

S. D. FALES.
SCREW STEAM VALVE COCK.

No. 47,097.

Patented Apr. 4, 1865.

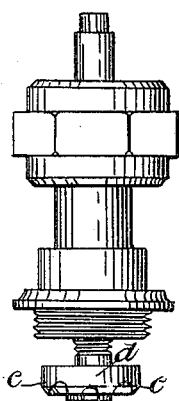


Fig:1

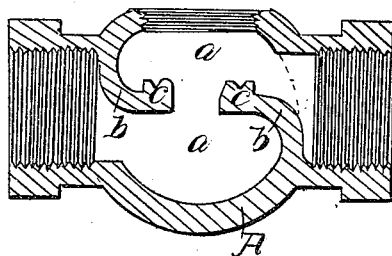
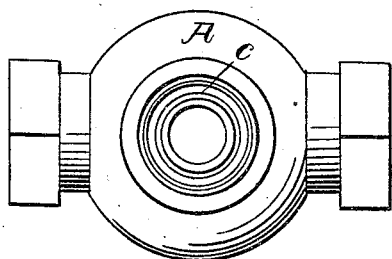


Fig:2.



Witnesses:
John D. Thurston.
Benj. F. Thurston.

Inventor:
Samuel D. Fales

UNITED STATES PATENT OFFICE.

SAMUEL D. FALES, OF CENTRAL FALLS, SMITHFIELD, RHODE ISLAND.

IMPROVEMENT IN SCREW-STEM-VALVE COCKS.

Specification forming part of Letters Patent No. 47,097, dated April 4, 1865.

To all whom it may concern:

Be it known that I, SAMUEL D. FALES, of Central Falls, Smithfield, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Screw, Steam, and Water Valve Cocks; and I do hereby declare that the following specification, taken in connection with the drawings, making a part of the same, is a full, clear, and exact description thereof.

Figure 1 is a view, partly sectional and partly in perspective, showing the valve with the valve-seat and the passages. Fig. 2 is a perspective view of the globe in which the passages are contained, showing the peculiar form of the valve-seat.

A steam or water screw valve as heretofore made consists of a globe, A, within which are the passages *a a*, separated by the partition *b*, in which partition is a conical or tapering valve-seat fitted to receive a valve of the variety known as "puppet-valve," which is raised from the seat so as to connect the passages by turning the stem, upon which is the thread of a screw working in a corresponding thread cut in a stationary nut or collar of the packing-box, through which the stem passes. This description of valve-cock, which is more extensively used than any other for steam and water pipe connections, is very liable to become leaky, for the obvious reason that the valve has no other guide to find its proper seat than the stem which works in the packing-box, and if this becomes worn or is packed harder upon one side than another the valve will have a tendency not to fill the opening perfectly.

My improvement consists in so construct-

ing the valve and its seat that the latter shall act as a guide to the former as the port is being closed, and shall always present a surface in opposition to this tendency of the valve to wear. In all other respects the apparatus is the same as the one heretofore in common use described.

Instead of having the joint between the outer edge of the valve and the inner edge of the seat, I surround the edge of the opening in the partition *b* which connects the passages with an annular V-shaped channel or groove, *c*, and construct the valve *d* with a corresponding ring, *e*, upon its face, which shall be a counterpart of the channel, to which it is ground, so as to make a tight joint when the two are in contact. It is obvious that by this means the valve will be more readily and certainly guided to its seat than with the old method of construction, and; furthermore, that from the fact that there are two ground surfaces formed by the sides of the channel with the corresponding sides of the ring in direct opposition to any tendency of the valve to wear at any part, instead of one surface only, it is evident that the valve must continue to remain tight for a much longer period of time.

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

Constructing the valve and valve-seat for a steam or water valve cock in the manner substantially as described, for the purposes specified.

SAMUEL D. FALES.

Witnesses:

JOHN D. THURSTON,
BENJ. F. THURSTON.