

John Warren.- Valve or Stop Cock.

117704

PATENTED AUG 1 1871



Fig. 1.

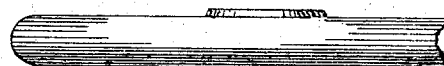


Fig. 2.

Scale: Machine-Size.

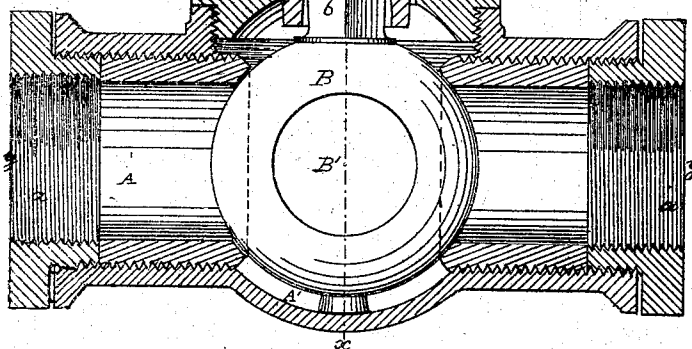


Fig. 3.

Witnesses:
Fred. Artis-
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Inventor:
John Warren
by his attys A.H. & R.K. Evans

UNITED STATES PATENT OFFICE.

JOHN WARREN, OF WESTON, ASSIGNOR TO HIMSELF AND JOHN C. CHAPMAN,
OF WALTHAM, MASSACHUSETTS.

IMPROVEMENT IN VALVES.

Specification forming part of Letters Patent No. 117,704, dated August 1, 1871.

To all whom it may concern:

Be it known that I, JOHN WARREN, of Weston, Massachusetts, have invented an Improvement in Valve or Stop-Cocks, of which the following is a clear, full, and exact description, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a longitudinal vertical section. Fig. 2 is a cross vertical section. Fig. 3 is a horizontal section through the line *y y*.

My invention has reference to that class of valve or stop-cocks subjected to the influence of heat or steam whereby the plug becomes expanded; and it consists in the use of a ball-valve and seat so constructed that its working cannot be interrupted or influenced by steam or heat.

To enable others skilled in the art to make and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawing, A represents the cock, constructed with a globular projection, A', and with the usual pipe connections *a a*. This cock may be made to screw together in the center, making the body in halves with fast seat. B is a loosely-fitting ball or globe in the globular projection of the cock, with the tubular opening B' through its center, corresponding in size with the opening through the cock. On the upper portion of the ball is cast or secured the projection *b*, (see Fig. 1,) with square or flat sides, over which fits the key-rod C, and by which the ball is caused to turn in the cock, and the valve opened or closed at pleasure. When the valve

is closed the introduction of steam into the pipe forces the ball against the opposite side of the cock and thus completely and perfectly prevents the escape of the steam. It is evident, however, from the description thus given of my invention, that the heat of the steam thus brought in contact with the valve cannot, in the slightest, affect its easy working, or cause either the valve or its seat to wear, as is always the case with the plug-cock, which fits tightly in its seat, and which necessarily expands more than the body of the cock when brought in contact with the steam, thus rendering its control frequently difficult and causing it to wear. The other portions of the cock are made in any of the usual styles for gas, water, or fluids.

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

1. The valve or stop-cock A, having a perforated metal ball-valve, B, working loosely in its seat, and constructed and operated substantially as and for the purpose set forth.

2. The cock A, having the globular projection A', in combination with the perforated ball-valve B working loosely in its seat, as described, and having the projection *b*, on which fits the key-rods C, substantially as shown, and for the purpose set forth.

JOHN WARREN.

Witnesses:

DANL. F. VILES,
J. M. SHERMAN.