

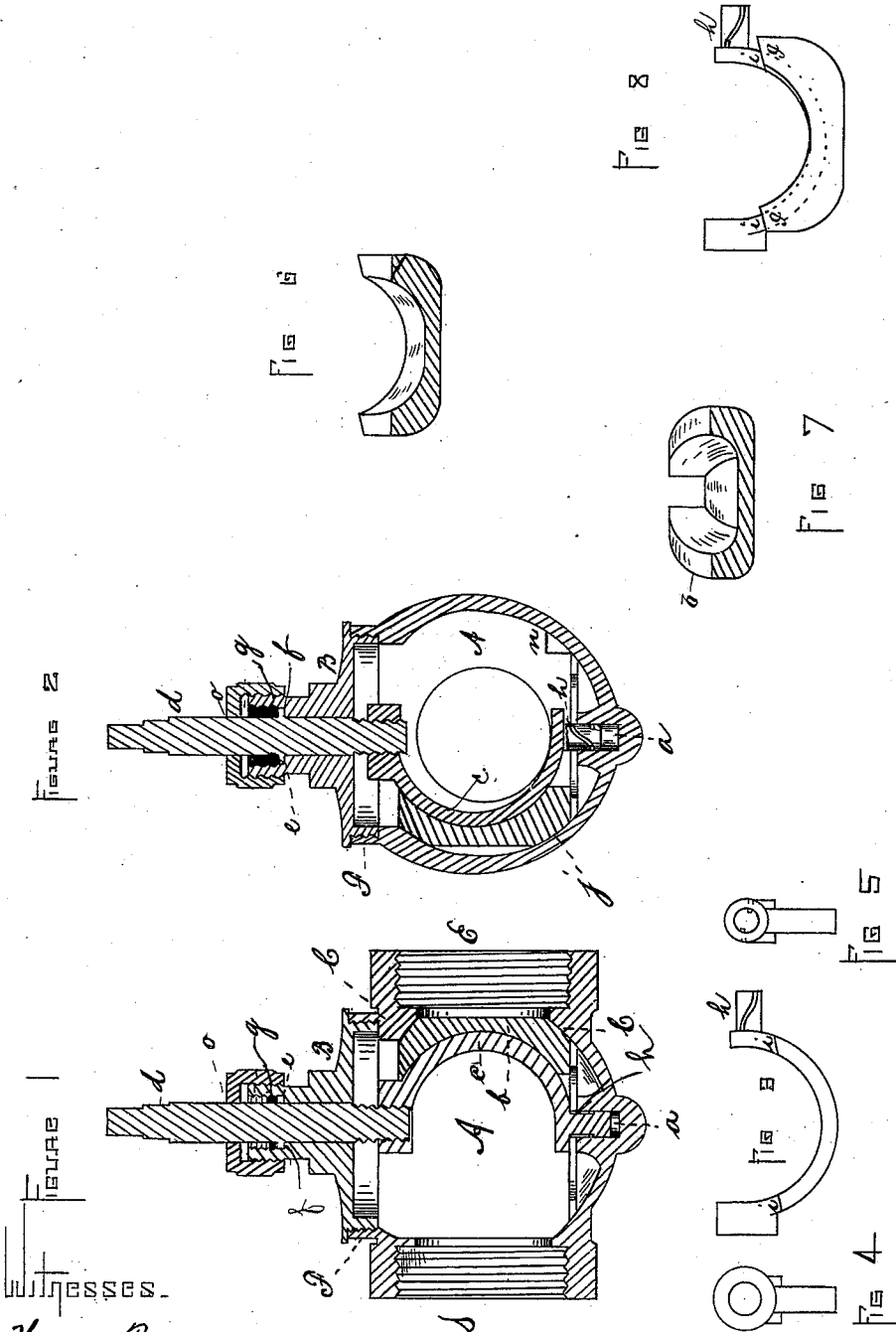
(Model.)

2 Sheets—Sheet 1.

A. B. ROHNEY.
GLOBE VALVE.

No. 357,561.

Patented Feb. 8, 1887.



Witnesses.
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Inventor - Alexander B Rohney
By Jacob Reese
Attorney

(Model.)

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Fig. 69.

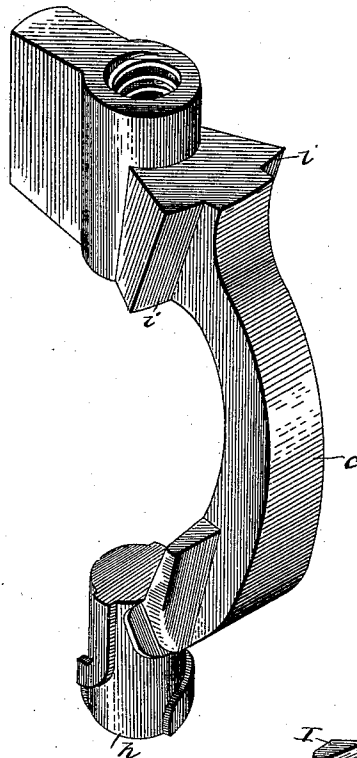
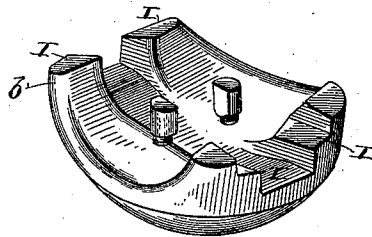


Fig. 70.



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UNITED STATES PATENT OFFICE.

ALEXANDER B. ROHNEY, OF PITTSBURG, PENNSYLVANIA.

GLOBE-VALVE.

SPECIFICATION forming part of Letters Patent No. 357,561, dated February 8, 1887.

Application filed February 27, 1886. Serial No. 193,472. (Model.)

To all whom it may concern:

Be it known that I, ALEXANDER B. ROHNEY, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Globe-Valves; and I hereby declare the following to be a full, clear, and exact description thereof, reference being had to the drawings, forming a part of same.

My invention relates to globe-valves; and it consists in the features of construction and combinations of parts, hereinafter fully described and claimed.

In the drawings, Figure 1 represents a longitudinal section of my improved straight-way globe-valve with the valve shut. Fig. 2 represents a cross-section of same with the valve open. Fig. 3 is a side view of my valve-spider. Figs. 4 and 5 are end views of same. Fig. 6 is a longitudinal section of the valve. Fig. 7 is a cross-section of same. Fig. 8 is a side view of the valve and valve-spider in place. Fig. 9 is a detail perspective of the spider removed, and Fig. 10 is a detail perspective of the valve removed.

Like letters where they occur refer to like parts.

In the construction of my improved straight-way globe-valve I use a barrel, A, having a cap, B. I then bore it out, turn down the valve-seat C, bore and thread the pipe ends D and E, bore and thread the mouth F, then dress the spider-arbor *a*. The valve *b* is then put in place, and the spider *c* placed in the valve. The cap B is then screwed onto the mouth F. The valve-stem *d* is placed into the cap B and its forward end screwed into the spider *c* until the collar *e* is up against the shoulder *f*. A lock-nut, *g*, is then placed over the valve and screwed up against the collar *e*, so that the stem may revolve freely but shall have no up or down motion. The stem *d* is then packed and the packing-follower *o* is screwed on, all of which are shown in Figs. 1 and 2, and the valve is then ready for use.

In operating my improved straight-way globe-valve, the valve-stem *d* being screwed down and the valve tight against its seat, the valve-stem *d* is turned to the left. This draws the spider *c* toward the stem and out of the arbor *a*. This arbor *a* is provided with two projecting pins which traverse the slots in the end *h* of the spider. Now, when the stem *d* is turned to the left, the pins of the arbor *a* being in the parallel section of the slots, the

spider is drawn back, which loosens the wedges *i i* from the inclines I I of the barrel A, and thus lets the valve loose on the seat, and as the stem is turned farther to the left the arbor-pins traverse the spiral section of the slots and cause the spider and the valve to rotate until the valve is on the side of the globe, as shown in Fig. 2, and thus the valve is open with a clear passage as large and as free as the pipe.

In closing the valve the valve-stem *d* is turned to the right, which forces the spider *c* downward. The arbor-pins traverse the spiral slots and the spider rotates and carries the valve to its proper position until the shoulder *j* strikes *n*. By this time the pins in the arbor traverse the parallel portion of the slots and the spider is forced straight down, when the wedges *i i* are forced down on the inclines I I and press the valve tightly against its seat.

The advantages of my improved straight-way globe-valves are, first, there being no movement of the valve while the pressure is on, there is no friction or wear of the valve-seat; second, the valve is pressed to its seat by powerful inclines combined with the screw, and may more certainly be made tight than by any one of these powers; third, the valve may be left at any position without being moved by the flow of fluid or gas at any pressure; fourth, the valve may be placed in the side of the globe, thus leaving a clear straight way as large and as free as the pipe; fifth, the parts are few, simple, and easily constructed; sixth, the valve is cheap, and, best of all, it is effective and durable.

What I claim as new, and desire to secure by Letters Patent, is—

In a globe-valve, the combination, with a case, of a threaded stem adapted to be rotated, but stationary against vertical movement, a spider mounted on the lower end of said stem and having bearing at its lower end in the socket of the case, pins projecting inwardly from the socket and engaging grooves in the stem, inclines on the spider, and a valve having inclines corresponding with those of the spider and loosely mounted on the latter, as set forth.

ALEXANDER B. ROHNEY.

Witnesses:

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HENRY S. KING.