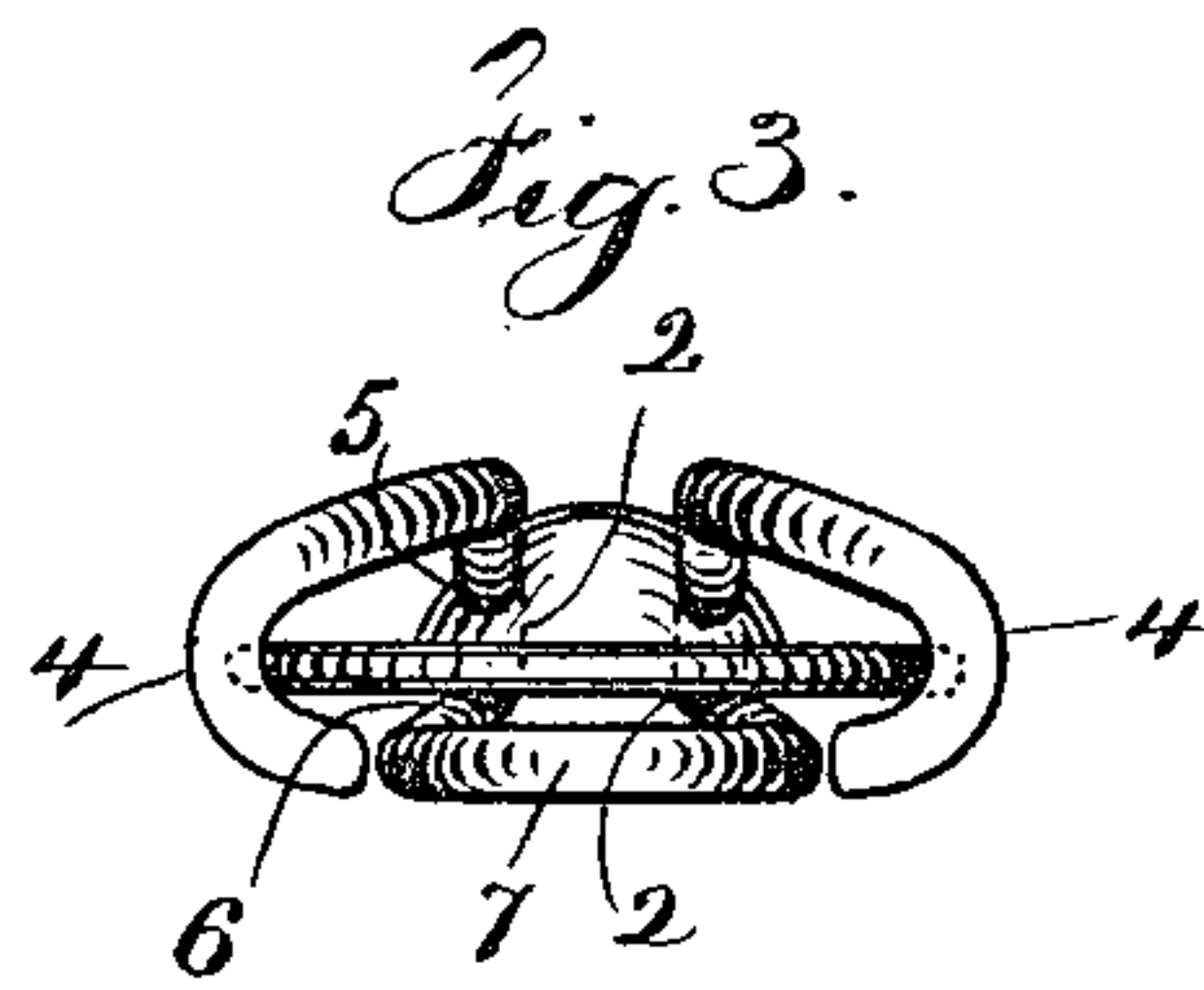
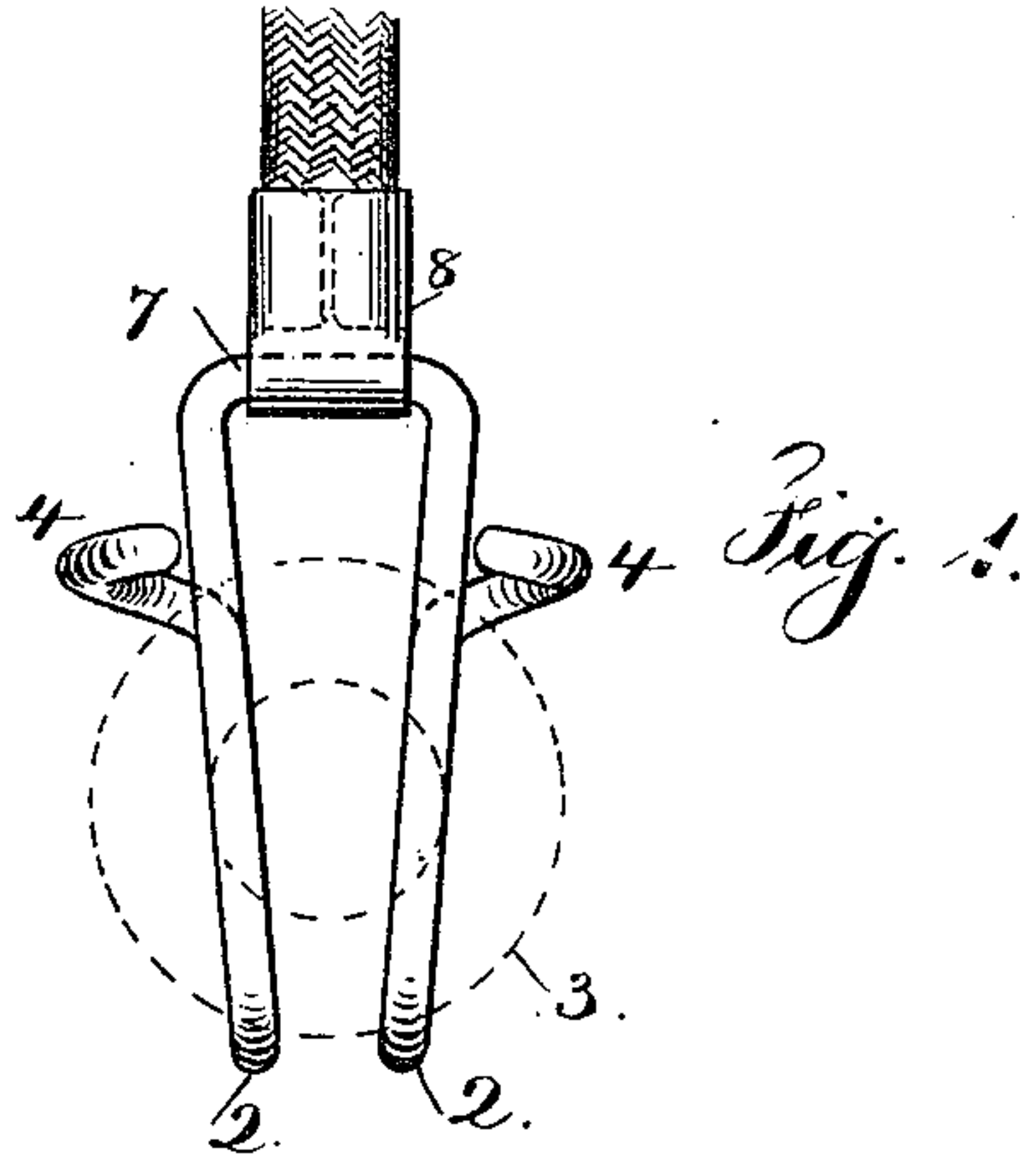
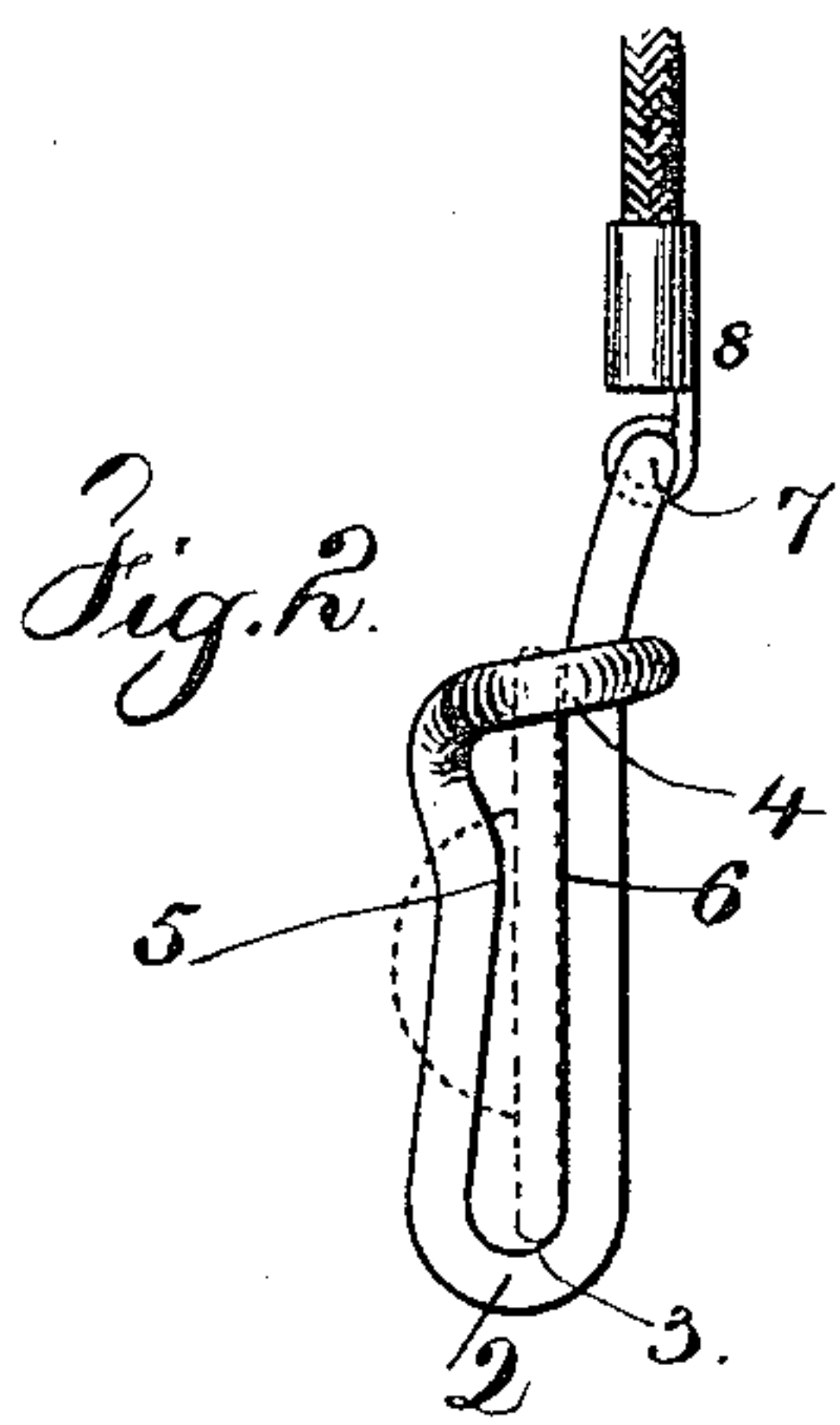


(No Model.)

C. VOORHIS.  
SUSPENDER END.

No. 362,684.

Patented May 10, 1887.



Witnesses

Chas. H. Smith  
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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. 362,684, dated May 10, 1887.

Application filed March 5, 1887. Serial No. 229,742. (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 Button-Loops for Suspenders, of which the following is a specification.

Loops have heretofore been made for buttons, in which a wire frame is employed having an opening in it sufficient for the button to pass through, the wire forming a loop that comes up in front of the button. This device, however, is not well adapted to suspender-ends, because it is liable to unhook from the button, and the wire presses against the threads by which the button is attached; hence they are liable to injury.

My present invention is made for the two-fold object of bearing against the edges of the button and of grasping the button with a spring-pressure, so that the button will not be liable to escape accidentally from the wire loop and there will not be any contact of the wire with the threads by which the button is attached.

In the drawings, Figure 1 is an elevation, and Fig. 2 is a side view, of my improved button-loop. Fig. 3 is a plan view of the same. Fig. 4 is a side view, and Fig. 5 an elevation, of my button-loop in a slightly modified form.

My button-loop is made of one piece of wire having two pendent loops at 2 2 for the reception of the button, which is above them, as indicated by dotted lines at 3. Thereby such button rests at its lower edges upon the wire itself, and there is little or no strain of the wire against or upon the threads or other devices for fastening the button to the garment, and the ends of the wire loop are spread outwardly and turned around horizontally toward each other, forming nearly horizontal hooks 4, that are closer together than the diameter of the button; hence as this button-loop is drawn over the button the hooks 4 will be sprung apart to allow the button to pass through, and as they spring back they will close sufficiently to prevent the button slipping out accidentally; and to aid in holding the button in its proper position the wire of the loop is bent backwardly, as seen in Fig. 2, so that the space between the parts 5 and 6 of the wire is slightly less than the average thickness of the suspender-buttons, so that these parts 5 and 6 will apply a slight friction to the front and

back surfaces of the button, to hold the same and prevent the button slipping out accidentally.

It is usually preferable to attach the suspending device to the middle part, 7, of the wire forming the spring button-loop, and this suspending device may be a sheet-metal clip, connecting the loop to a chain or to a flexible suspender-end of any desired character. Such a clip is shown at 8, with a hooking end that can be passed around the wire at 7 and closed in to receive and hold the same.

It is to be understood that, if desired, the ends of the wire may be bent, as eyes 10, in place of the cross portion 7, and that such eyes 10 may receive the cross-piece 11 of a ladder-chain forming a suspender-end. In this case it will be necessary to bend the middle portion of the wire downwardly between the hook portions 4, so that the center part of the wire will possess the proper spring to allow the hooks 4 to open for the reception of the button or when being separated from such buttons. This modification of my wire spring button clip is shown in Figs. 4 and 5.

I claim as my invention—

1. The button-loop of wire having the loops 2, to receive the edges of the button, and the hook-shaped portions 4, that are nearer together than the diameter of the button and spring apart for the passage of such button, substantially as set forth.

2. The button-loop of wire having the loop portions 2, to receive the edge of the button, and the portions 5 of the wire loops being curved toward the portions 6, so as to apply friction to the front and back of the button for holding the same, substantially as set forth.

3. The combination, in a wire button-loop, of the loop portions 2, against which the edges of the button rest, the hook portions 4, that are sprung apart by the passage of the button, and the portions 5 and 6, that apply friction to the front and back of the button, substantially as specified.

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

CALVIN VOORHIS.

Witnesses:

GEO. T. PINCKNEY,  
WILLIAM G. MOTT.