

(No Model.)

C. H. DE WITT.

GAGE COCK.

No. 326,022.

Patented Sept. 8, 1885.

Fig. 1.

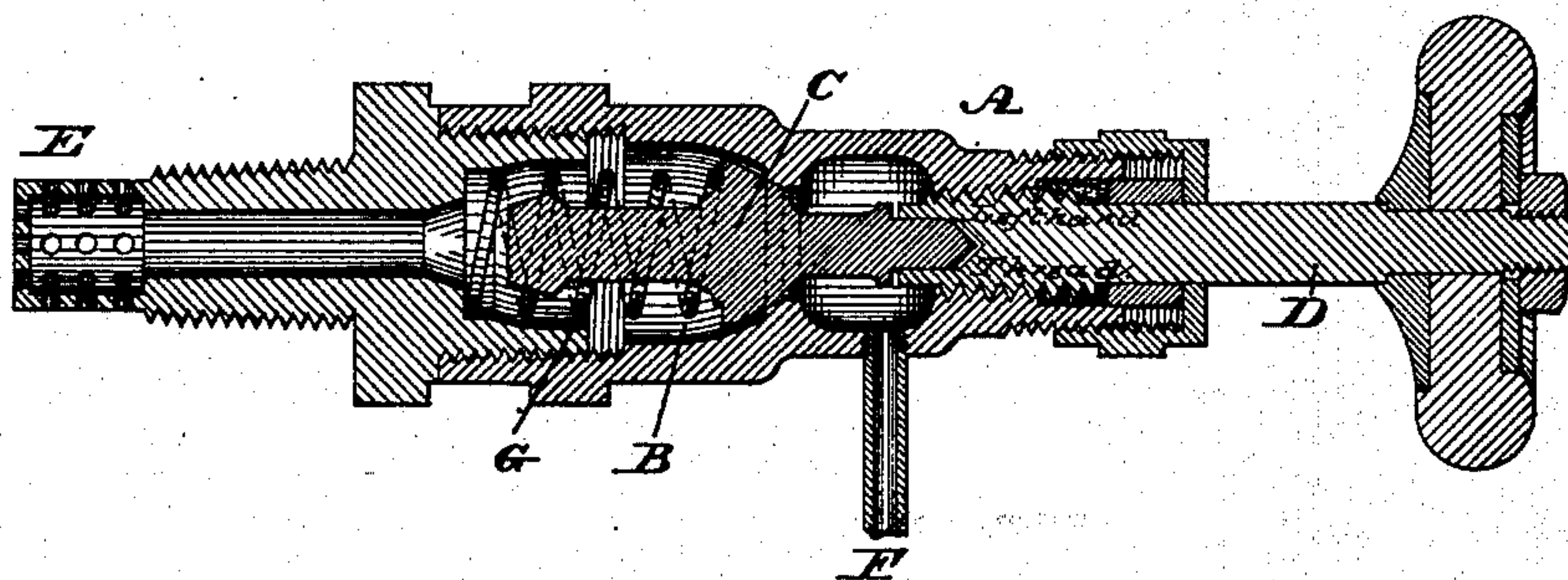


Fig. 2.

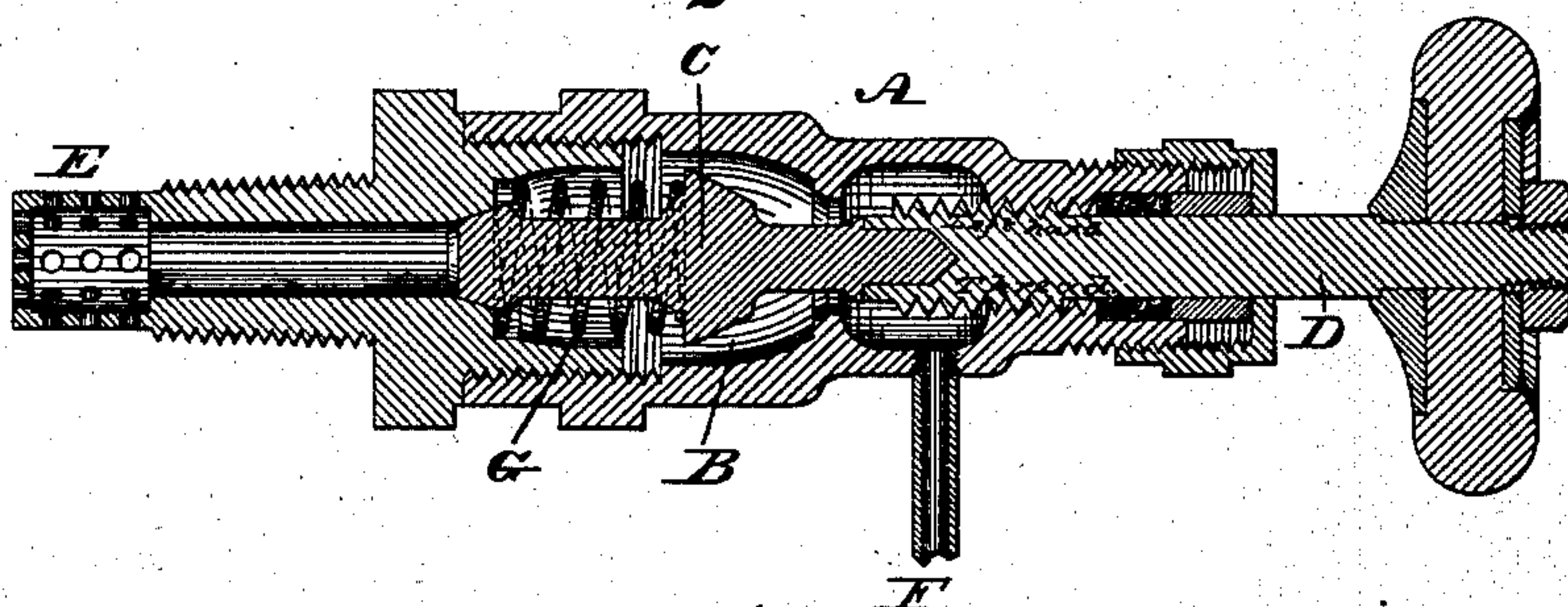
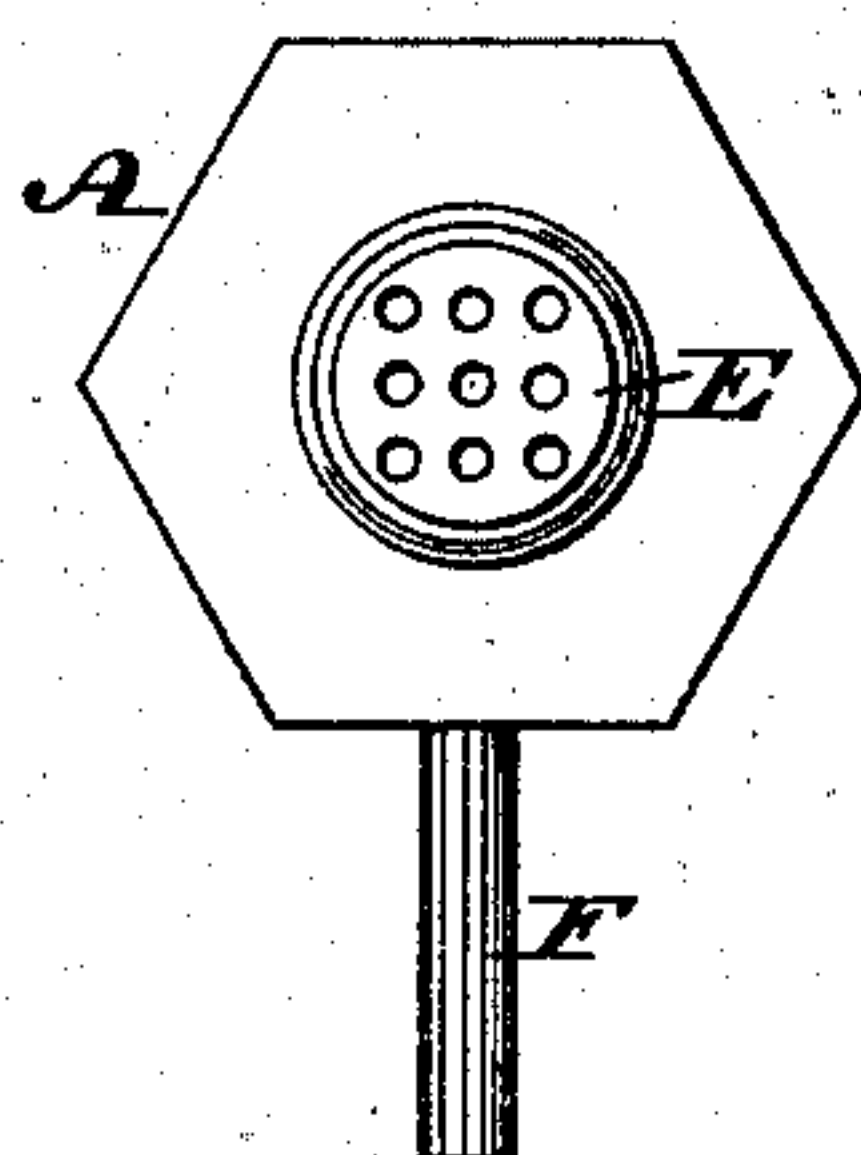


Fig. 3.



WITNESSES:

L. P. Grant,  
H. F. Kircher

INVENTOR:  
Chas. H. De Witt  
BY John A. Niederhiser ATTORNEY.



# UNITED STATES PATENT OFFICE.

CHARLES H. DE WITT, OF WEATHERLY, PENNSYLVANIA.

## GAGE-COCK.

SPECIFICATION forming part of Letters Patent No. 326,022, dated September 8, 1885.

Application filed April 11, 1885. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES H. DE WITT, a citizen of the United States, residing at Weatherly, in the county of Carbon, State of Pennsylvania, have invented a new and useful Improvement in Gage-Cocks, which improvement is fully set forth in the following specification and accompanying drawings, in which—

10 Figures 1 and 2 represent longitudinal sections of a gage-cock embodying my invention, the valves being in different positions, and Fig. 3 an end view thereof.

The nature of my invention is a gage-cock 15 in which the valve is prevented from wearing and tearing its seat and forcibly closing against the same.

Referring to the drawings, A represents the shell or body of a gage-cock having a valve-chamber, B; C, the valve; D, the valve-stem; 20 E, the inlet, and F the discharge-pipe, said stem and valve being loosely or freely connected.

The chamber B has a valve-seat at each end, 25 and the valve C is double, or has two heads located at opposite places so that it may close against either seat.

Within the chamber B is a spring, G, which 30 bears against a shoulder on the valve C for forcing the valve in the direction toward the stem D when there is no pressure in the boiler.

As previously stated, the stem and valve are loosely or freely connected. This is accomplished in the present case by forming an 35 opening in the inner end of the stem, and the adjacent end of the shank of the valve enters said opening; or, if desired, the opening may be in the shank of the valve, and the end of the stem enters the same; but in all cases 40 there is a loose or free connection of the valve and its stem, so that the rotation of the stem does not impart rotation to the valve, it being noticed that the steam keeps the valve properly against the seat.

45 When the parts are in the position shown in the drawings, Fig. 1, the cock is properly closed, the main head of the valve resting against its seat of the valve. In order to

open the valve the stem is rotated, and the head of the valve just referred to leaves its 50 seat, the effect of which is evident, it being seen that the valve moves in advance of the stem without, however, rotating.

The valve may be closed by properly rotating the stem, in which case it reaches its 55 seat, due to the action of the steam. Should there be leakage of the valve at said seat, then the seat on the end of the chamber toward the inlet is brought into service, in which case the stem is rotated until the relative 60 head of the valve is permitted to reach the last-named seat, and the latter is then employed for the purposes of the cock instead of the seat, where the leakage occurs.

While the valve operates with certainty in 65 relation to either of its seats, its non-rotating nature prevents it from wearing or tearing the seat, and as the stem is threaded said stem causes the valve to move gradually and easily and the valve is held tight on its seat. 70

The inlet portion E of the cock which is within the boiler is perforated around its periphery and at the end, so that water is permitted to circulate constantly through said 75 portion, thus preventing the openings in said portion from closing and the passage of dirt and scale through the cock.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is— 80

1. A gage-cock having its valve and valve-stem freely connected by having a projection on one of the said parts fitting in a recess of the other, substantially as described.

2. A gage-cock having a double valve, a 85 valve-stem freely connected with the valve, and a spring, substantially as described.

3. A gage-cock having a double valve, a valve-chamber with two seats, a valve-stem freely connected with the valve, and a spring 90 bearing against the latter and pressing it toward the stem, substantially as described.

CHAS. H. DE WITT.

Witnesses:

JOHN D. KROMER,  
GEO. H. JONES.