S. MYERS.

BLOW OFF COCK.

No. 183,197. Patented Oct. 10, 1876.

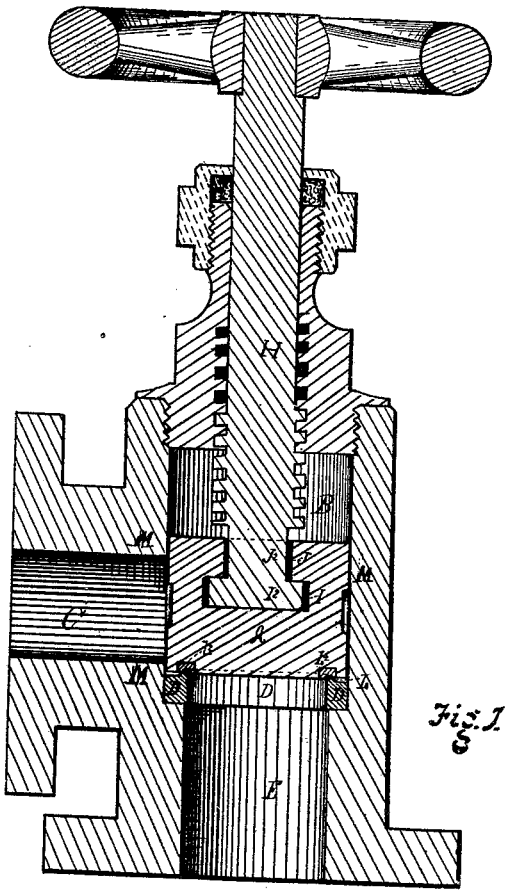

Fig. 1.

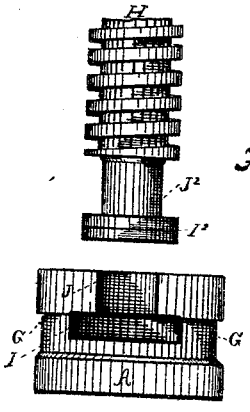

Fig. 2.

WITNESSES.

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SAMUEL MYERS, OF PITTSBURG, PENNSYLVANIA.

IMPROVEMENT IN BLOW-OFF COCKS.

Specification forming part of Letters Patent No. **183,197**, dated October 10, 1876; application filed July 1, 1876.

To all whom it may concern:

Be it known that I, SAMUEL MYERS, of the city of Pittsburg, in Allegheny county, State of Pennsylvania, have invented a new and useful Improvement in Blow-Off Valves for Steam-Boilers, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings, of which—

Figure 1 is a vertical section, showing all parts of my improved blow-off valve; and Fig. 2 is a detached view, showing the mode of attaching the valve to the stem which operates it.

The object of my invention is to avoid a frequent cause of derangement and injury to blow-off valves—viz., the lodgment of sediment or scale on the valve-seat, or on the usual guide-piece or bridge below the valve.

To accomplish this I so construct the valve that it fits somewhat loosely at top and bottom of chamber B, and provide it intermediately with a groove or channel, *a*, around its central portion, opposite the inlet-opening. It is, however, requisite the valve A shall fit sufficiently close at the bottom to prevent pieces of thin scale from entering between it and the inner sides of the casing M, but at the same time permit the passage of water for the purpose of washing away any solid matter that may have lodged on the seat, so that the valve will seat perfectly. In case a piece of scale should be caught under the valve while passing the inlet-opening, and project into the chamber, it will be sheared off between the edge of the inlet and the edge of the descending valve, and will be washed out, as before stated, through the discharge-opening E; and, again, the cylindrical chamber serving as a guide to the loosely-fitting valve, I am enabled to dispense with the usual bridge or guide-piece and the lower stem of the valve.

To secure the passage of a sufficient amount of water while the valve is closing, I provide it with the aforesaid circumferential groove or channel G at a point opposite the inlet-orifice C. This groove permits the water to pass around the valve and thus escape downward in equal volume or with equal force on all sides of the valve.

By my improved construction, therefore, I not only provide for guiding the valve in its chamber, and preventing passage of scale while the valve is closing, but at same time cause the valve-seat to be washed by a descending current, so that the valve will be properly seated. The valve likewise operates with little friction, owing to its being loosely fitted, while it is guided with such accuracy as to cause it to be seated accurately. The valve is properly provided with a shouldered slat, I J, to adapt it for attachment to the inverted T-shaped end I^2 J^2 of the stem.

I do not claim, broadly, a valve provided with a circumferential groove, nor a valve fitting loosely in its chamber or socket; but

I claim as my invention—

The improved blow-off cock for steam-boilers, composed of the casing M, provided with the inlet-tube C, the annular beveled seat, and downward discharge-tube, and the valve A, provided with a circumferential groove at a point opposite the inlet, and fitted in said casing, as shown and described, whereby it is adapted to be guided accurately to its seat, also shear off, as it descends, any scale that may project from the inlet-opening, but to exclude scale when once said inlet has been passed, and yet permit the downward escape of water, as specified.

SAMUEL MYERS.

Attest:

H. J. BIGGER,

ANDW. PATTERSON.