

No. 682,172.

Patented Sept. 10, 1901.

W. H. CHADDOCK.  
PINCH COCK.

(Application filed Mar. 21, 1900.)

(No Model.)

Fig. I

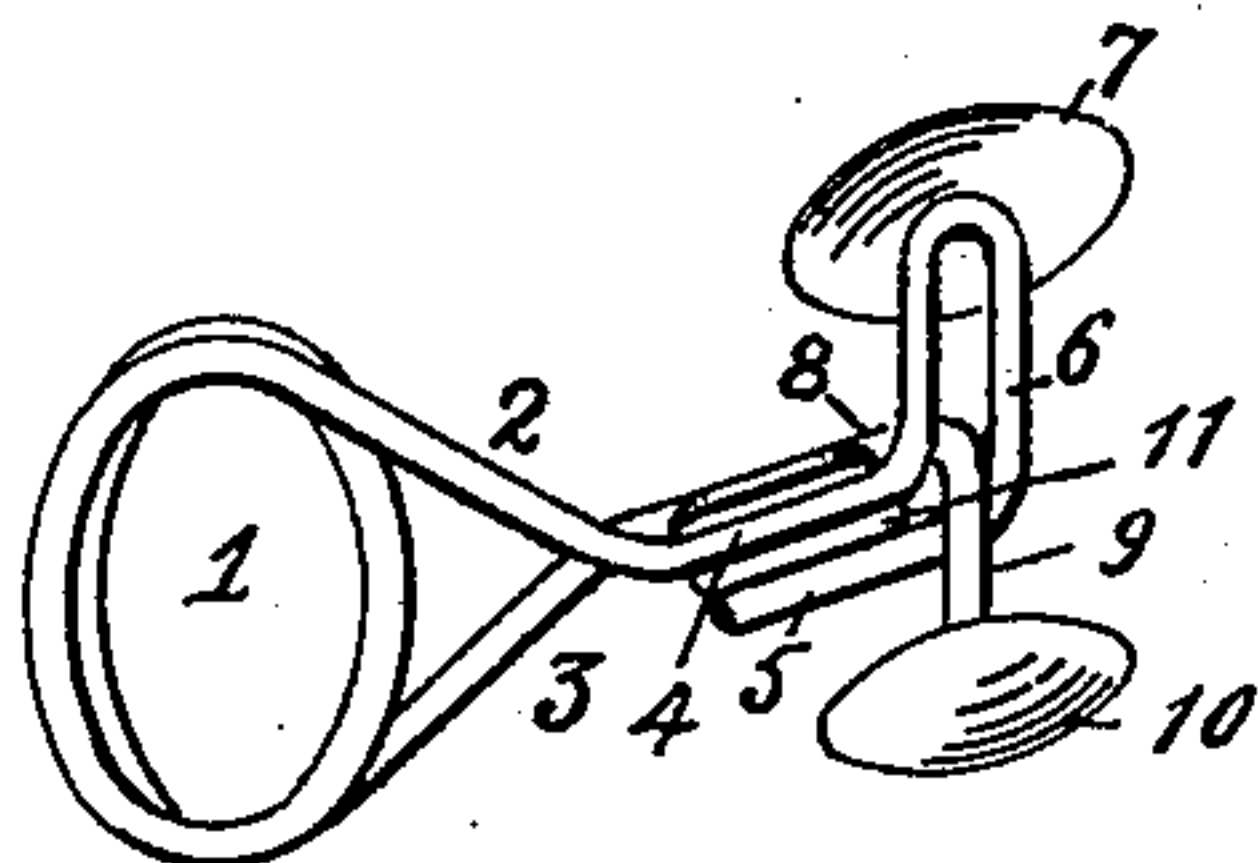


Fig. II

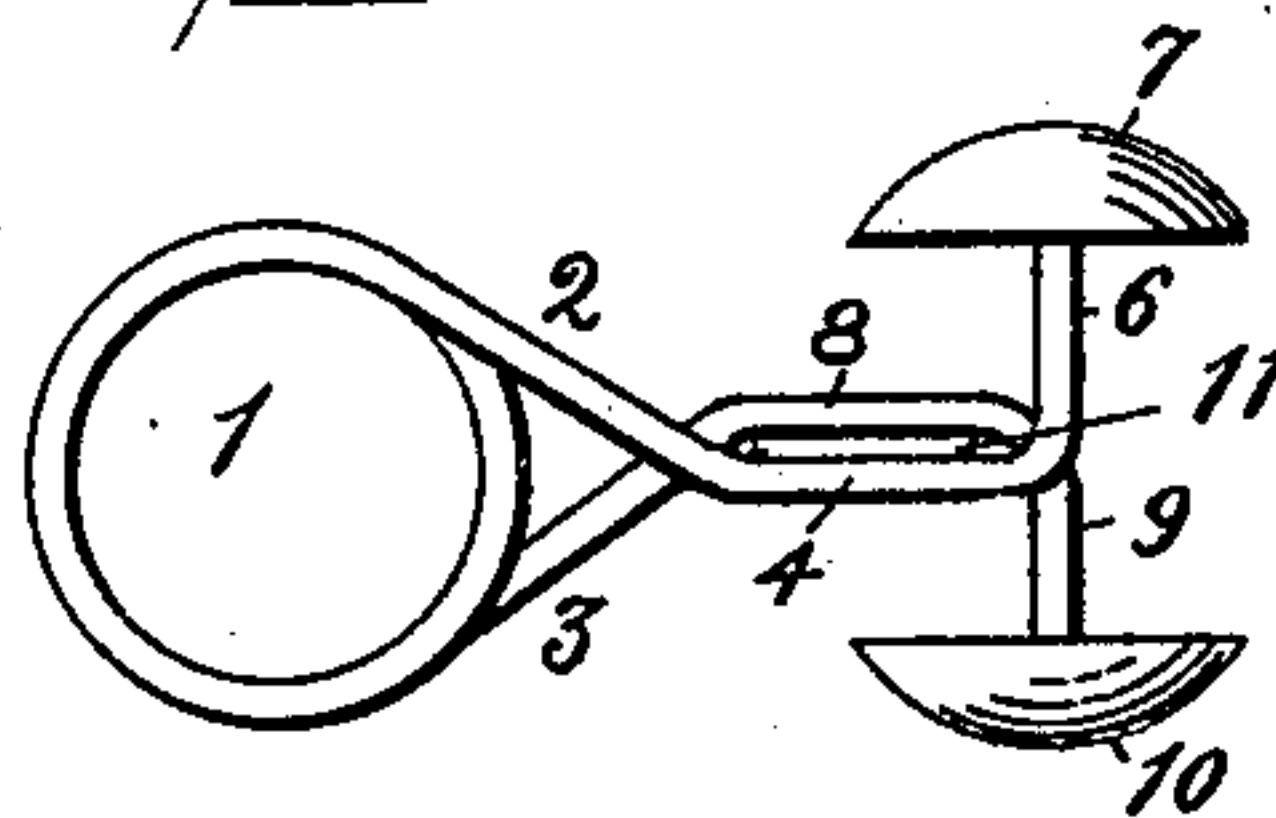


Fig. III

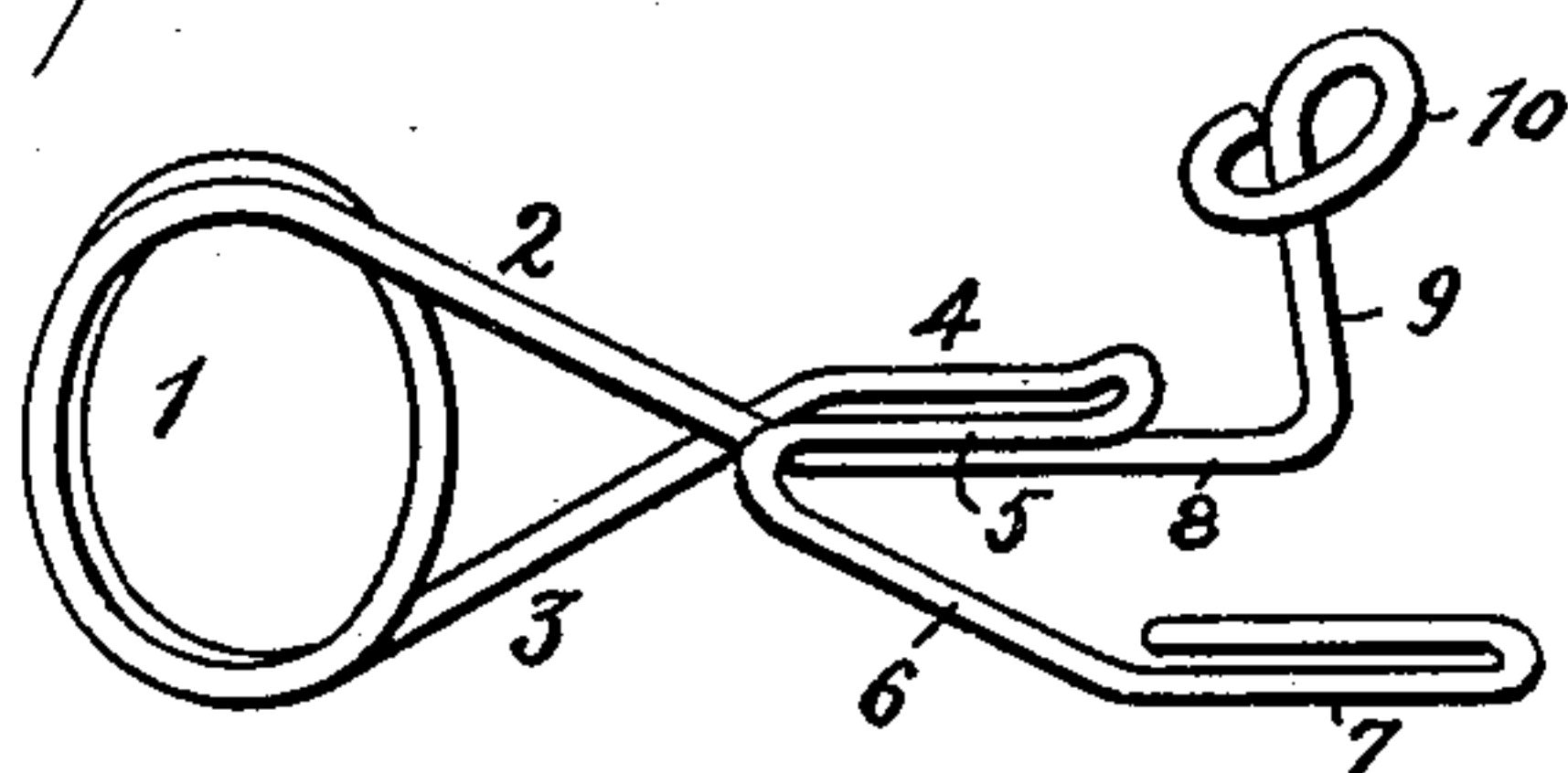


Fig. IV

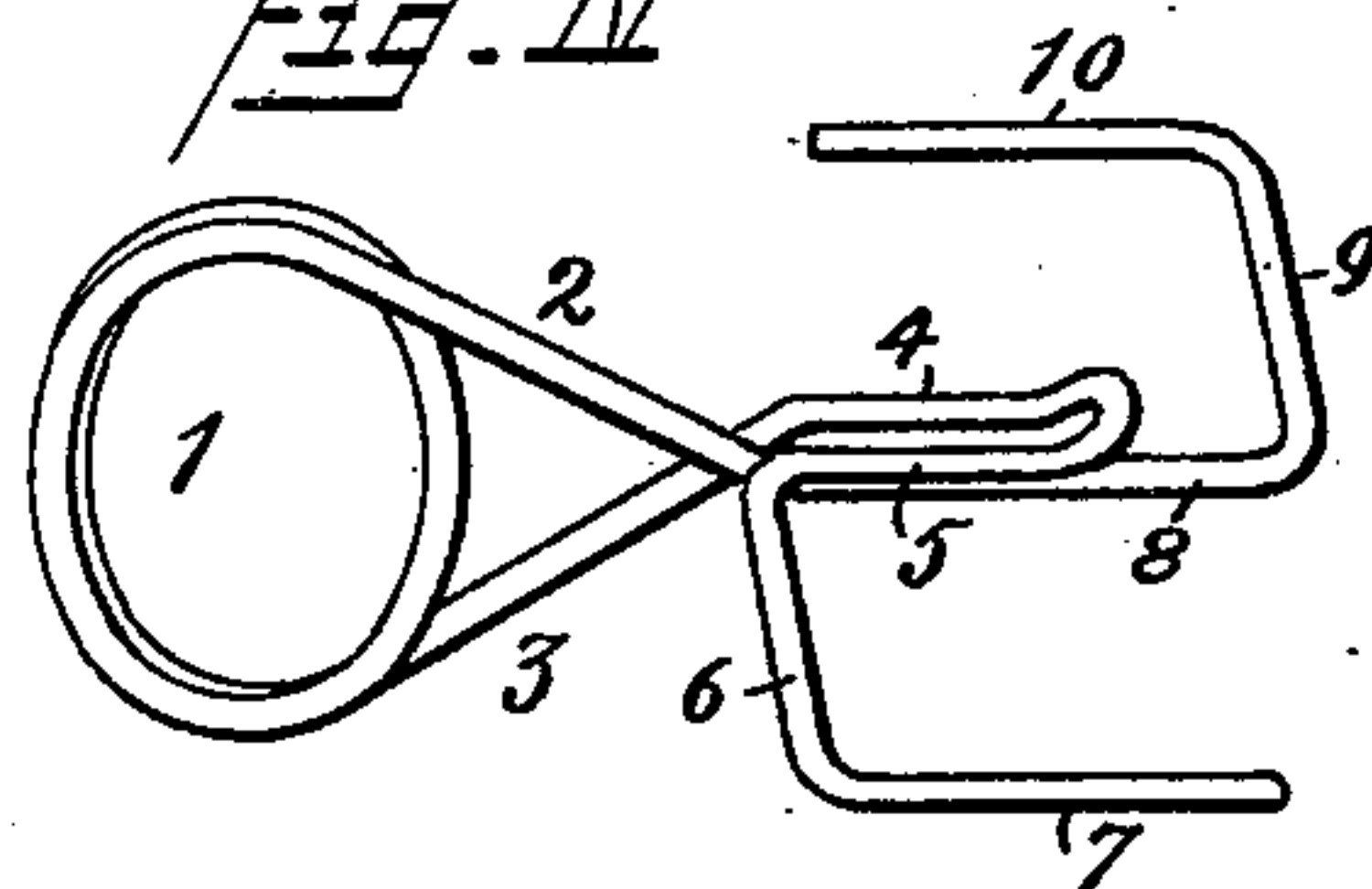


Fig. V

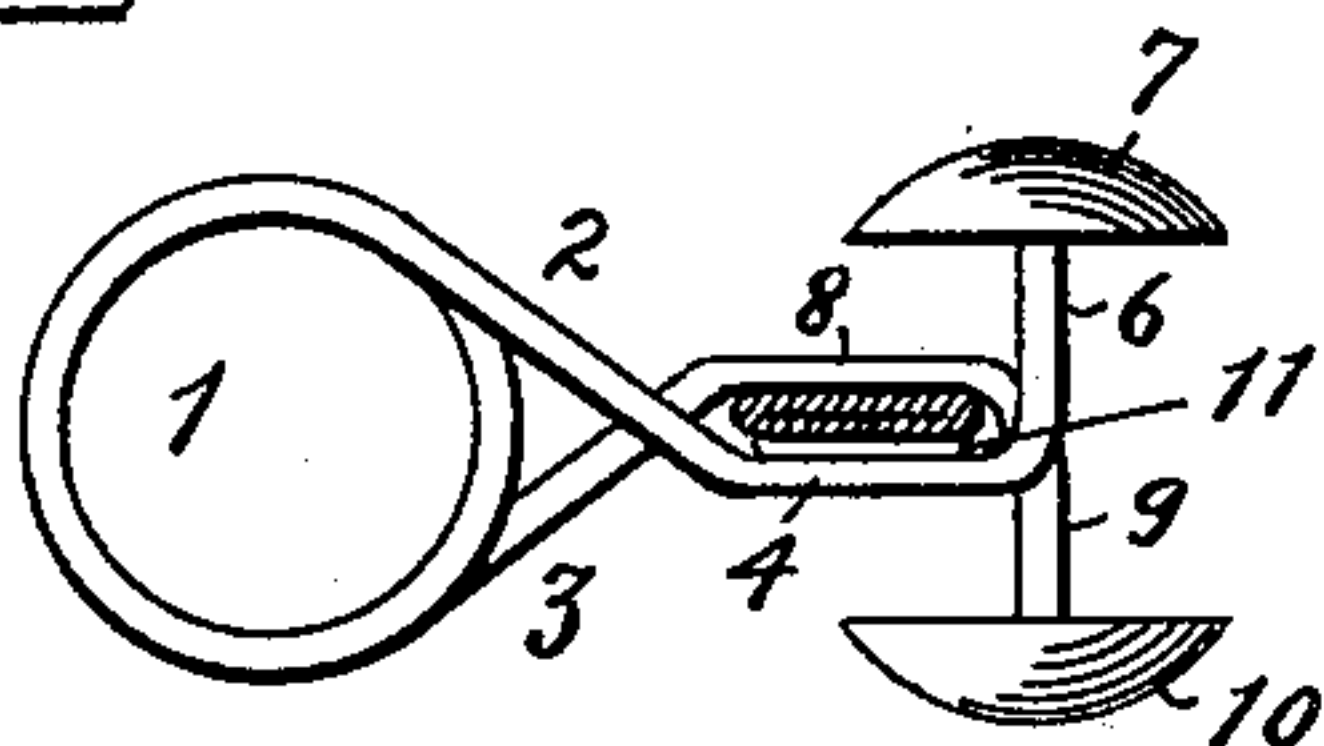


Fig. VI

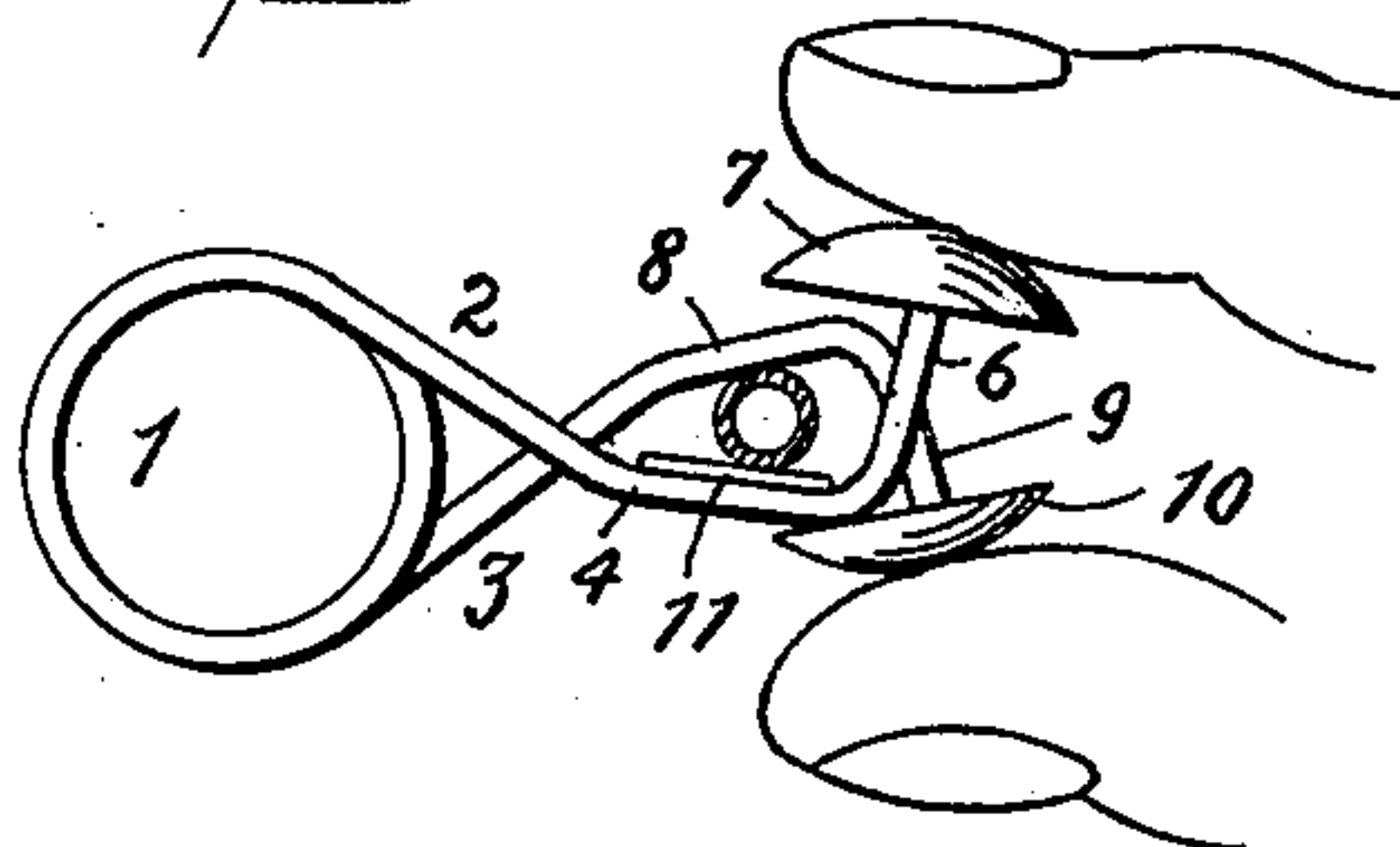
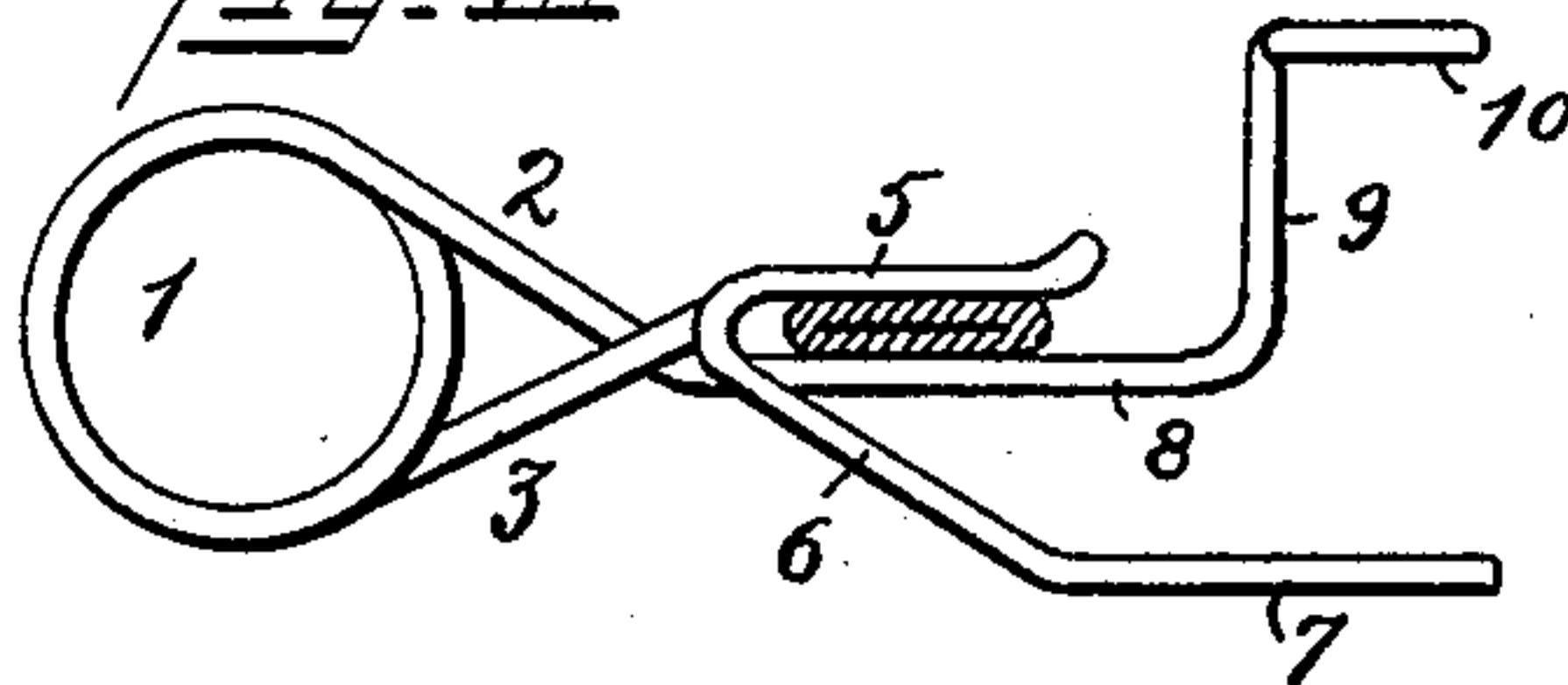


Fig. VII



Witnesses:

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# UNITED STATES PATENT OFFICE.

WILLIAM H. CHADDOCK, OF ALLEGAN, MICHIGAN.

## PINCH-COCK.

SPECIFICATION forming part of Letters Patent No. 682,172, dated September 10, 1901.

Application filed March 21, 1900. Serial No. 9,514. (No model.)

*To all whom it may concern.*

Be it known that I, WILLIAM H. CHADDOCK, a citizen of the United States, and a resident of Allegan, county of Allegan, and State of Michigan, have invented certain new and useful Improvements in Pinch-Cocks, of which the following is a specification, the principle of the invention being herein explained and the best mode in which I have contemplated applying that principle, so as to distinguish it from other inventions.

The annexed drawings and the following description set forth in detail one mechanical form embodying the invention, such detail construction being but one of various mechanical forms in which the principle of the invention may be used.

In said annexed drawings, Figure I represents a perspective view of one form of my improved pinch-cock; Fig. II, a side view of the same; Fig. III, a perspective view of another form of the pinch-cock; Fig. IV, a perspective view of still another form of the pinch-cock; Fig. V, a side view of the first form, illustrating it as clamping a piece of rubber tubing, which is shown in section; Fig. VI, a similar view showing the device pressed together to open the pinching-jaws; and Fig. VII, a side view of the form illustrated in Fig. III, illustrating it as clamping a piece of rubber tubing.

The form illustrated in Figs. I, II, V, and VI consists of a spring-loop 1, formed by a wire coil and having its ends 2 and 3 crossing each other. The end 2 is carried straight out and doubled upon itself to form two parallel jaw portions 4 and 5 and bent at a right angle to form a shank 6, upon which a finger-piece 7, in the present case a metallic button, is secured. The other end 3 of the loop is carried to form a straight jaw portion 8, which extends between the doubled portion of the other end of the wire and acts in opposition to the jaw portions of the same, whereupon it is bent at a right angle to form a shank 9, upon which a finger-piece 10 is secured, likewise a metallic button. A plate 11 is secured by soldering or otherwise to the parallel jaw portions to prevent the opposed jaw portion from slipping through between them and for the purpose of forming a facing for that jaw of the pinch-cock. When the two finger-

pieces are clasped between the fingers and compressed, as illustrated in Fig. VI, the jaws are spread apart against the tension of the spring-coil, and the rubber tubing may be inserted between the jaws, or after the pinch-cock is in place upon the tube the tube may open to permit the passage of the fluid conveyed by it. When the finger-pieces are released, the jaws will close by the expanding force of the spring-coil clamping and compressing the walls of the tube, and thus closing the passage through the same.

In the forms illustrated in Figs. III, IV, and VII the shank is formed from the end of the wire of the doubled jaw portions, and the finger-pieces are formed from the ends of the shank-wires. In the form shown in Figs. III and VII the shank of the double jaw is bent obliquely forward and then bent straight out and doubled back upon itself to form the finger-piece, and the finger-piece of the single jaw is formed by making a loop on the wire of the shank and then bending such loop forward at a right angle to the shank. In the form shown in Fig. IV the finger-piece is a straight piece of wire bent at a right angle to the shank. In said two latter forms the jaws are opened in the same manner as in the first-described form; but the end of the doubled jaw is unobstructed, so that the tube may be slipped in between the jaws under the end of said doubled jaw. If the wire forming the pinch-cock is sufficiently stiff or less elasticity is desired, the coil may be omitted and a simple wide loop or half-coil formed upon the wire. As the jaws are closed by the expansion of the coil said jaws will have a quick and efficient action, which is superior to the action of jaws closing by the contraction of a coil or loop which is liable to become weakened by use. The opening of the jaws by the compression of the finger-pieces is more convenient than opening the jaws by separating the finger-pieces.

The entire pinch-cock is formed from one piece of wire, so that it will be strong and durable and of simple construction. The parts of the pinch-cock cannot separate nor become loose, as it is formed from one integral piece of wire.

Other modes of applying the principle of my



invention may be employed for the mode herein explained. Change may therefore be made as regards the mechanism thus disclosed, provided the principles of construction set forth, respectively, in the following claims are employed.

I therefore particularly point out and distinctly claim as my invention—

1. A pinch-cock formed from a piece of spring-wire coiled to form a spring-loop 1 having one end 2 doubled upon itself to form a straight jaw portion 4 5 and bent to form a shank 6 having a finger-piece 7, and having the other end 3 crossing said end 2 and bent to form a straight jaw portion 8 and a shank 9 having a finger-piece 10, substantially as set forth.

2. A pinch-cock formed from a piece of

spring-wire coiled to form a spring-loop 1, having one end 2, doubled upon itself to form a straight jaw portion 4 5, and bent to form a shank 6, having a finger-piece 7, secured upon it, and having the other end 3, crossing said end 2 and bent to form a straight jaw portion 8, and a shank 9, having a finger-piece 10, secured upon it, and a jaw-plate 11, secured upon the parallel pieces 4 5 of the jaw portion, substantially as set forth.

In testimony that I claim the foregoing to be my invention I have hereunto set my hand this 14th day of February, A. D. 1900.

WILLIAM H. CHADDOCK.

Witnesses:

M. J. DEERY,

JOSEPH F. PRENDERGAST.