H. R. CORKHILL.
Globe-Valve.

No. 209,382. Patented Oct. 29, 1878.

Fig. 2.

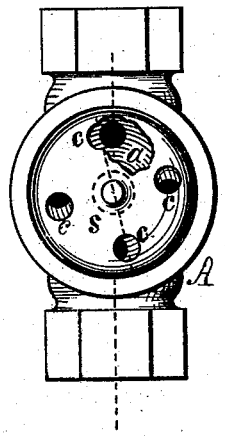
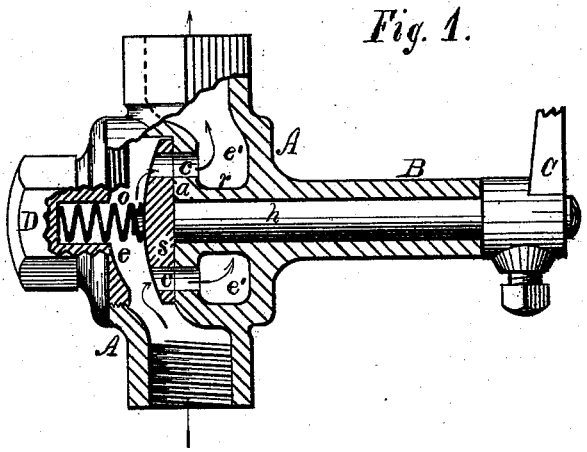


Fig. 1.



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UNITED STATES PATENT OFFICE.

HENRY R. CORKHILL, OF ROCHESTER, NEW YORK.

IMPROVEMENT IN GLOBE-VALVES.

Specification forming part of Letters Patent No. **209,382**, dated October 29, 1878; application filed December 27, 1876.

To all whom it may concern:

Be it known that I, HENRY R. CORKHILL, of Rochester, in the county of Monroe and State of New York, have invented a new and useful Improvement in Globe-Valves, which improvement is fully set forth in the following specification and accompanying drawing, in which—

Figure 1 is a central section of the globe, showing the contained valve, &c.; and Fig. 2 shows the globe or shell with the cap removed, looking in upon the valve *s*.

The object of my invention is to improve a globe-valve, principally by casting a mass in the middle of the back chamber, reaching from the partition between the chambers across to the shell of the globe, and passing the valve-stem through the mass, for the purpose of keeping the stem from coming in contact with the contents of the chamber, thus preventing leakage.

In the drawing, A is the shell or wall of a globe-valve, the interior space of which is divided into two chambers by the partition *a*, said chambers respectively opening out at opposite ends of the globe. *s* is a valve, in the form of a circular disk, seated on the partition *a*, with which it forms a steam-tight joint. The stem *h* of the valve passes out through the sleeve B, and is provided at the end with a crank or lever, C, by which it may be operated.

The valve *s* and seat or partition *a* are provided with similar openings *c*, circular or of other suitable form, and of any desired number, which, when made to coincide, form passage-ways between the said chambers *e* and *e'*. Through the sand-core placed in the mold to form the chamber *e'*, when the globe-shell A is cast, I cause a cylindrical hole to be made, which, when the shell or mold is poured, simultaneously fills with metal, forming the mass or column *r*, reaching from the partition *a* centrally across the said chamber *e'* to the outer wall of the shell. This mass or tie braces and stiffens the partition or valve-seat *a*, and when bored out forms a sleeve or sheath for the valve-stem *h*, and renders a steam-tight joint between the valve-stem and shell in the vicinity of *h* unnecessary.

Globe-valves having a separate piece fitted into one side of the shell, and reaching inward to the partition between the chambers and at right angles thereto, have been heretofore made. These pieces are fitted to place at the expense of much labor and time; and to avoid this large amount of work I at once cast a mass or column, *r*, within the chamber *e'*, substantially as shown and above described.

The chamber *e* is covered and closed by the screw-cap D, which, when unscrewed, allows the valve to be taken out. The cap D has a hole bored into the center of its inner surface, in which a spiral spring, *o*, is inserted, which, when the cap is screwed to its place, presses moderately upon the valve, holding it to its seat.

Globe-valves having the valve-stem inclosed where it passes through the chamber of the globe have been before known and used. Such, broadly, I do not claim.

I claim as my invention—

1. A globe-valve shell cast with a mass, *r*, forming a sleeve or sheath for the valve-stem and uniting or tying the partition *a* between the chambers with the outside shell, said shell and mass *r* being solid and in one piece, substantially as described, and for the purpose set forth.

2. A globe-valve consisting of a shell, A, having a tying-mass, *r*, forming a sleeve or sheath for the valve-stem, cast within the chamber *e'*, and forming one piece with the shell, in combination with valve and seat *s* and *a* and valve-stem *h* passing longitudinally through said mass *r*, all constructed and arranged substantially as shown and described.

HENRY R. CORKHILL.

Witnesses:

E. B. WHITMORE,

GEO. A. HUBBARD.