

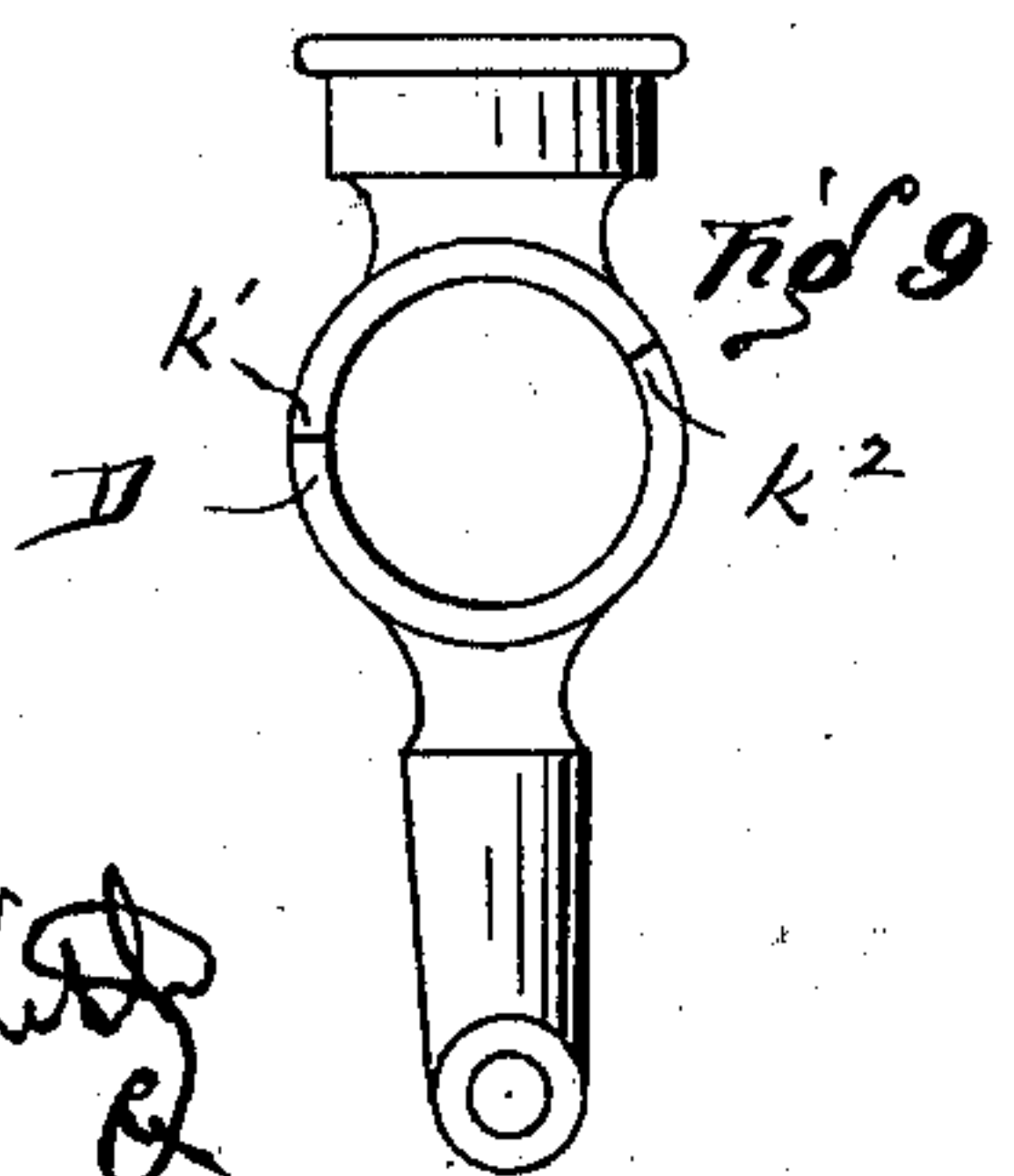
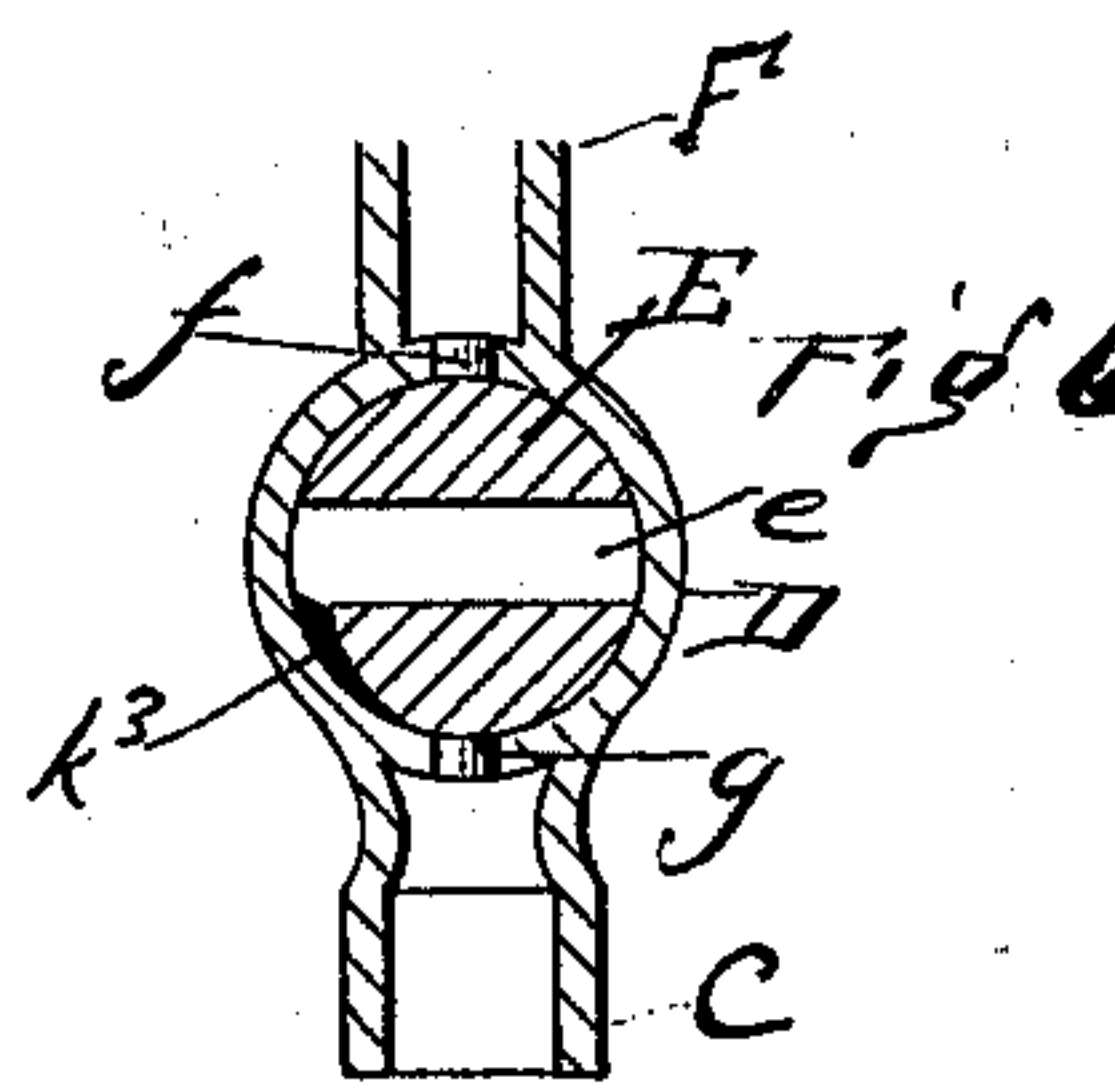
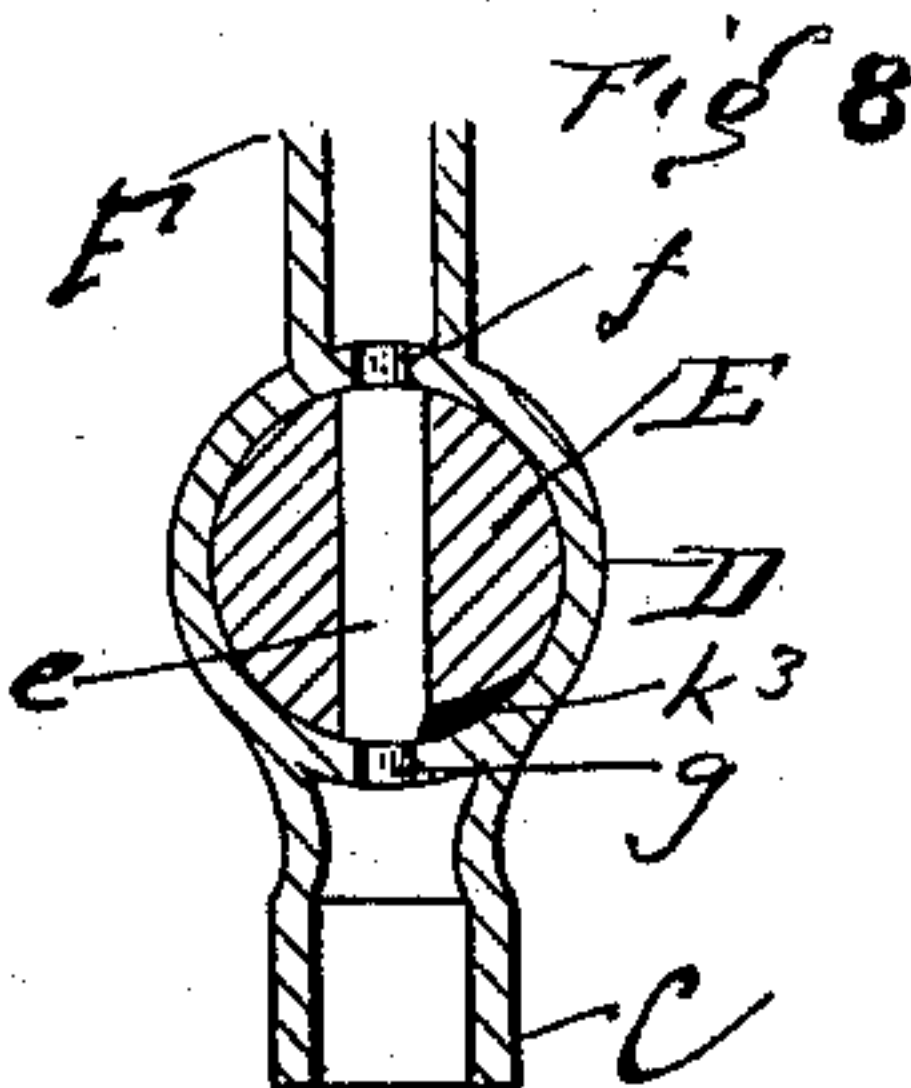
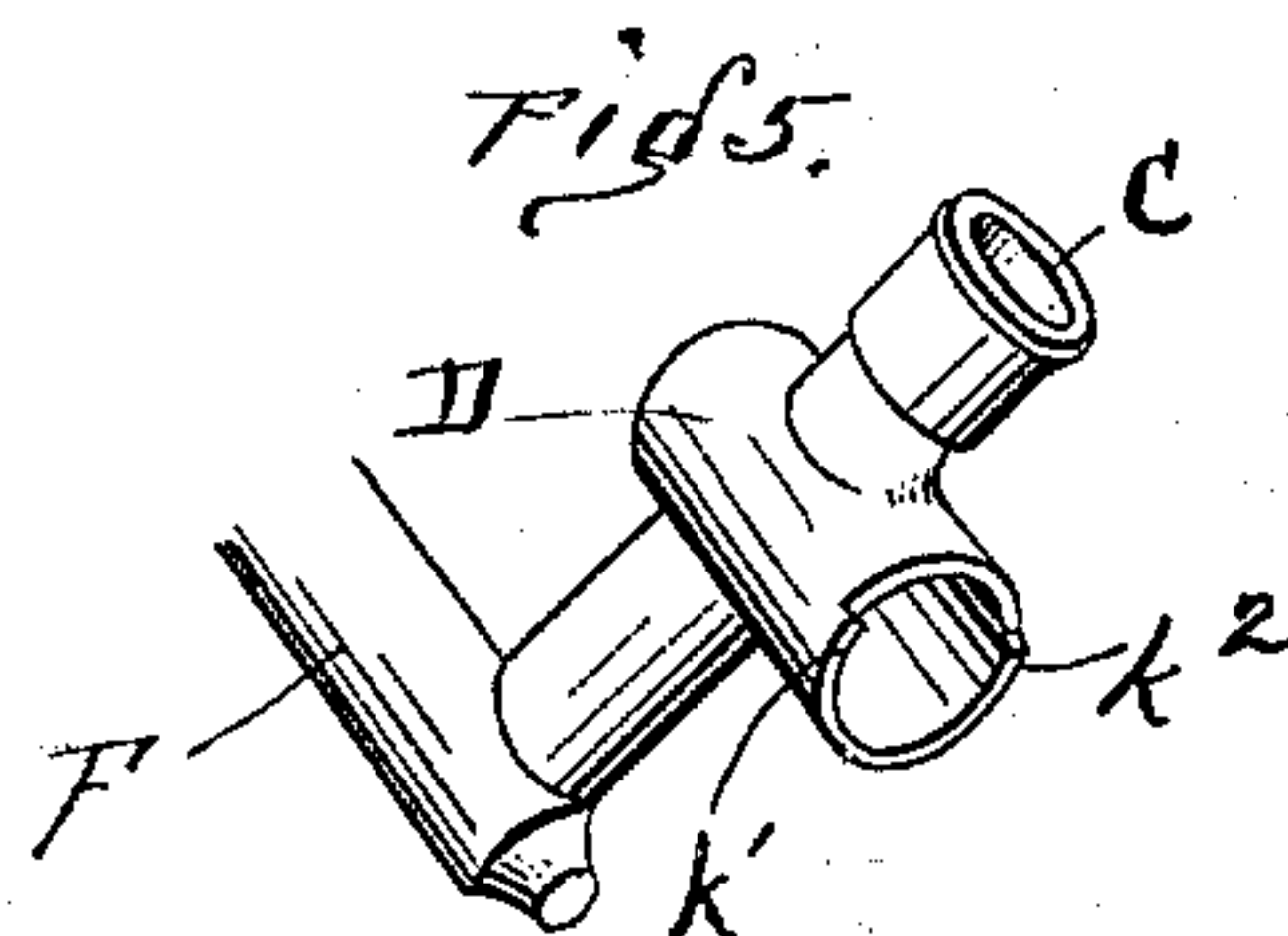
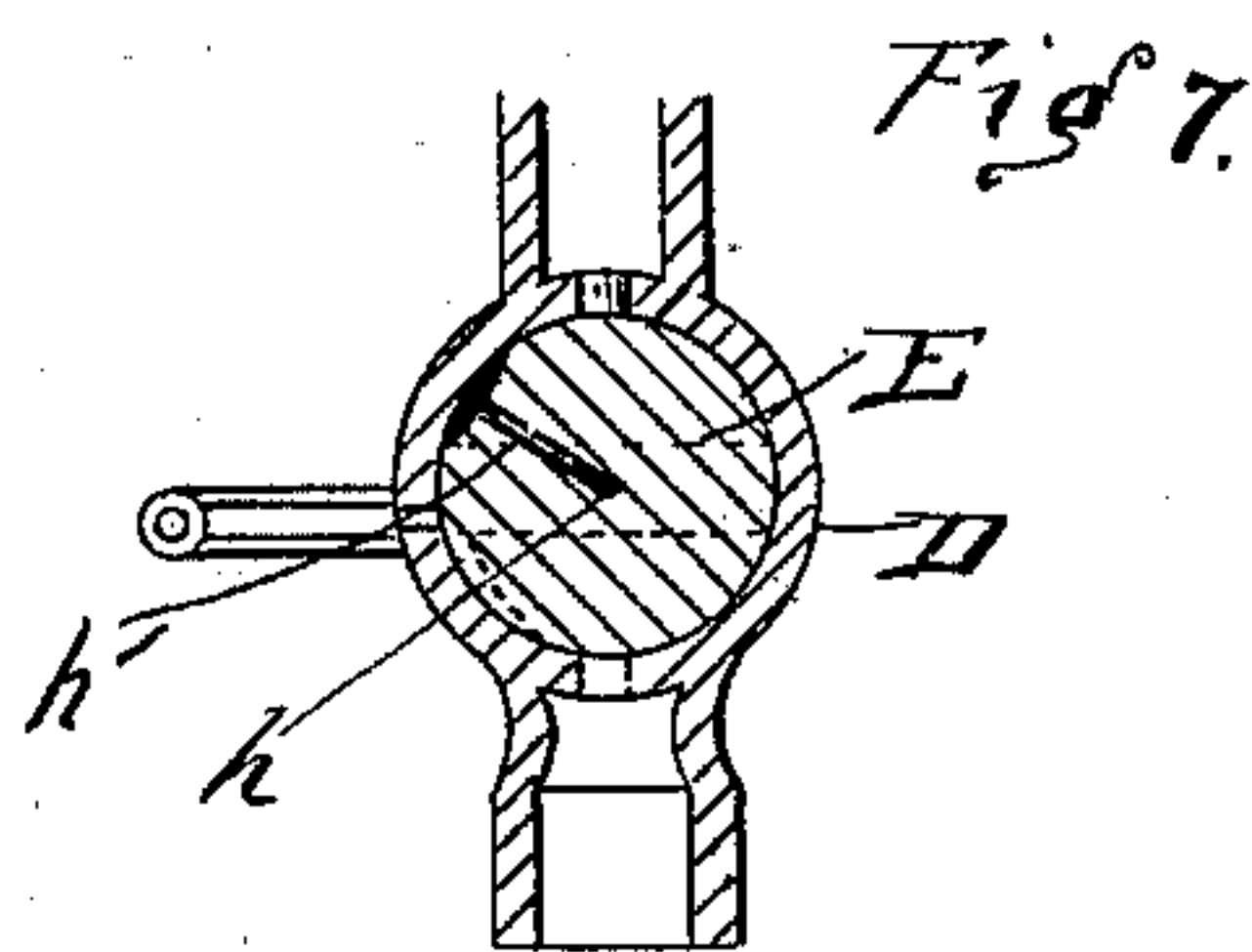
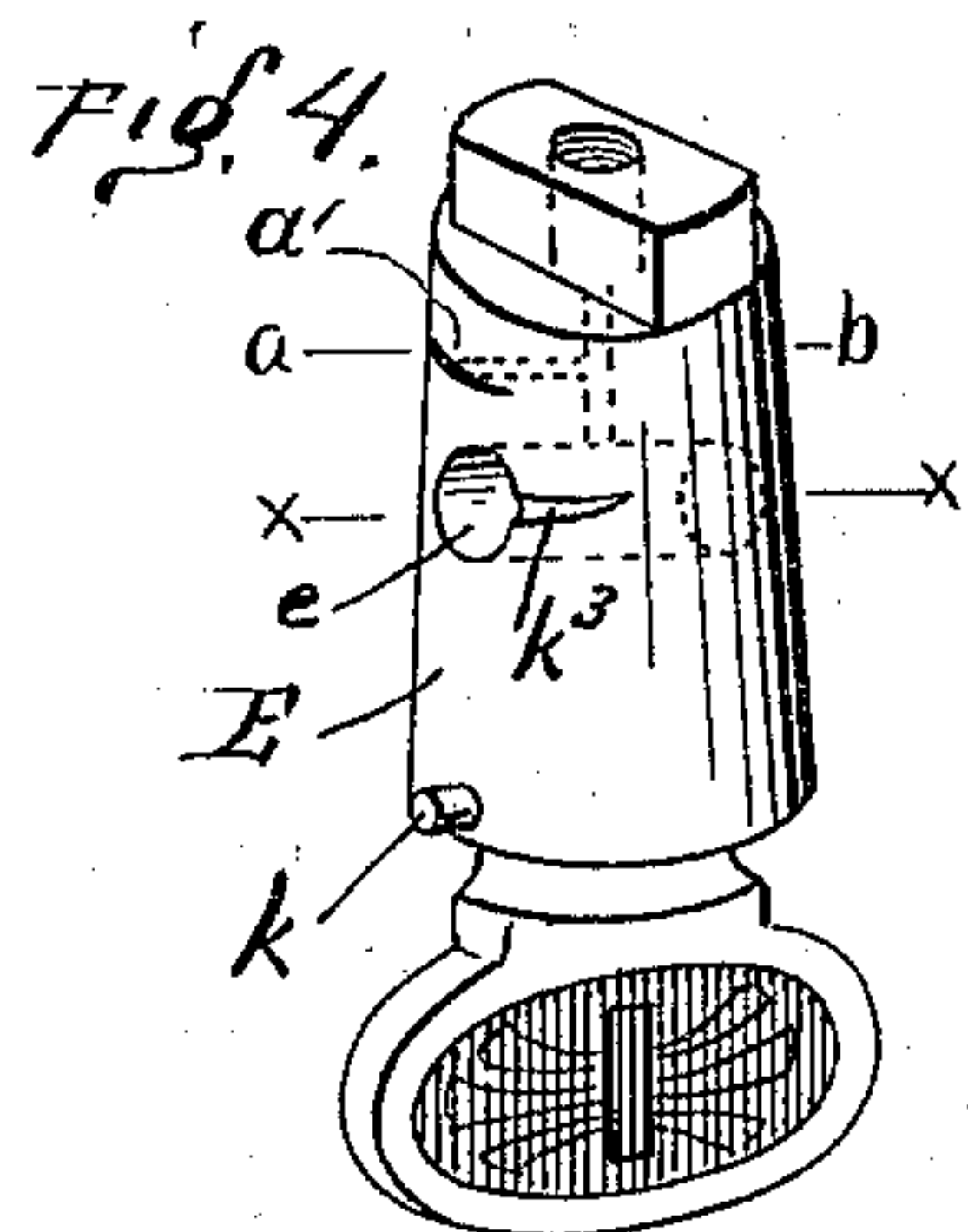
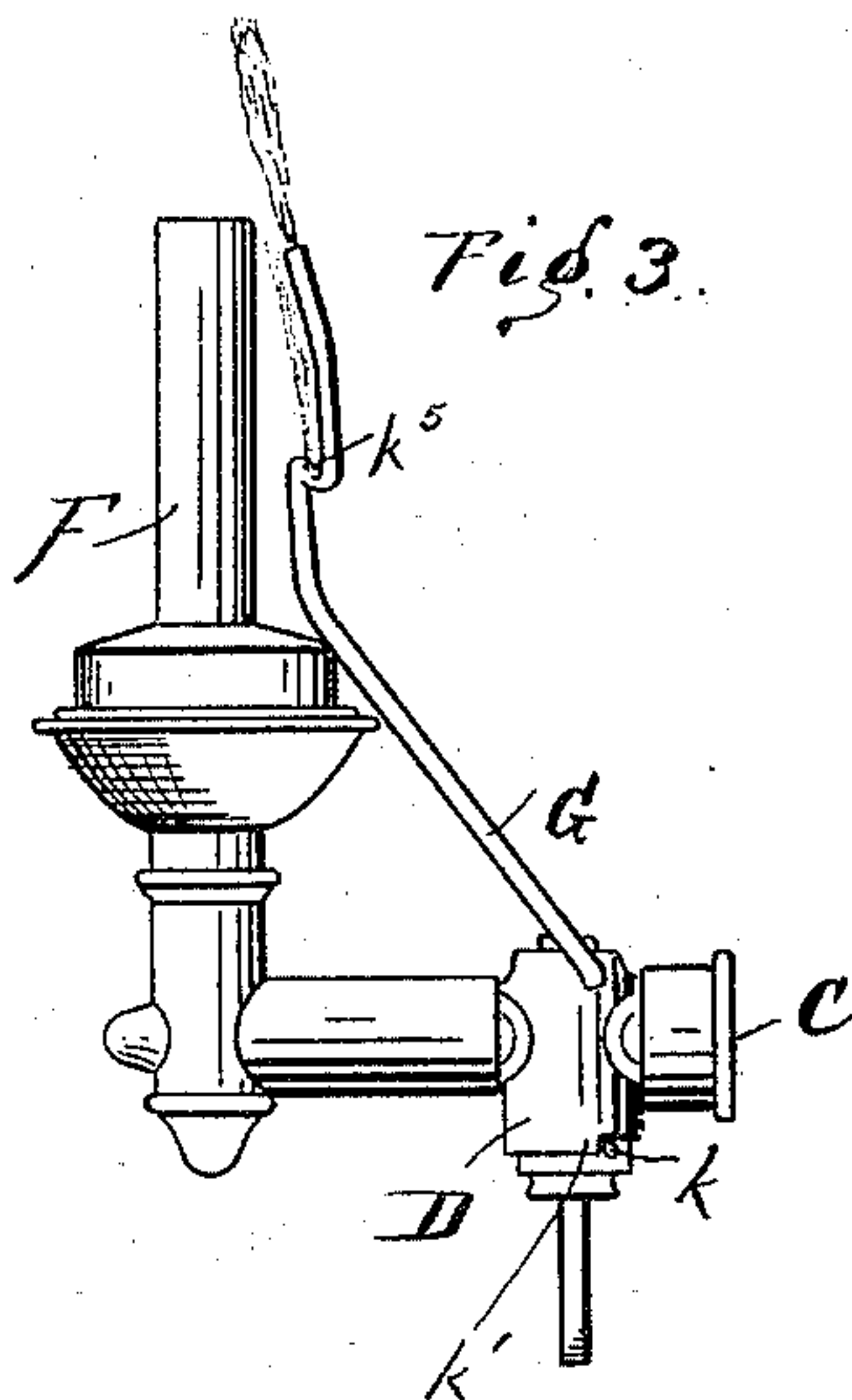
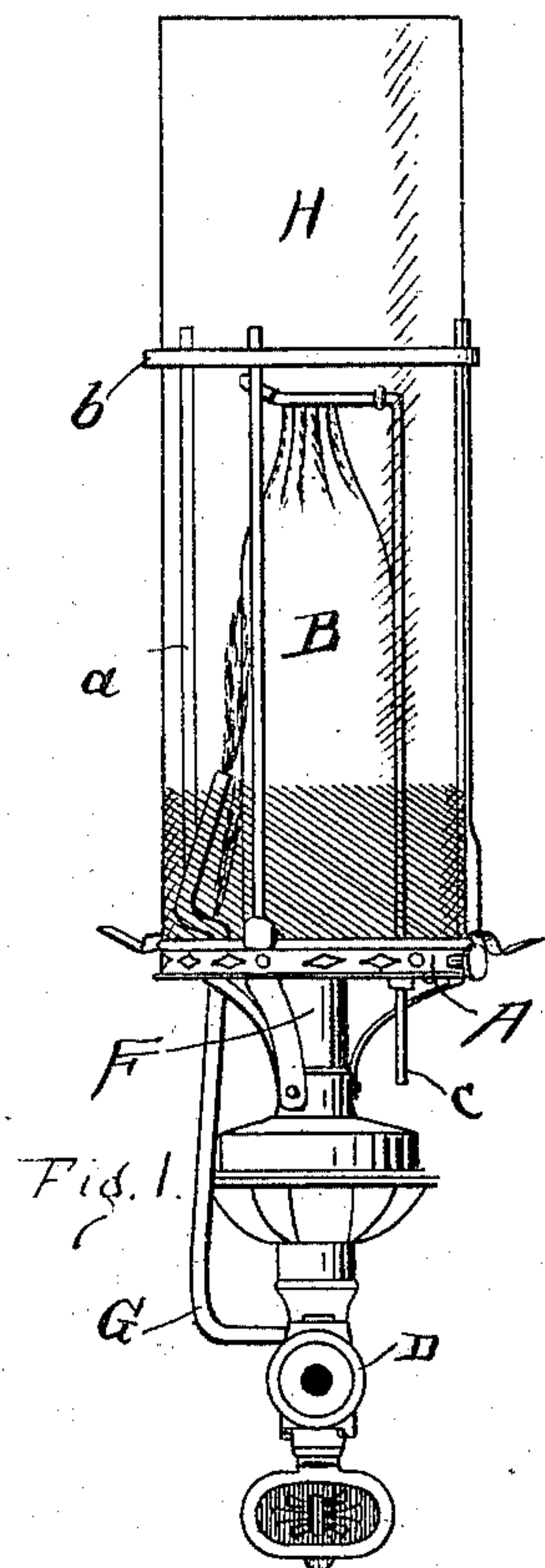
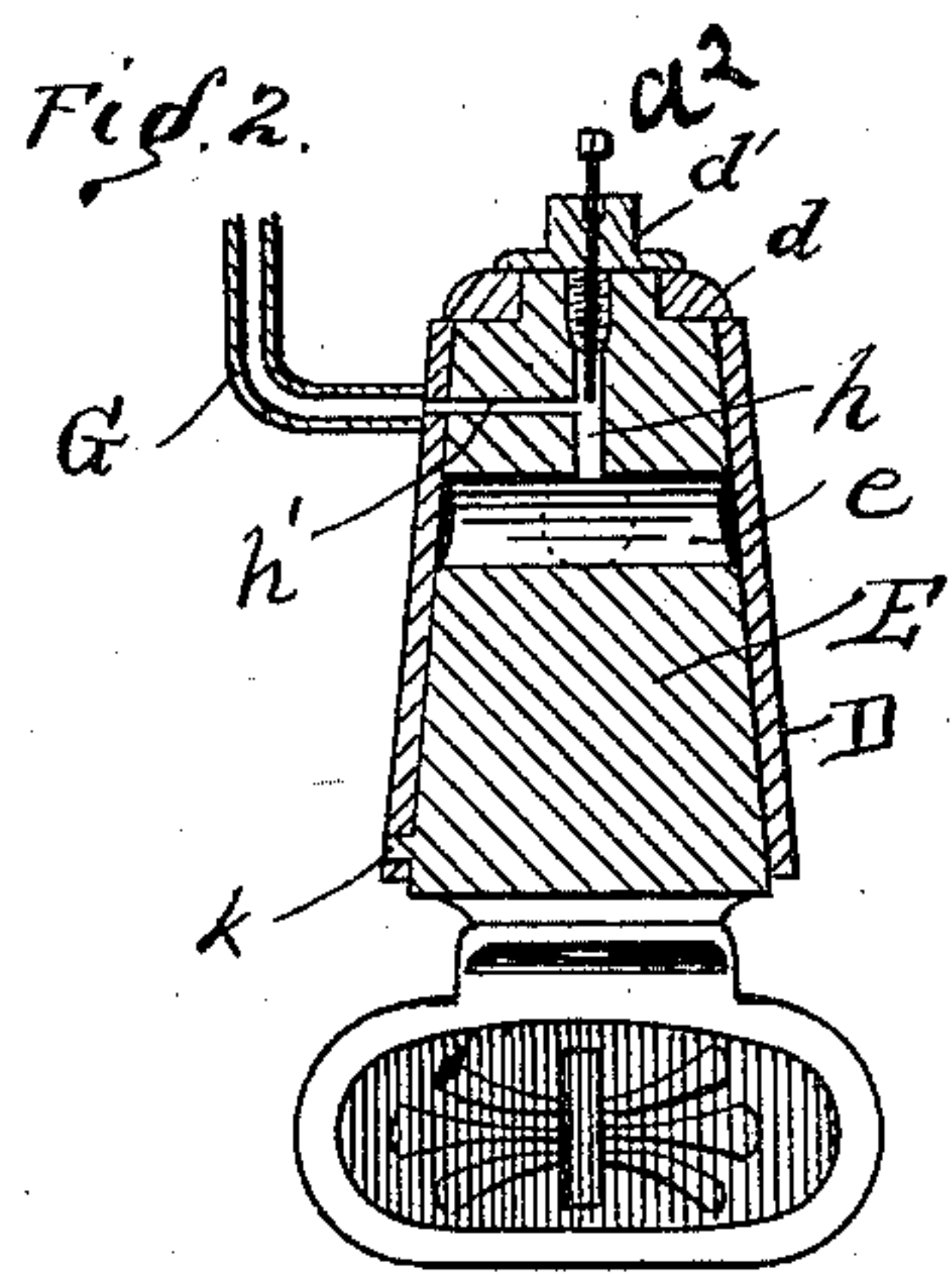
(No Model.)

W. F. SIMONET.

ATTACHMENT FOR INCANDESCENT GAS BURNERS.

No. 544,834.

Patented Aug. 20, 1895.



WITNESSES.
C. J. CROSS,

Edw. Smith

Fig. 10. INVENTOR.
William F. Simonet
By Fred W. Bond
Attorney.

UNITED STATES PATENT OFFICE.

WILLIAM F. SIMONET, OF MASSILLON, OHIO.

ATTACHMENT FOR INCANDESCENT GAS-BURNERS.

SPECIFICATION forming part of Letters Patent No. 544,834, dated August 20, 1895.

Application filed March 20, 1895. Serial No. 542,467. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM F. SIMONET, a citizen of the United States, residing at Massillon, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Attachments for Incandescent Gas-Burners; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon, in which—

Figure 1 is a side elevation of the burner, showing my improvement properly attached. Fig. 2 is a longitudinal section of the valve-cock, showing the arrangement of the different gasways and also showing a section of the cock-casing and illustrating the location of the sub gas-tube. Fig. 3 is a side elevation showing the position of the sub gas-tube, also showing the burner proper removed. Fig. 4 is a detached view of the valve cock. Fig. 5 is a view showing the valve-cock casing and the main pipes belonging thereto. Fig. 6 is a transverse section through line *x x*, Fig. 4, except that in said Fig. 4 the casing is not shown. Fig. 7 is a similar view through line *a* and *b*. Fig. 8 is a transverse section of the valve cock and its casing, showing the cock opened to admit a full flow of gas. Fig. 9 is a view showing the bottom or under side of the valve-cock casing. Fig. 10 is a detached view of the sub gas-tube.

The present invention has relation to attachments for incandescent gas-burners; and it consists in the different parts and combination of parts hereinafter described, and particularly pointed out in the claim.

Similar letters of reference indicate corresponding parts in all of the figures of the drawings.

In the accompanying drawings, A represents the chimney-supporting band or ring, to which are attached the bars *a*, which bars are for the purpose of supporting the band *b*. The band A is provided with the adjustable rod *c*, to the upper end of which is attached in the ordinary manner the top or upper end of the mantle B. These parts are constructed and adjusted in the ordinary manner and form no particular part of the present inven-

tion, except that they are used in connection with my improvement.

To the feed-pipe C and in close proximity to the burner proper is located the valve-casing D, which valve-casing is provided with the valve-cock E, which valve-cock is closely fitted within its casing and is held in proper position by means of the cap *d* and the screw-threaded nut *d'*, or their equivalents.

The valve-cock E is provided with the cross-aperture *e*, which aperture is so adjusted that it will register with the openings *f* and *g*, said openings being for the purpose of allowing gas to flow from the feed-pipe to the burner-tube F. From the cross-aperture *e* leads the vertical aperture *h*, which aperture communicates with the aperture *h'*, said aperture *h'* communicating with the sub gas-tube G, as hereinafter described.

For the purpose of limiting the rotary movements of the valve-cock E the stop or pin *k* is provided, which stop or pin comes in contact with the shoulders *k'* and *k''*, thereby stopping the rotation of the valve-cock at the desired point to regulate and cut off the flow of gas. The periphery of the valve-cock E is provided with the groove *k³*, which groove communicates with one end of the cross-aperture *e*, substantially as shown in Fig. 4, and is formed of such a length that a portion of the groove *k³* will register with the opening *g*, thereby allowing a small quantity of gas to enter the cross-aperture at the time the pin *k* is in contact with the stop or shoulder *k'*. The gas as it enters the cross-aperture *e* from the groove *k³* will find its way into the apertures *h* and *h'*, and when the valve-cock E is turned a sufficient distance to register the aperture *h'* with the sub gas-tube G the gas will flow through said sub gas-tube G. The top or upper portion of the sub gas-tube G is preferably bent as illustrated in the drawings, and at the bend of said sub gas-tube is located or formed the aperture *k⁵*, which aperture is for the purpose hereinafter described.

The sub gas-tube G is extended upward and into the chimney H, substantially as illustrated in the drawings, thereby bringing the upper portion of the sub gas-tube between the chimney and the mantle. When it is desired to light the burner, the valve-cock E is turned

a sufficient distance to cause the aperture h' to register with the aperture or bore of the sub gas-tube G, at which time gas escapes from the aperture k^5 and the upper end of the sub gas-tube. By providing the aperture k^5 and locating the same near or at the bottom or lower end of the chimney H the gas can be easily ignited, at which time the flame will communicate with the gas escaping from the top or upper end of the sub-tube G, thereby igniting all of the gas escaping from the sub-tube G. As the valve-cock E is still further rotated, the gas will enter the tube F through the cross-aperture e , at which time the gas escaping from the tube F will be ignited by means of the burning gas from the sub gas-tube G.

When it is desired to use the burner at its full capacity, the valve-cock E is rotated until the cross-aperture e comes into full register with the apertures f and g . It will be understood that when the cross-aperture e is brought into full registration with the apertures f and g that the flow of gas will be cut off from the sub gas-tube G, thereby causing all of the gas to escape through the tube F, the flow of gas being cut off from the sub-tube G by bringing the aperture h' out of register with said sub gas-tube at the point where said sub gas-tube enters the casing D.

For the purpose of insuring a communication or flow of gas from the aperture h' to the sub gas-tube G the valve-cock E is provided with the short groove a' , thereby allowing or providing a more extended rotation of the valve-cock without cutting off the flow of gas through the sub gas-tube G.

When it is desired to reduce the quantity of gas and thereby lessen the brilliancy of the light, the valve-cock E is turned so as to bring or carry the pin k toward the shoulder k^2 , said shoulder being so located that all of

the gas will not be cut off at the time the pin k is brought against the stop or shoulder k^2 .

The object and purpose to be accomplished by my peculiar arrangement are to provide a means for lighting a small quantity of gas at first, and during the time a small quantity of gas is burning to turn on and light the desired amount of gas to be burned, thereby preventing the sudden combustion of excessive quantities of gas.

It will be understood that by my peculiar arrangement the burner proper can be easily lighted from the aperture k^5 , said aperture being located in such a position that a match or its equivalent can be easily applied.

For the purpose of regulating the flow of gas through the aperture h' the needle a^2 is provided, which needle is so arranged that it can be adjusted to close or partially close the inner end of the aperture h' .

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination of a main feed pipe, provided with the casing D, the valve-cock E located in said casing and provided with the stop-pin k , the cross aperture e , the vertical aperture h leading from the cross-aperture, the aperture h' , the groove k^3 located upon the periphery of the valve cock, the groove a' connected with the aperture h' , and the sub-gas tube G provided with the aperture k^5 , and the shoulders k' and k^2 located upon the valve casing, substantially as and for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

WILLIAM F. SIMONET.

Witnesses:

F. W. BOND,

E. A. C. SMITH.