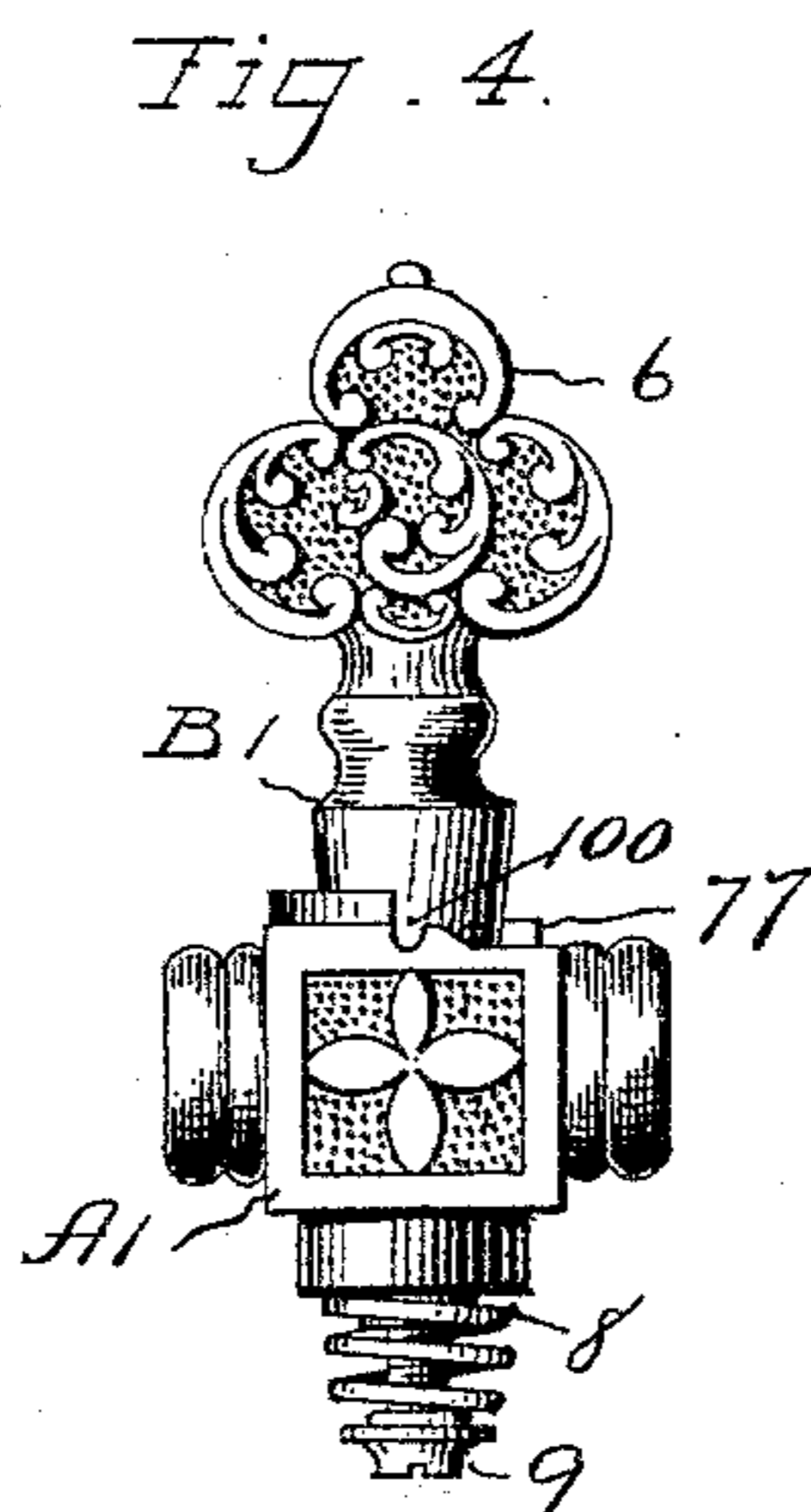
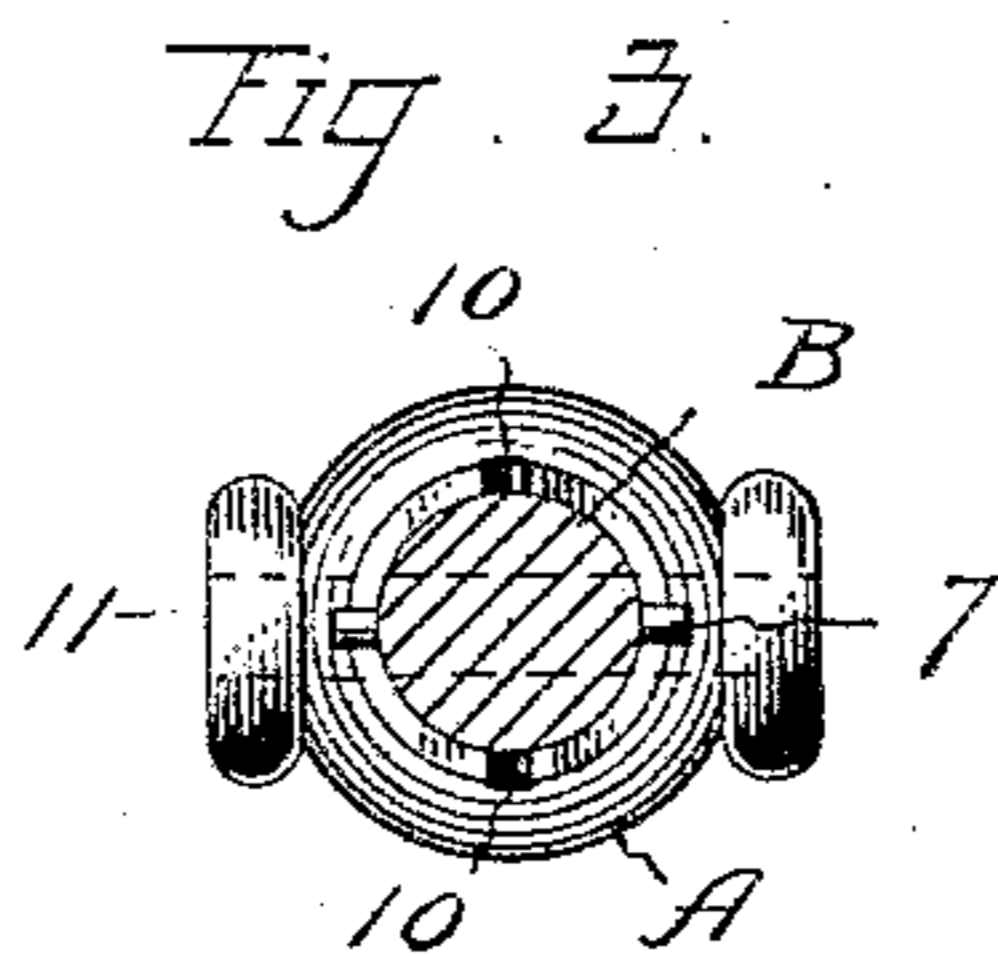
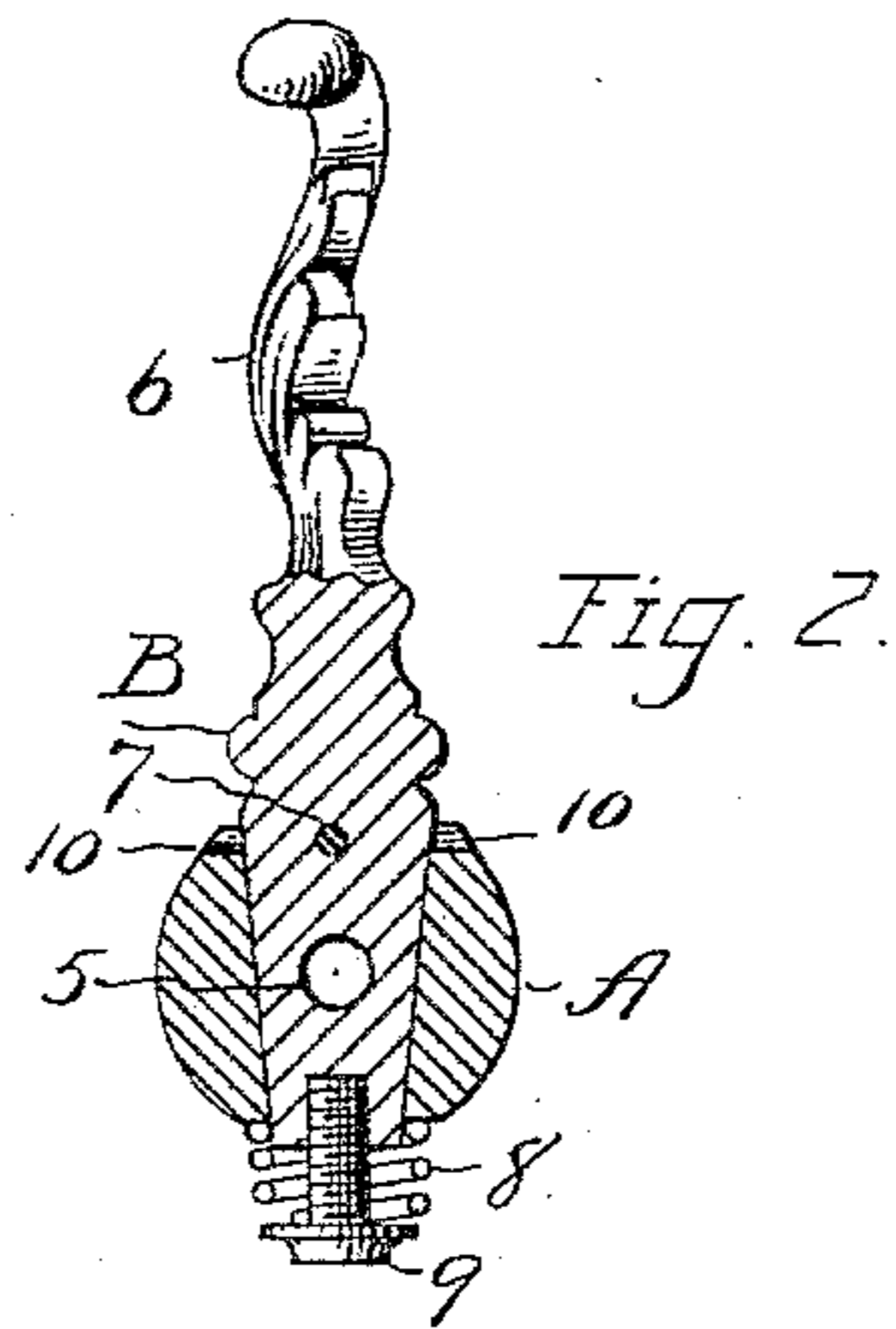
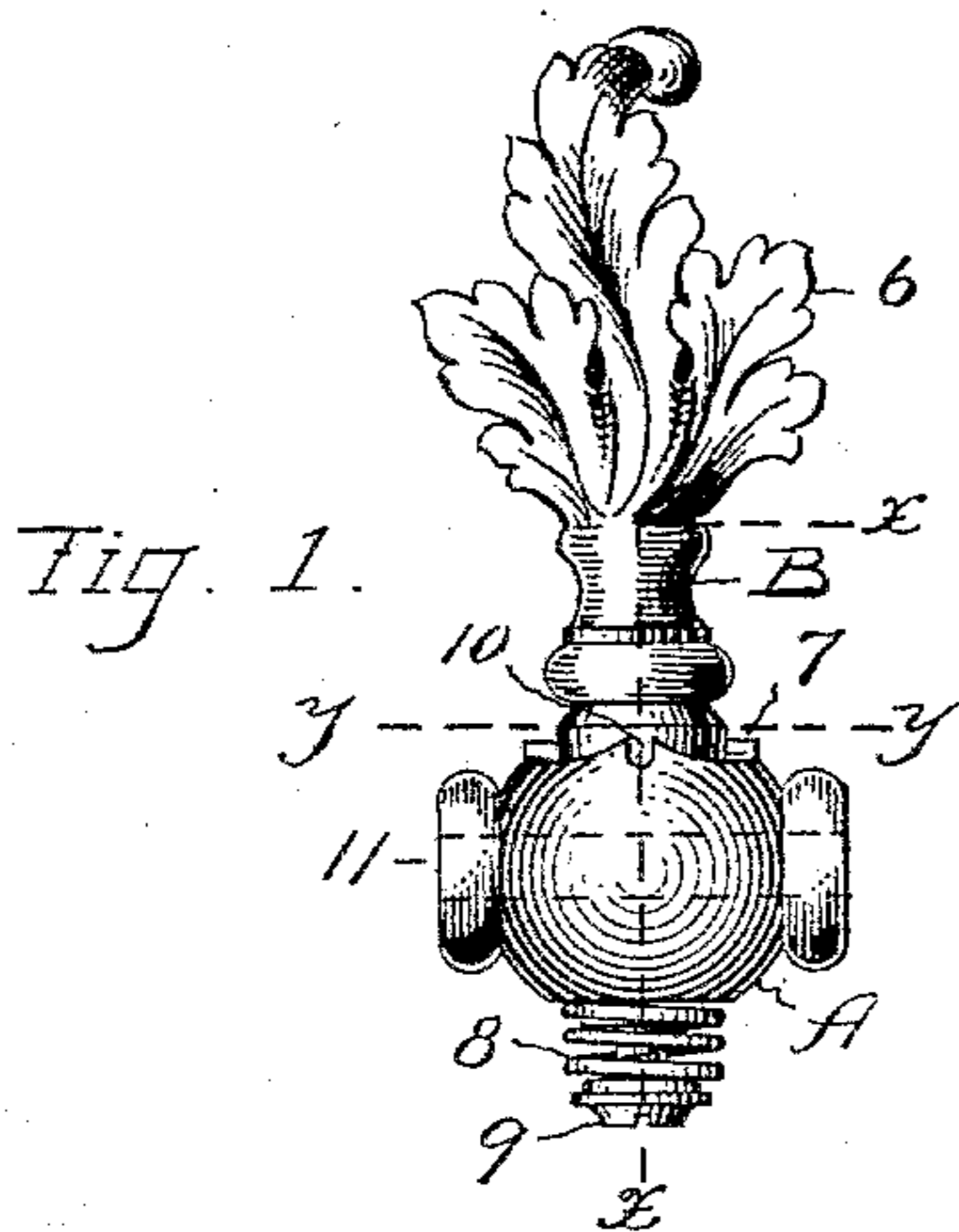


(No Model.)

J. DUNLOP.
SAFETY GAS COCK.

No. 597,897.

Patented Jan. 25, 1898.



WITNESSES

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UNITED STATES PATENT OFFICE.

JOHN DUNLOP, OF MERIDEN, CONNECTICUT, ASSIGNOR OF ONE-HALF TO
HUGH HIGGINSON, OF SAME PLACE.

SAFETY GAS-COCK.

SPECIFICATION forming part of Letters Patent No. 597,897, dated January 25, 1898.

Application filed February 10, 1897. Serial No. 622,752. (No model.)

To all whom it may concern:

Be it known that I, JOHN DUNLOP, a citizen of the United States, residing at Meriden, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Safety Gas-Cocks, of which the following is a specification.

My invention relates to improvements in safety gas-cocks; and the object of my invention is to fasten the plug of the cock in its closed position by merely turning the handle.

In the accompanying drawings, Figure 1 is a side elevation of my safety-cock. Fig. 2 is a vertical section thereof on the line $x x$ of Fig. 1. Fig. 3 is a sectional plan view of the same on the line $y y$ of Fig. 1, and Fig. 4 is a side elevation of my safety gas-cock in a slightly-modified form.

A designates the body of the cock, the major portion of which may be in any of the ordinary forms.

B designates an ordinary tapering plug fitted to said body and provided with the usual transverse passage 5 and a handle 6. I also provide said plug with a stop-pin 7, that projects radially on opposite sides, (in the preferred form,) and with a spring 8 between the body A and head of the screw 9, acting to hold the tapering plug firmly within its seat in the body of the cock with a yielding pressure, so as to permit of an endwise movement of the plug, as hereinafter described.

That portion of the body which faces the stop-pin 7 is provided with recesses 10, extending at a right angle to the ordinary passage through the body, said passage being indicated by parallel broken lines 11 in Figs. 1 and 3, whereby the gas-cock is closed whenever the stop-pin rests in said recesses. These recesses should be deep enough to permit the tapering plug to firmly seat itself under the influence of the spring 8. The top of the body between the recesses 10 is gradually depressed and at a point midway between said recesses the body should be so low that the stop-pin when in said midway position, as it is when the gas-cock is fully opened, shall not bear hard enough upon the body to prevent the tapering plug from properly seating itself to make a tight joint. The drawings show the cock in its open position,

with the stop-pin half-way between the recesses.

Upon turning the plug in either direction the stop-pin rides up the inclines toward the top of the recesses, thereby moving the plug endwise against the force of the spring 8. When the stop-pin registers with the recesses, the spring causes the plug to snap down to its seat, with the stop-pin in said recesses, thereby fastening the plug in its closed position. In order to open the cock, it is only necessary to pull the plug endwise against the force of the spring to lift the pin out of the recesses, and then the plug can be turned in either direction to open the cock. If the inclines leading from the top of said recesses slant gradually to the point midway between them, the spring will have a tendency to bring the plug to or nearly to the position for fully opening the cock.

In Fig. 4 I have shown substantially the same construction excepting that the body A' is cut away only on one side of the recesses 100, so that the plug B' can be turned only half-way around, and that the space over which the stop-pin 77 passes is more abruptly inclined, leaving more of a flat place between the recesses, so that the spring does not act to open the cock to the same extent as it does when the inclines are more gradual and nearly meet each other, and therefore the plug may be placed in any desired partially-open position within certain limits. It is evident that the abrupt and separated inclines can be used on both sides of the recess in a cock where the plug may be given a complete revolution as well as it can where the plug is limited to a half-revolution, as in Fig. 4.

By my improvement the plug is fastened in its closed position by the mere act of turning the plug, and that position is so plainly indicated by the snapping of the stop-pin into the recess or recesses that one is not liable to accidentally leave the cock in its open position.

I claim as my invention—

1. In a gas-cock, the combination of the cock-body having the locking-recess with an incline by the side thereof that slants away from said recess, the plug having a stop-pin

for engaging said incline and stop-recess, and
a spring, acting to force the plug endwise to
its seat and bring the stop-pin into said re-
cess after running up said incline and to the
5 bottom of said incline after leaving said stop-
recess, the said incline and stop-recess both
extending low enough to permit the plug to
come to its seat both when the pin is in the
locking-recess and when it runs down the in-
10 cline, substantially as described.

2. In a gas-cock, the combination of the

cock-body having the recesses 10 and in-
clines on each side that slant away from said
recesses, the plug having a stop-pin for en-
gaging said recesses and a spring acting to 15
force the plug endwise and bring the stop-
pin into said recesses substantially as de-
scribed.

JOHN DUNLOP.

Witnesses:

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GEORGE L. KING.