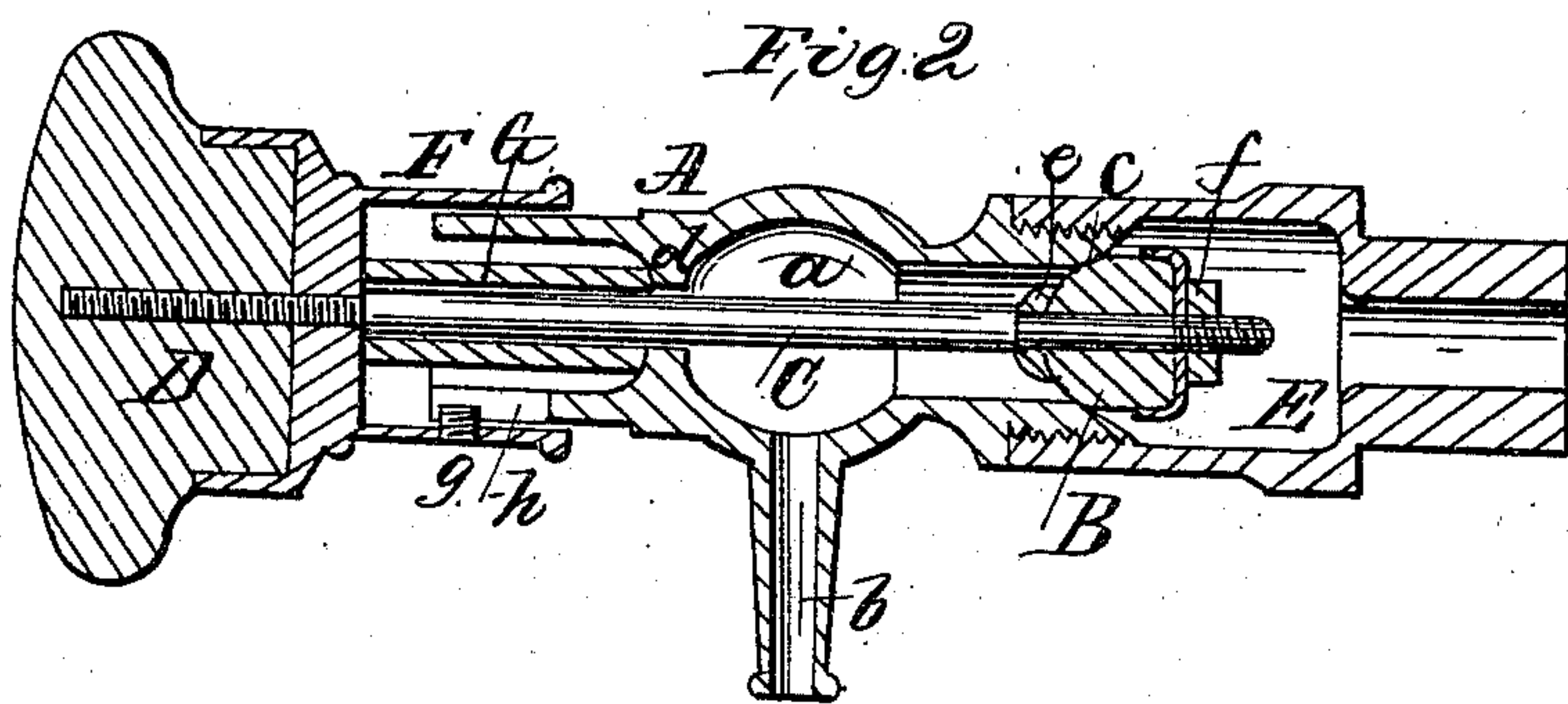
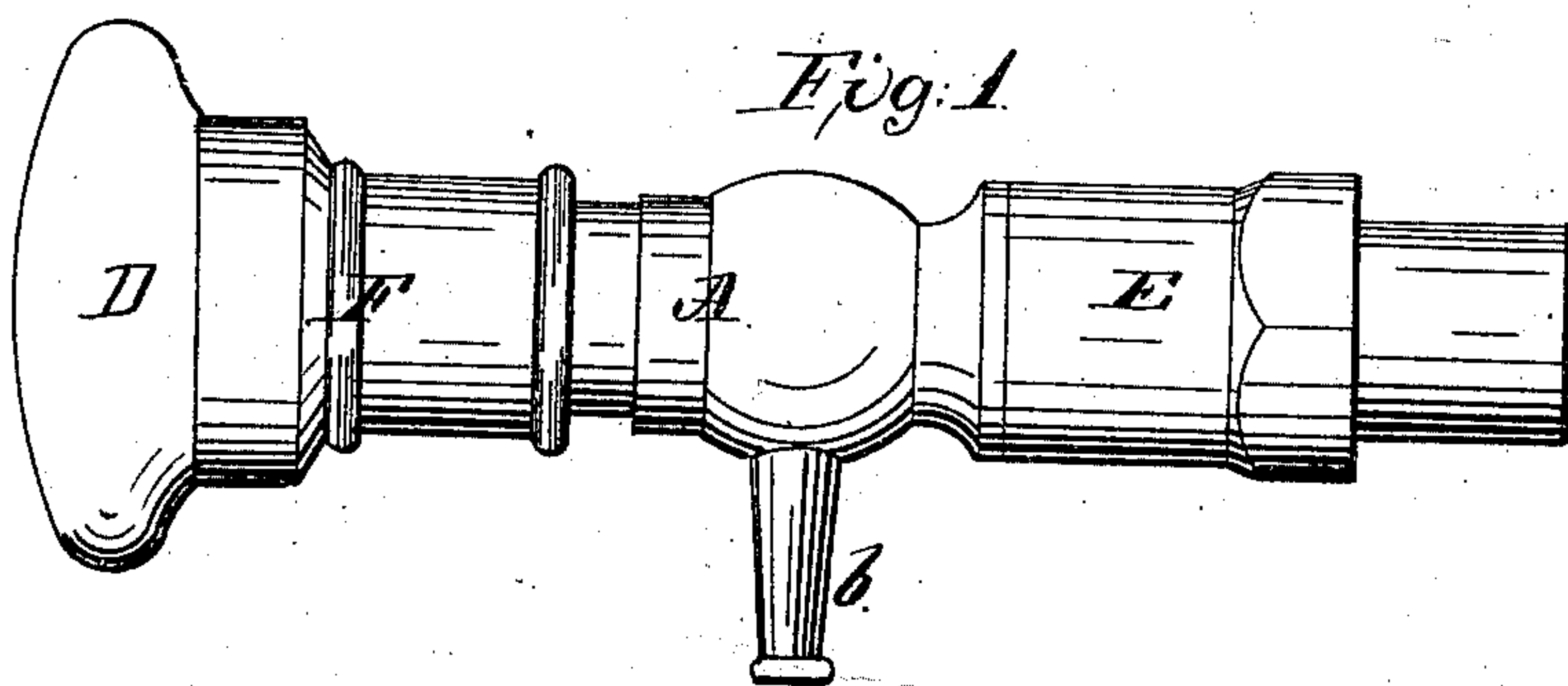


A. FULLER,  
GAGE COCK.

No. 66,579.

Patented July 9, 1867.



Witnesses:  
J. M. Coomb  
G. W. Reed

Inventor:  
Albert Fuller

# United States Patent Office.

ALBERT FULLER, OF BROOKLYN, NEW YORK.

*Letters Patent No. 66,579, dated July 9, 1867.*

## IMPROVEMENT IN GAUGE-COCKS.

The Schedule referred to in these Letters Patent and making part of the same.

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, ALBERT FULLER, of Brooklyn, in the county of Kings, and State of New York, have invented a certain new and useful improvement on Gauge-Cocks, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, forming part of this specification, and in which—

Figure 1 represents a longitudinal exterior view of a gauge-cock constructed according to my improvement; and

Figure 2, a longitudinal section of the same.

Like letters indicate like parts in both figures.

The nature of my invention consists in a peculiar construction of gauge-cocks, in which a conical and preferably soft or elastic valve is opened and closed by action in a straight line or course on the valve-stem, through an outside knob and interior spring operating in connection with an internal fixed collar and external sliding-ferrule attached to the knob, the same forming a cock which is free from leakage at the knob, and not liable to be bent or broken on roughly driving in the knob to open the valve.

Referring to the accompanying drawing, A represents what may be termed the body of the cock, having a central or intermediate chamber, *a*, from which branches the outflow pipe or tube *b*. The one end or portion of this body A forms a seat, *c*, to a conical and preferably soft or flexible valve, B, the stem C of which passes through the chamber *a*, guiding-collar *d*, and into the knob or handle D, in which it is screwed or secured at its one end, while its other end fits through the valve with which it is connected by a cup, *e*, in front, and washer or cap and nut, *f*, in the rear. E is a coupling screwed on to the body A at its one end, for attaching the cock to the boiler or other vessel. The knob D is fitted with an inner projecting collar or ferrule, F, constructed to form a tight but sliding socket outside of and over the outer end of the body A, and along which it may be guided in a straight line or course by a pin or screw, *g*, projecting within a slot, *h*, of the body. Between this ferrule or inner end of the knob and the guiding-collar *d* is arranged a spring, G, through which the valve-stem is made to pass, and which is preferably formed of an India-rubber cylinder, the one end of it abutting against what may be styled the inner end of the knob or its collar F, and the other end against the guiding-collar *d*.

From this description it will be obvious, that on pressing or driving in the knob D against the action of the spring G, the valve B is opened, to allow the escape of steam, water, or other fluid, as the case may be, into the chamber *a* and out through the tube *b*, and that, on releasing the knob D from outside pressure on it, the spring G throws out the knob and closes the valve B. This is, however, only the general action, about which nothing in the abstract is claimed as new; but there are peculiarities in the construction of such a cock as represented and described which, in a practical point of view, secure to it important advantages. Thus, not only is or may be the knob or valve-stem guided internally by the collar *d*, but also externally by the outside sliding-collar F, which not only serves to stiffen and steady the action, reducing the liability to bending or breakage, but lessens the possibility of leakage at or about the inner end of the knob, which, in case of steam, is liable to produce a scalding action or effect. It is here, or in this connection also, that the soft or flexible valve B, faced by the cup *e* and adjusted by the nut *f*, and operating in concert with the spring G, has an important advantage. Thus, though another form of spring G may be used, where such, as in the case of an India-rubber cylinder, has end-bearings against the inside of the knob and collar *d*, preferably made to also act as a guide to the valve-stem, said spring serves at both ends to shut off escape from the chamber *a* round the valve-stem outside of or round the interior of the knob, and on screwing up from time to time, if requisite, the nut *f*, not only is the valve B tightened in or on its seat, but a compression of the spring G is produced by drawing up or inwards the knob, with its sliding-ferrule or collar F, thereby reducing the liability to escape at or about the knob, or, it may be said, in connection with the inside collar *d* and outside collar F, rendering the same impossible. If preferred, the outside collar F may be arranged to slide inside the outer extension or end of the body A. Also, in some cases, the spring G may be dispensed with; or, if a spring be used, it need not necessarily have a valvular character.

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

The arrangement and combination of the sliding-collar F, interior collar *d*, and spring G, with the body A and valve-stem C, said spring having a valvular or closing action at its opposite ends, essentially as shown and described.

ALBERT FULLER.

Witnesses:

J. W. COOMBS,

G. W. REED.