

(No Model.)

J. F. SMITH.
SAFETY ATTACHMENT FOR GAS COCKS.

No. 604,197.

Patented May 17, 1898.

Fig. 1.

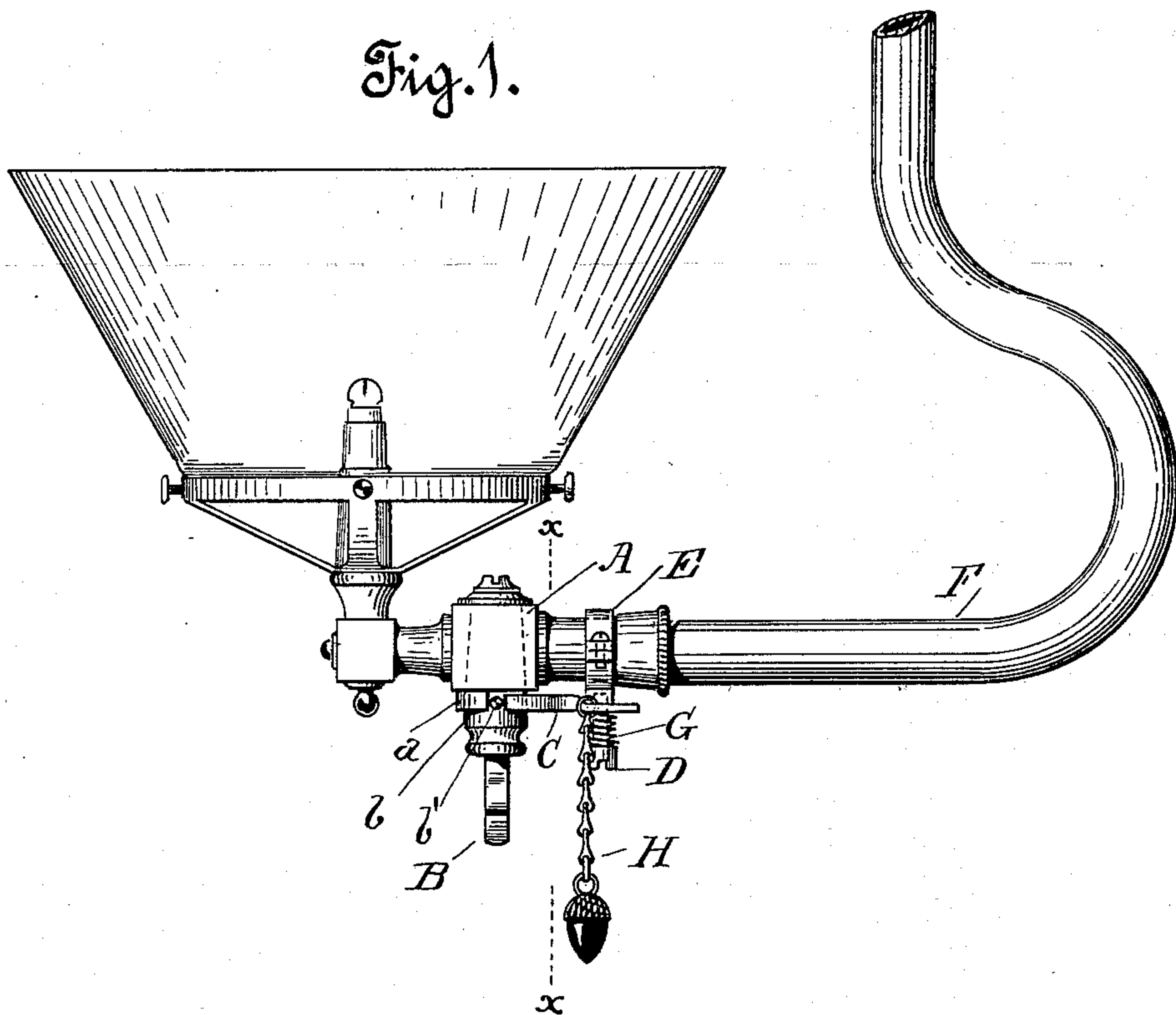


Fig. 2.

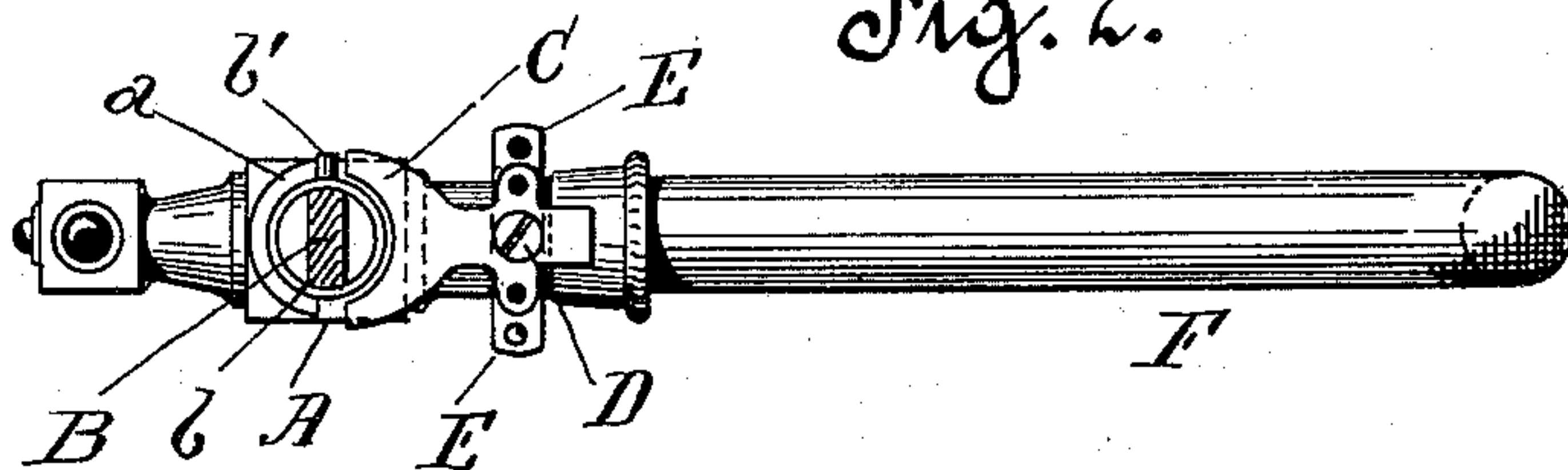
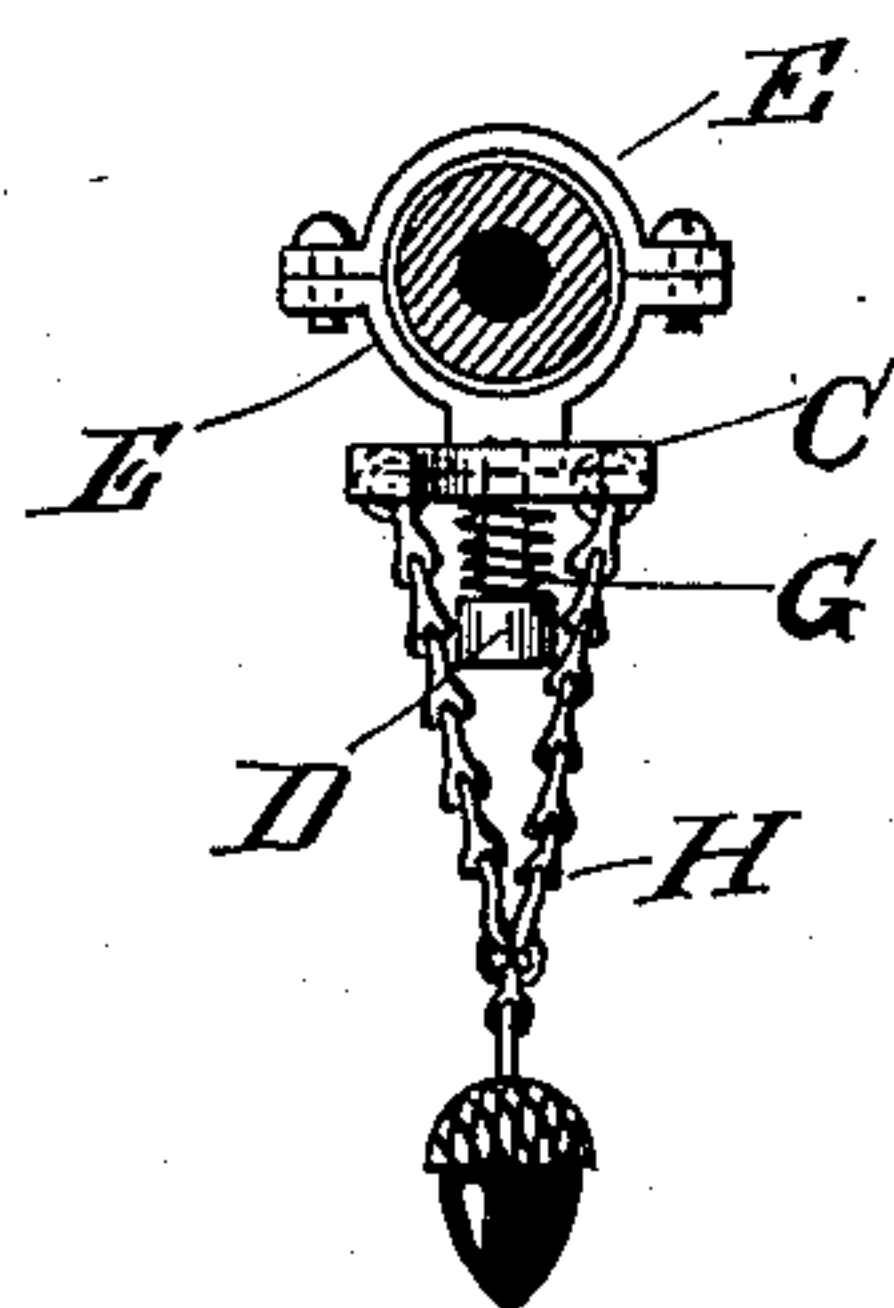


Fig. 3.



Witnesses.

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SAFETY ATTACHMENT FOR GAS-COCKS.

SPECIFICATION forming part of Letters Patent No. 604,197, dated May 17, 1898.

Application filed December 15, 1897. Serial No. 661,948. (No model.)

To all whom it may concern:

Be it known that I, JAMES FRANKLIN SMITH, a citizen of the United States, residing in the city and county of San Francisco and State of California, have invented certain new and useful Improvements in Safety Attachments for Gas-Cocks; and I do hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to the general class of safety gas-cocks, and more especially to devices and appliances independent of the cock proper, but adapted by attachment in its vicinity to work in such relation thereto as to lock and release the cock as required.

My invention consists in a locking-yoke the extremities of which lie normally in the path of movement of the stop-pin of the stem of the cock-key, thereby positively locking said cock in a closed position, said yoke being so mounted that it may readily, but only by intention, be moved from its normal position to permit the rotation of the key, said movement being effected by means which when released will permit its return to its first position, whereby the cock is once more positively and automatically locked, all as I shall hereinafter fully describe.

The object of my invention is to provide an effective and practical device for preventing the accidental turning on of the gas. Devices for this purpose may be effective enough, but not practical of application, as by reason of requiring special cocks or those differing in any way from stock forms or trade designs. The special utility of my attachment lies not merely in its capability of positively and automatically locking the cock and releasing it again readily enough by intention, but also in its adaptability to be applied with ease and precision and without deformity to any of the stock forms and styles of cocks and fixtures, if not, in fact, to all kinds.

Referring to the accompanying drawings, Figure 1 is a side elevation of a gas cock and fixture, showing the application of my safety attachment. Fig. 2 is a bottom view, the key B being cut off and the pull-chain omitted. Fig. 3 is a section on line *xx* of Fig. 1.

A is a common form of gas-cock, of which B is the key, the stem *b* of which, entering the shell of the cock, forms, as usual, the ro-

tary plug carrying the ports alining with the general passages on each side and adapted to turn on and off the gas in the usual way. Upon the base of the shell is the customary flange *a*, the extremities of which form stops for the usual pin *b'* of the key-stem. My attachment to this ordinary gas-cock consists of the yoke C, the arms of which freely embrace the key-stem, and their extremities approach but terminate short of the ends of the stop-flange *a*, leaving a space between of sufficient width to easily, though not too loosely, contain the stop-pin *b'*. The normal position of this yoke is one in which the extremities of its arms lie in the path or plane of movement of the stop-pin *b'*, and it follows that normally the pin lies between one extremity of the yoke-arm and the opposite extremity of the fixed stop-flange *a*, whereby the key cannot be turned, and thus the cock is closed and the gas turned off; but if the yoke be moved to carry its arms out of the path of movement of pin *b'* the key can be turned. To effect this, the body of the yoke is mounted and adapted to slide upon a hanger D, secured to or formed with a suitable holding device, here shown in its best form as a two-part clamp E, removably secured upon any portion of the fixture F or the adjacent body of the cock itself, as convenience may require. A spring G upon the hanger presses up under the yoke and holds it to its normal position, in which, as heretofore described, it locks the cock. Any means may be used to pull the yoke down—as, for example, the simple pull-chain H, which I have here shown and which may be of any length—and this may be provided with any of the customary pendent ornaments, such as a bell or an acorn or what not.

Now as the whole attachment is solidly supported from the fixture the pull on the chain, which, as shown, lies in close proximity to the key, may be a positive and strong one to insure the descent of the yoke at the same time that the key itself is grasped conveniently with the same hand and turned to open the cock. A peculiarity of construction resulting in the advantage of requiring only a momentary pull upon instead of a prolonged holding and independent fastening of the yoke is to be noted in the fact that the locking-yoke, embracing as it does the key-stem,

presents its upper surface to be ridden over by the stop-pin b' , which, the moment it passes upon said surface, serves as a positive means of holding the yoke down, thereby relieving the operator of any but a momentary attention to the matter. The surface of the yoke is smooth enough to permit the pin to move over it easily, though it serves as a means of tightening the key or plug to the extent of the tension of the controlling-spring. A further advantage in this connection lies in the fact that when the pin passes from the surface of the yoke on either side the latter, returning to its locking position automatically, gives forth a slight but perceptible click as it comes in contact with the metal above, thus advising the operator of the locking of the key.

The fastening or holding device here shown—namely, the clamp E—though perfectly practical to enable the attachment to be applied readily to any fixture, irrespective of the cock proper, may be varied or changed in character without affecting the essential principle of the invention, which lies in the movable and automatically-returning locking-yoke, independent of the key or of any peculiar construction of the cock or any portion thereof, said yoke operating upon the key-stem to lock it in closed position on either side, and therefore other holding means might be employed, and it follows also that I do not confine myself to the locking contact of the pin b' and the yoke extremities specifically, as said yoke may be made to lock the key otherwise, though the necessity for this is unlikely, because of the present forms of cocks being so well adapted by reason of their stop-pins to receive the attachment herein illustrated.

In describing my invention, though I have

referred to gas-cocks only, it is to be understood that this attachment is applicable to any similar cock for any flowing medium, liquid or gas, or for any situation where there may be any necessity for locking the cock and permitting it to be opened only by the fullest intention.

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

In combination with a gas-cock having a turnable key, the stem of which is provided with a stop-pin adapted to contact with a fixed flange on the cock, a safety attachment therefor, consisting of a yoke, independent of the key-stem and fitted freely thereto to normally lie with the extremities of its arms in the path of movement of the stop-pin, and adapted to confine said pin between them and the ends of the fixed flange, whereby the key is normally locked, a holder or clamp supported by the fixture, and having a hanger on which the yoke is slidably fitted, a suitable pull attachment to the yoke for moving it in a plane to free the stop-pin of its extremities, and enable said pin to ride upon its adjacent surface in turning, as the key is turned to open the cock, whereby the cock may remain open, and a spring on the hanger, bearing on the yoke, to automatically return it to its normal position as the pin passes from its surface, as the key is turned to close the cock.

In witness whereof I have hereunto set my hand.

JAMES FRANKLIN SMITH.

Witnesses:

D. B. RICHARDS,
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