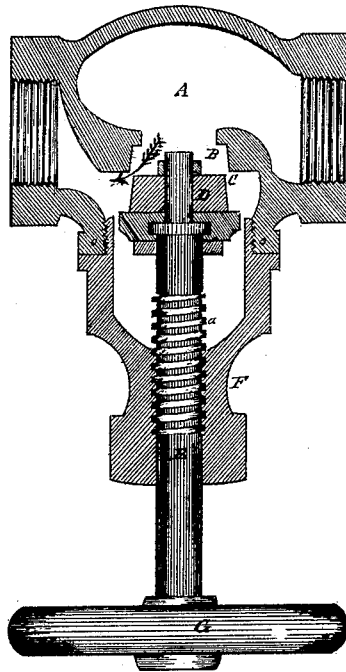


J. JOHNSON.

Valve Seat.

No. 112,047.

Patented Feb, 21, 1871.



Witnesses

G. B. Miller
H. J. May

Inventor

John Johnson

UNITED STATES PATENT OFFICE.

JOHN JOHNSON, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN VALVES.

Specification forming part of Letters Patent No. **112,047**, dated February 21, 1871.

To all whom it may concern:

Be it known that I, JOHN JOHNSON, of the city of Brooklyn, Kings county, and State of New York, have invented new and useful Improvements in Globe-Valves; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing, forming part of this specification, and to the letters of reference marked thereon.

This invention relates to that class of valves known as "globe-valves;" and it consists in the construction and arrangement of the valve and its seat, as will be more fully explained hereinafter.

The drawing shows a vertical section of a valve having my improved valve and seat therein, in which—

A refers to the casing or globe of the valve, which has the usual threads in its ends for the reception of the pipes with which it is to be connected. It also has a diaphragm extending through or across it, through which there is an aperture formed for the passage of steam or other gases, or of fluids. This diaphragm has formed in it a tapering or conical valve-seat, B, as shown in the drawing, so that as the elastic valve is forced down into it, it shall be caused to expand by being brought in contact with a projection at the bottom of such seat, and thus the valve be made to press against the walls of its seat throughout its entire surface, by which means a tight joint is formed upon its lower or smallest end and around its periphery.

The valve D is conical, and is to be of such dimensions as to cause it to fit into its conical seat B, it having an aperture through its center to receive the stem or spindle E, to which it is to be attached in any suitable manner.

This valve is to be made of rubber, gutta-percha, or other flexible material, in order

that when it is forced into its seat it shall have its diameter increased, so as to insure its filling and fitting its seat, as above described.

Above this conical valve, and upon the stem E, there is placed a metallic washer, the diameter of which is somewhat greater than that of the valve. This washer is attached to the stem E as shown in the drawing, or in any other manner that will allow it to play upon such rod or spindle, in order that it may turn freely thereon, and so that it may cause the valve to fit squarely in or upon its seat, even though the stem should not be in exact line with such seat.

Upon the diaphragm, and above or outside of the conical seat, there is formed another seat or surface, which is at right angles to the axis of the globe or core A, and upon which the collar D may rest whenever it shall be forced down far enough.

This valve is provided with a stem, E, which is of the usual kind, it having a thread cut upon it for moving the valve to and from its seat by means of a wheel or crank placed upon its outer end. It also has the usual guide F for the stem, which guide screws into the globe or core at o o.

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

In a globe-valve, the combination of a conical double-seated flexible valve and a conical recessed seat, their arrangement with reference to each other being such that when the valve is pressed into its seat its diameter may be enlarged, so as to insure its fitting against the conical walls of such seat, substantially as and for the purpose set forth.

JOHN JOHNSON.

Witnesses:

G. B. MILLER,
H. J. MAY.