

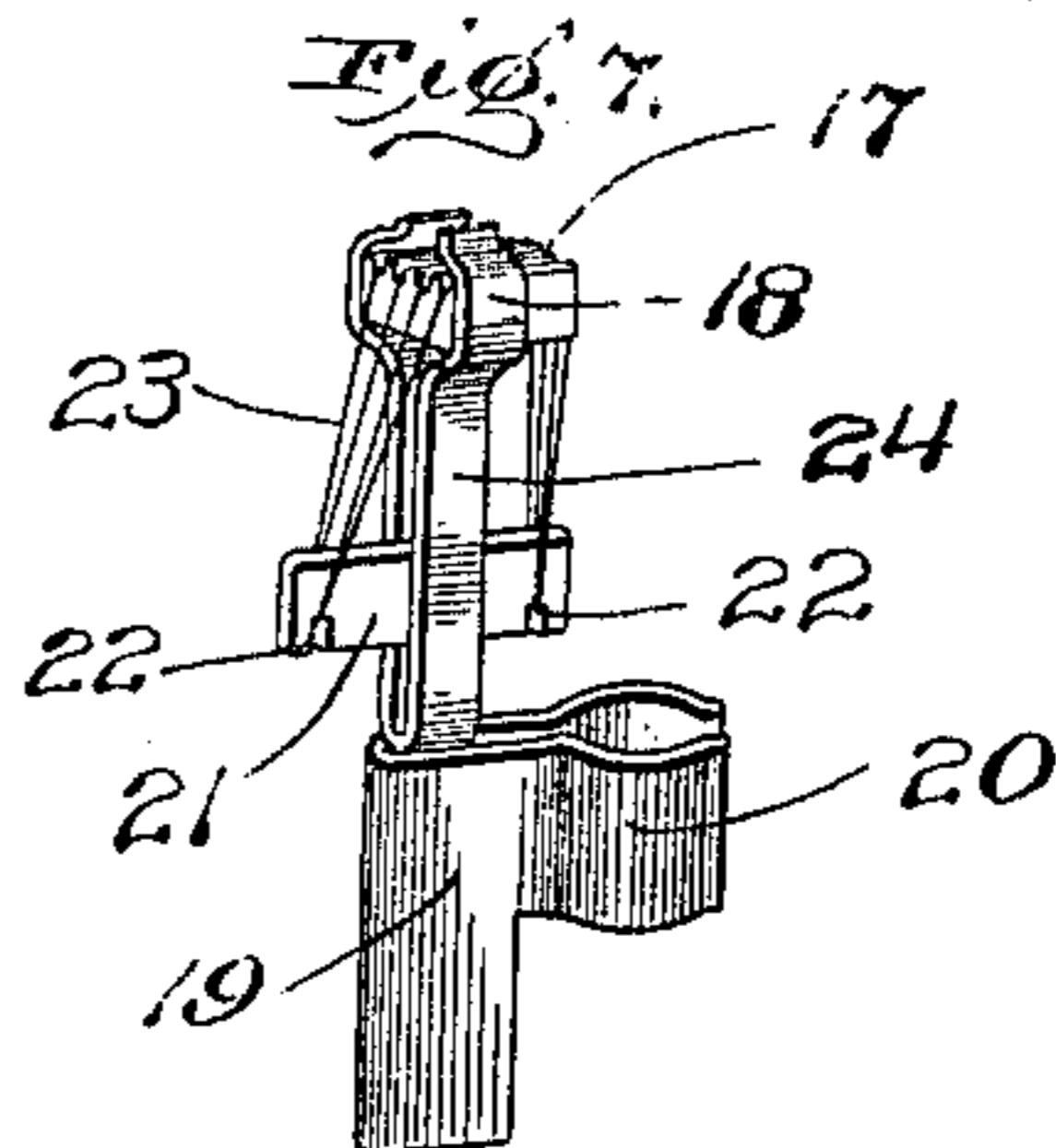
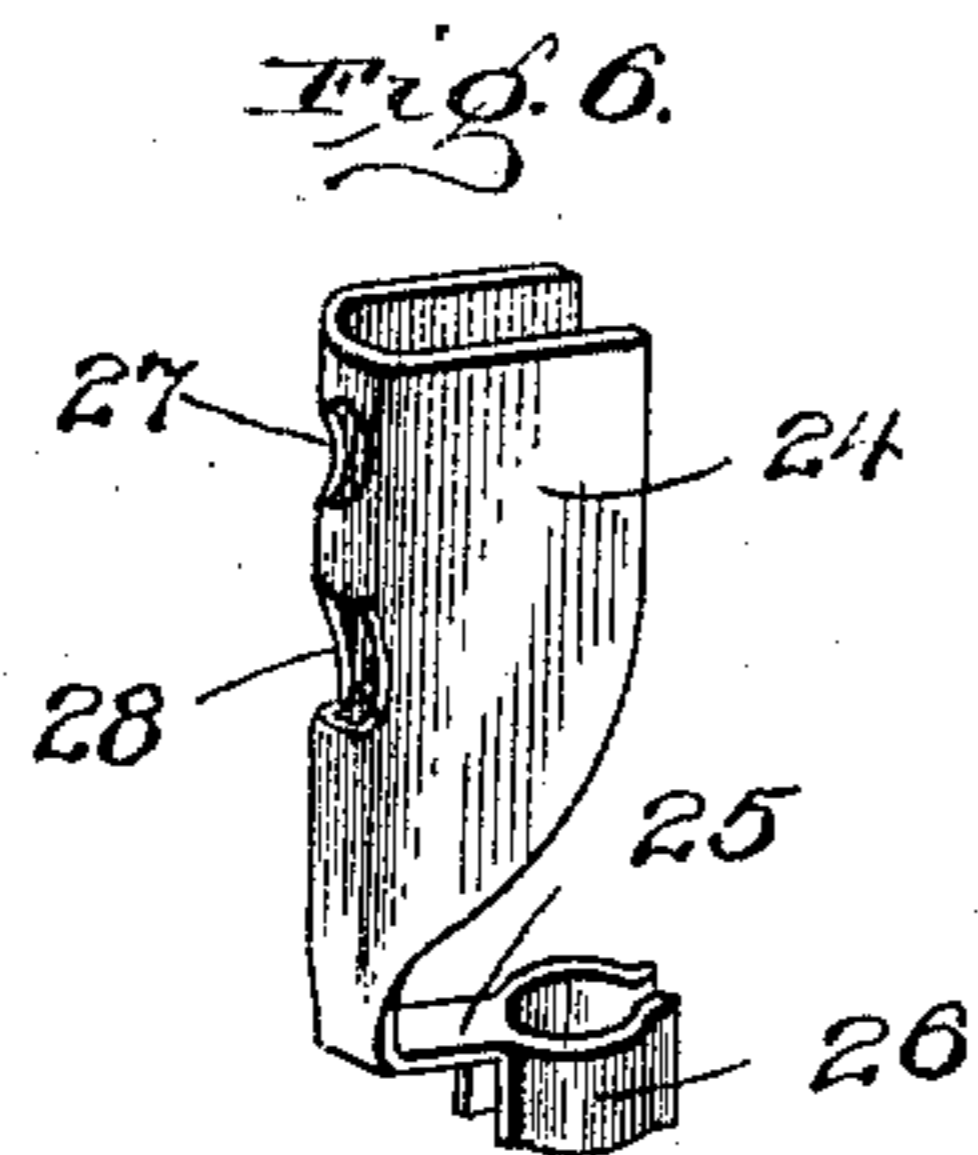
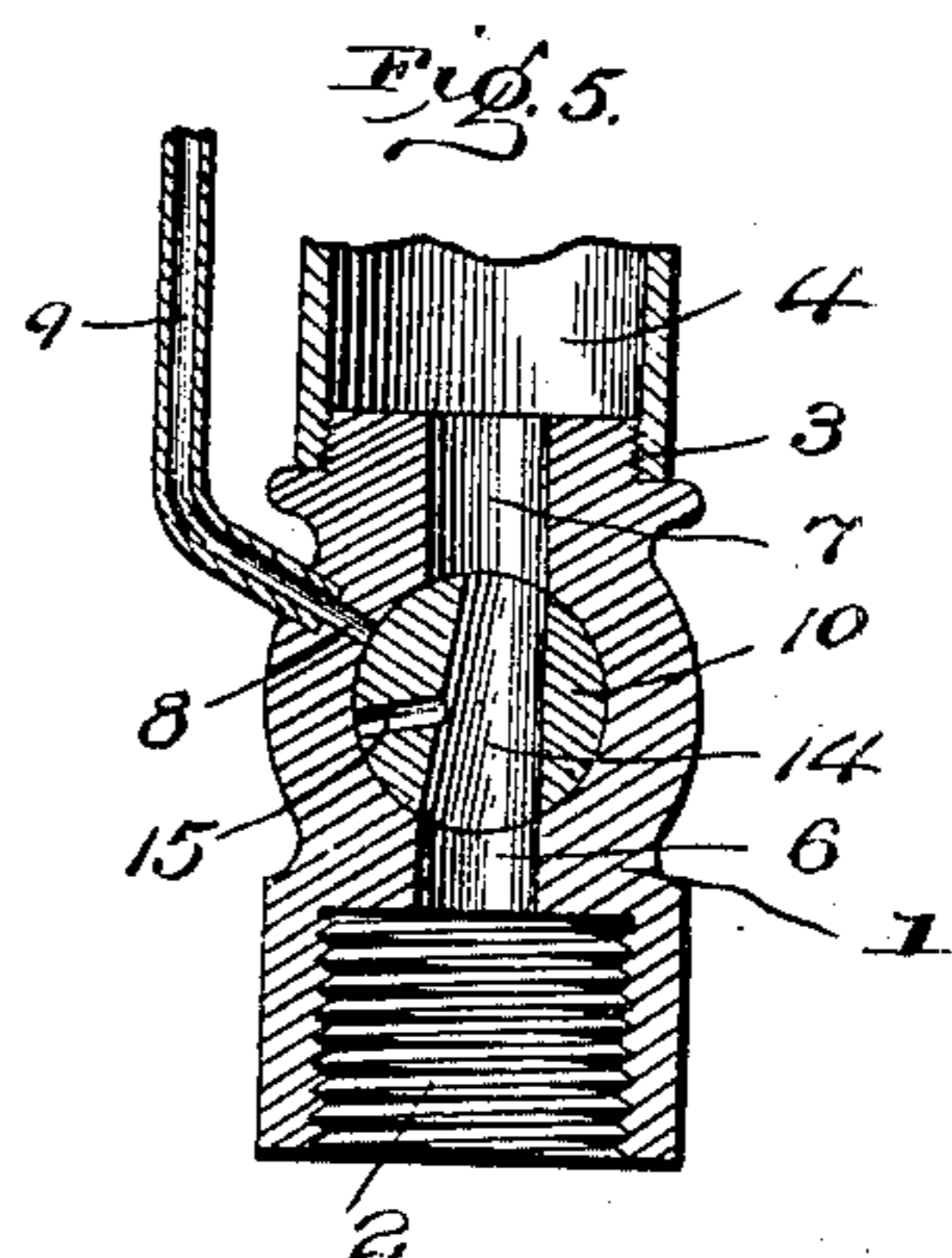
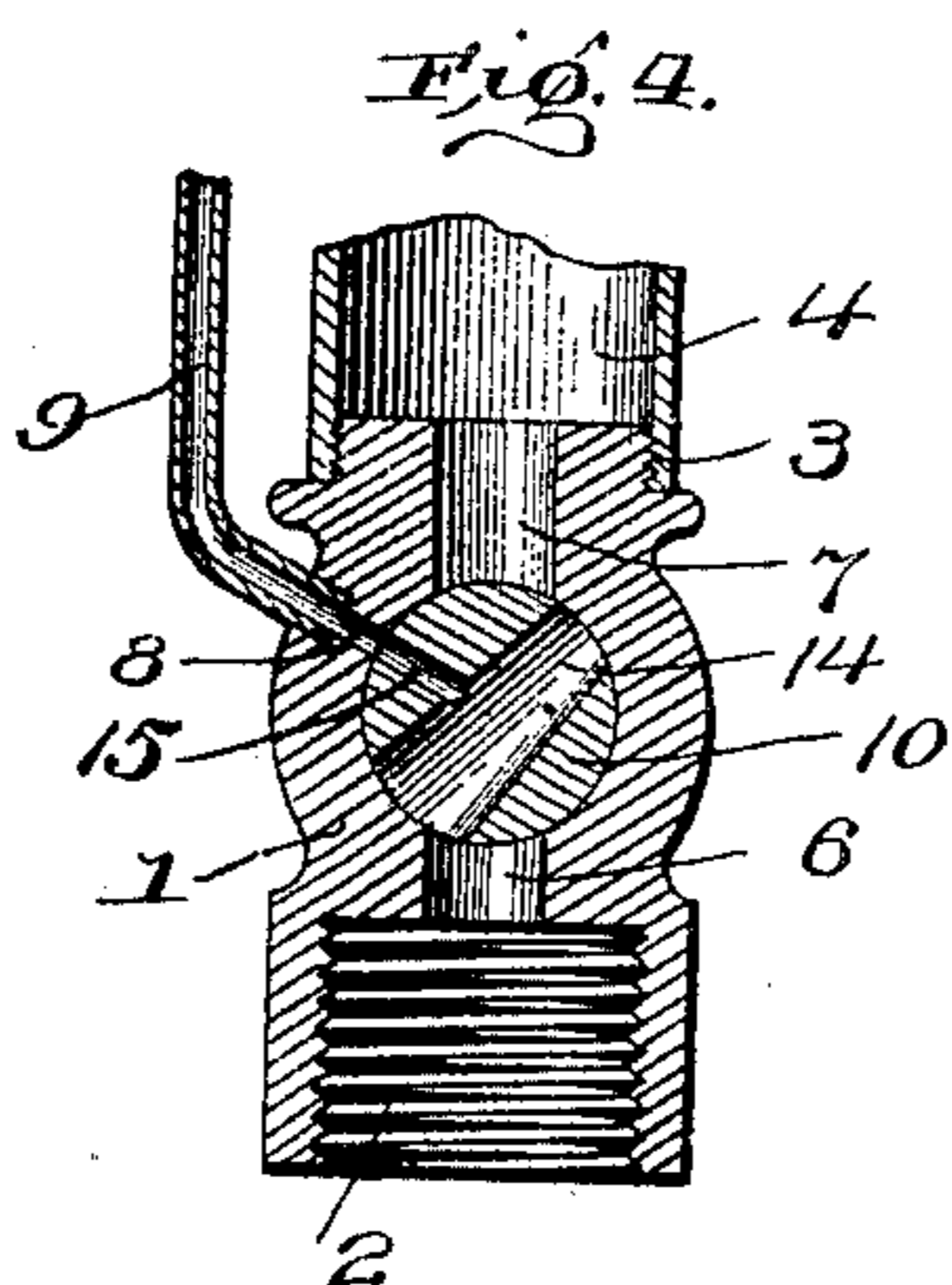
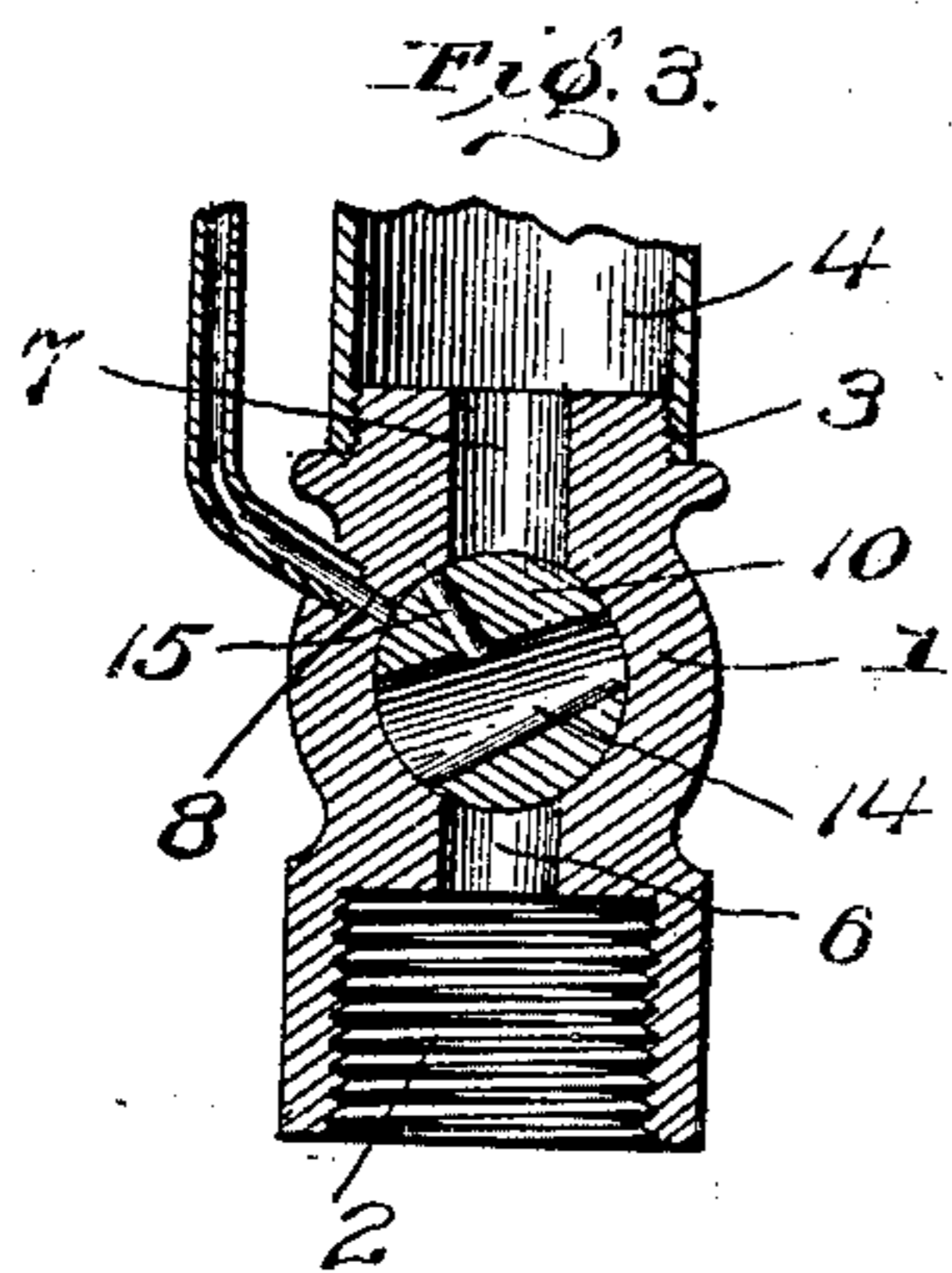
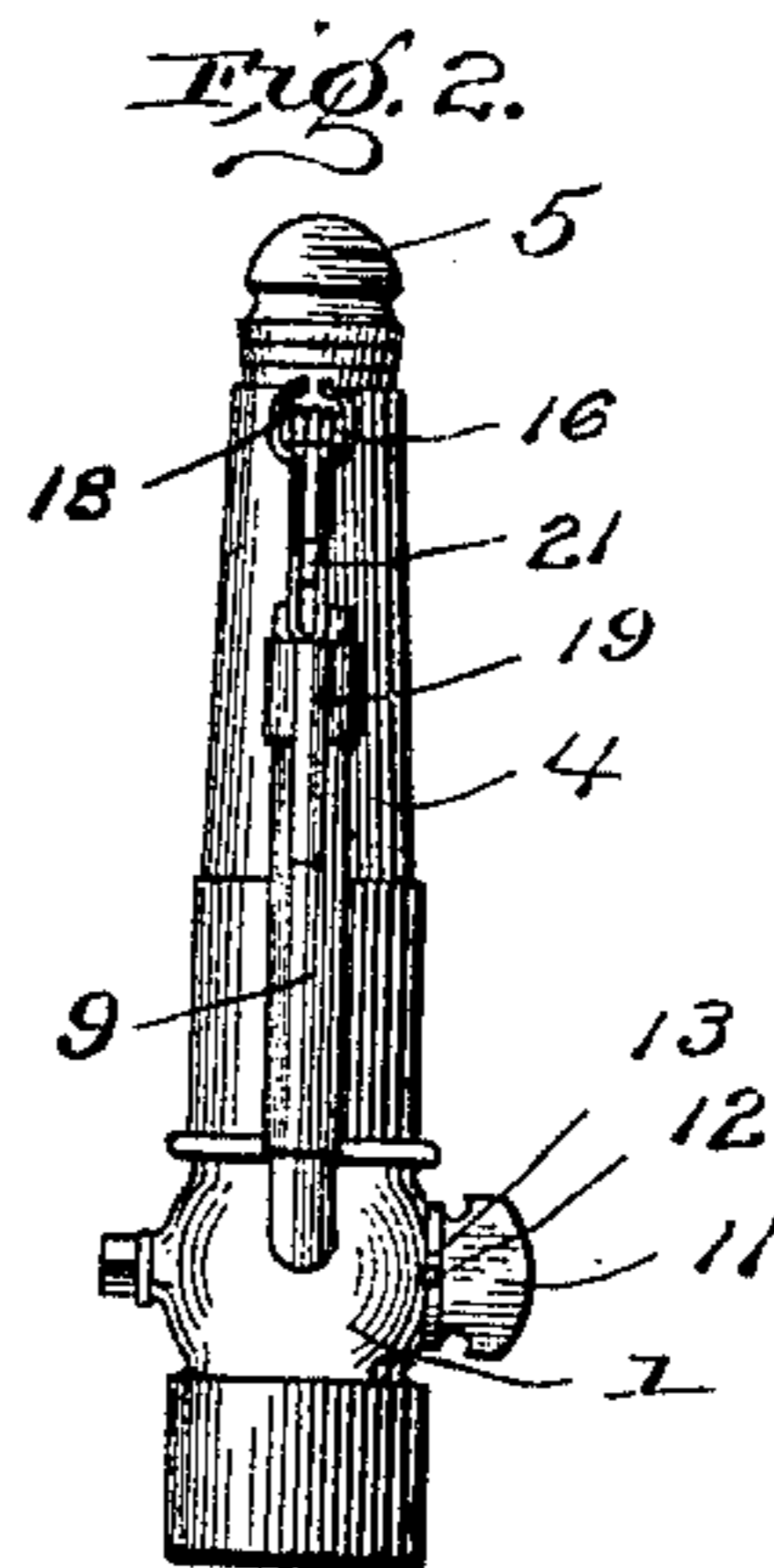
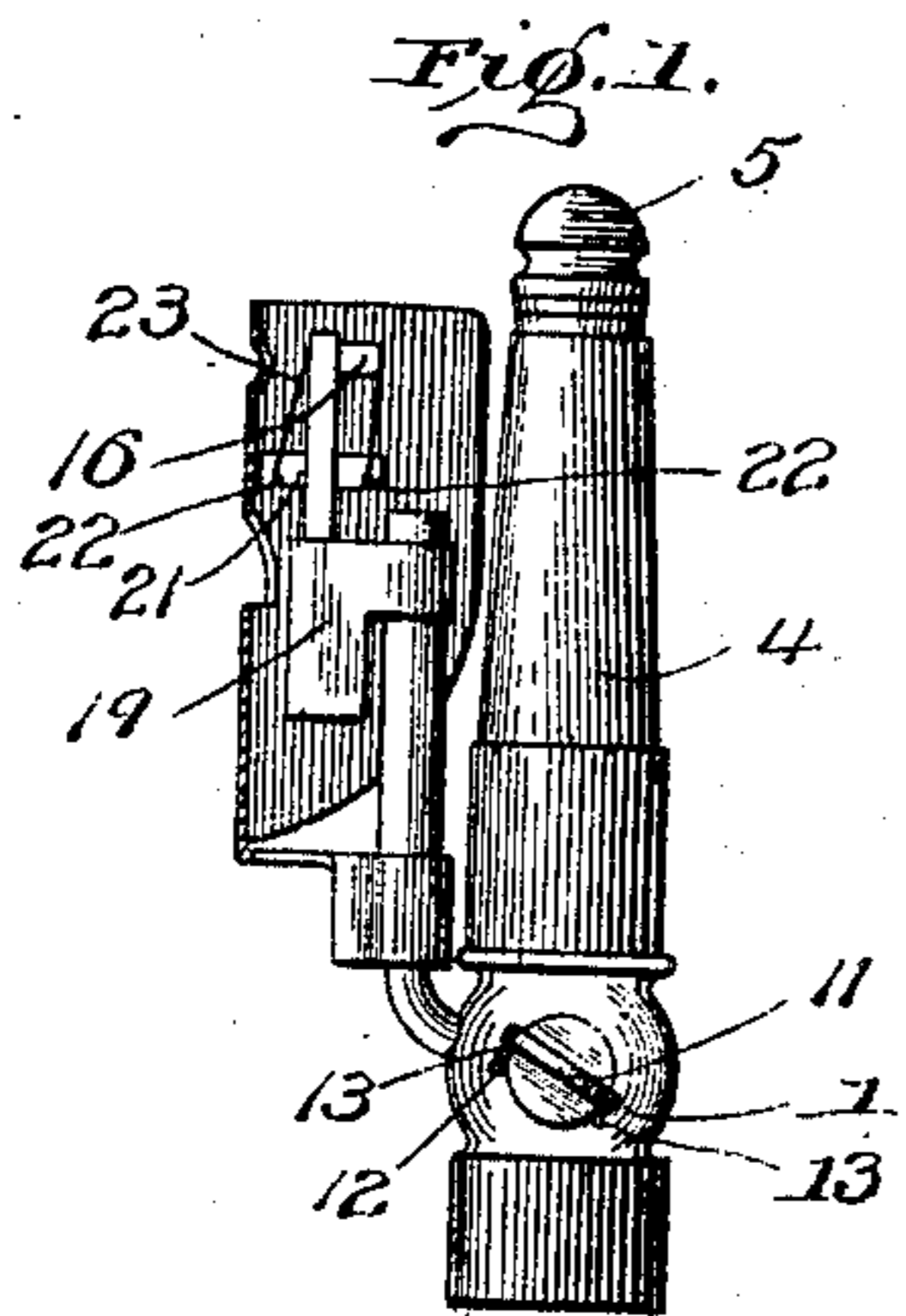
No. 668,368.

G. A. W. BARKOWSKY.
GAS IGNITING DEVICE.

Patented Feb. 19, 1901.

(Application filed Sept. 6, 1900.)

(No Model.)



Witnesses.

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UNITED STATES PATENT OFFICE.

GUSTAV ADOLF W. BARKOWSKY, OF ALLEGHENY, PENNSYLVANIA, AS-
SIGNOR OF ONE-HALF TO ROBERT E. WILSON, OF SAME PLACE.

GAS-IGNITING DEVICE.

SPECIFICATION forming part of Letters Patent No. 668,368, dated February 19, 1901.

Application filed September 6, 1900. Serial No. 29,144. (No model.)

To all whom it may concern:

Be it known that I, GUSTAV ADOLF W. BARKOWSKY, a resident of Allegheny, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Gas-Igniting Devices; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to a self-igniting attachment for gas-cocks, and has for its object a device of this character which is simple in construction and reliable in action, which is provided with means for insuring the rapid ignition of the gas, and in which the igniting body is supported in such a manner that it is not in the flame of the gas-jet, whereby its life is greatly increased.

In order to enable others to make and use my invention, I will describe the same more fully, referring to the accompanying drawings, in which—

Figure 1 is a side view of a gas-cock with my attachment applied thereto, the shield being shown in section. Fig. 2 is a similar view looking at the same from a different direction and with the shield removed. Figs. 3, 4, and 5 are sectional details showing the different positions of the gas-cock in the use of the device. Fig. 6 is a perspective view of the shield, and Fig. 7 is similar view of the igniting body and supporting-bracket.

The gas-fixture shown is of the ordinary type and comprises the body 1, provided with the screw-threaded socket 2 at its lower end for attaching it to the gas-bracket and with the screw-threaded projection 3 at its upper end, to which is secured the tip 4, which is provided at its top with the usual burner 5. The body 1 is provided with the port 6, leading to the gas-pipe, the port 7, leading to the tip 4, and the small side port 8, leading to the pilot-tube 9. This pilot-tube comprises a small tube having its lower end seated in the body 1 and projecting outwardly therefrom and then bent to project upwardly and substantially parallel with the tip 4. In the body 1 is seated an ordinary cock 10, which is provided with the thumb-piece 11 for turning the same and with a pin 12, which is adapted to contact with shoulders 13 on the outside of the casing 1 in order to limit the rotation of

the cock in both directions, as will be readily understood. The cock 10 is provided with the main port 14, which is preferably larger at one end than at the other, and with the small port 15, which extends from the port 14 to one side of the cock. When the cock is turned to the position shown in Fig. 3, the gas is entirely cut off both from the tip 4 and pilot-tube 9; but by rotating the cock slightly to the position indicated in Fig. 4 the lower end of the port 14 connects with the supply-port 6, but the upper end of the port 14 does not connect with the port 7, leading to the tip 4. The port 15, however, connects with the port 8, leading to the pilot-tube, so that gas can escape through said last-named tube. As soon as the gas emerging from the pilot-tube is ignited by the means hereinafter described the cock is turned to the position indicated in Fig. 5, wherein the port 14 connects the tip directly with the supply-pipe, while the pilot-tube is cut off.

The pilot-tube is provided at its upper end with a minute opening to allow the gas to escape through the same in a fine stream. Above the pilot-tube and below and to one side of the burner 5 is supported the igniting-body 16, the same comprising a rectangular body of porous material, preferably meerschauum, which has been impregnated in turn with silicic acid and platinum hydrogen chlorid and then exposed to a current of natural gas, after which the same is burned in a blow-pipe while closed in a platinum or palladium tube. This body, however, is not herein claimed, but is claimed, together with the method of making it, in an application of even date herewith, Serial No. 29,143. The body 16 is provided on its upper surface with a series of grooves 17 and is held between the upper ends of spring-arms 18, which are secured at their lower ends in the bracket 19, having the spring-clips 20, which are adapted to surround the pilot-tube 9 and which may be moved up and down on the latter to support the igniting-body at any desired distance above the upper end of the pilot-tube. Below the igniting-body 16 a cross-bar 21 is secured to the spring-arms 18, this cross-bar being provided on its lower edge at its ends with notches 22, in which notches are secured

the ends of fine platinum wires 23, which lie in the grooves 17 in the igniting-body 18. The igniting-body and supporting-bracket are enclosed in a shield 24, which is provided at its lower end with the arm 25, having a spring-socket 26, which surrounds the pilot-tube and holds the shield in any position to which it may be moved. This shield serves to direct the gas from the orifice in the top of the pilot-tube to the igniting-body, and as the gas escapes in a very fine stream the shield prevents the same from being blown to one side. On its back the shield is provided with openings 27 and 28 for the admission of air, so that a proper circulation therein takes place.

The operation of my device will be readily understood from the foregoing description. In order to ignite the gas, the cock 10 is turned to the position indicated in Fig. 4, thereby permitting gas to escape through the pilot-tube 9 in a very thin stream, which is directed by the shield 24 to the igniting-body 16. The catalytic action of the body 16 and platinum wires 23 soon ignites this stream of gas. As soon as this takes place the cock is turned to the position indicated in Fig. 5, which permits the gas to escape through the tip 4 and cuts it off from the pilot-tube 9. The flame from the pilot-tube, however, is not instantaneously extinguished; but by reason of the gas contained in the pilot-tube the flame is sustained until the gas escapes from the burner 5 and ignites the same. By removing the shield 24 the small flame from the pilot-tube may be used as a night-light by keeping the cock in the position indicated in Fig. 4. All of the parts of my igniter are easily made and assembled and can be readily removed for cleaning, while the igniting-body is supported out of the flame of the gas-

jet and in such a manner that the distance of the same from the top of the pilot-tube can be varied at pleasure or as found necessary, according to the different qualities of gas that may be encountered.

What I claim, and desire to secure by Letters Patent, is—

1. In a gas-igniting device, the combination with a burner, of a pilot-tube in proximity thereto, a cock provided with main and branch ports arranged to supply gas to the burner and pilot-tube, a self-igniting body supported above the pilot-tube, and a shield inclosing the pilot-tube and self-igniting body.

2. In a gas-igniting device, the combination with a burner, of a pilot-tube in proximity thereto, a cock provided with main and branch ports arranged to supply gas to the burner and pilot-tube, a self-igniting body supported above the pilot-tube, and a shield inclosing the pilot-tube and self-igniting body, said shield being provided with draft-openings in its back.

3. In a gas-igniting device, the combination with a burner, of a pilot-tube in proximity thereto, a cock provided with main and branch ports arranged to supply gas to the burner and pilot-tube, a self-igniting body supported above the pilot-tube, and adjustable vertically with reference thereto, and a shield inclosing a pilot-tube and self-igniting body, said shield being adjustably supported on the pilot-tube.

In testimony whereof I, the said GUSTAV ADOLF W. BARKOWSKY, have hereunto set my hand.

G. ADOLF W. BARKOWSKY.

Witnesses:

F. W. WINTER,
MAY MAGEE.