

J. H. STOMBS.

Improvement in Balance-Valves.

No. 131,415.

Patented Sep. 17, 1872.

Fig. 1.

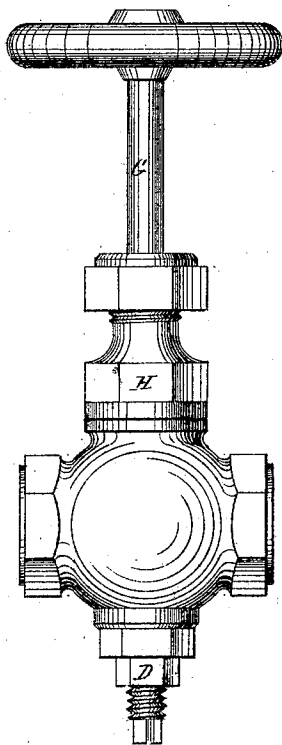
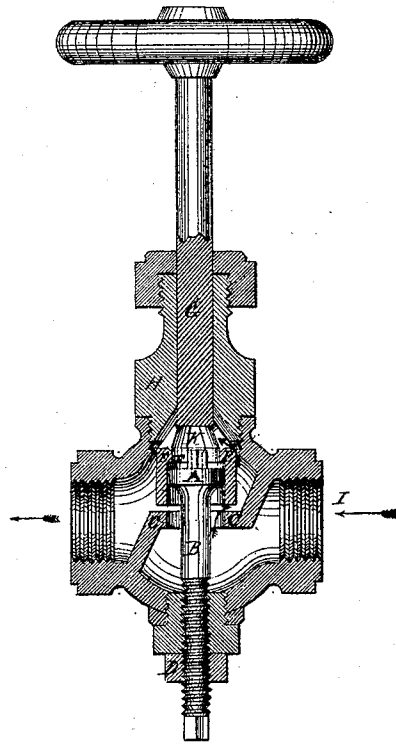


Fig. 2.



WITNESSES:

Thom. Linton.
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INVENTOR:

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UNITED STATES PATENT OFFICE.

JOSEPH H. STOMBS, OF ROCK ISLAND, ILLINOIS.

IMPROVEMENT IN BALANCE-VALVES.

Specification forming part of Letters Patent No. 131,415, dated September 17, 1872.

To all whom it may concern:

Be it known that I, JOSEPH H. STOMBS, of Rock Island, in the county of Rock Island and State of Illinois, have invented certain new and useful Improvements in "Balance-Valves;" and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making part of this specification, and to the letters of reference marked thereon, like letters indicating like parts wherever they occur.

Figure 1 is an elevation, Fig. 2 a vertical section.

To enable others skilled in the art to construct and use my invention, I will proceed to describe it.

In constructing I can use any ordinary form of chamber, and any of the single-seated valves can be readily altered to my plan. A is a stationary plate or counter-valve, formed and connected to stem B, which is made adjustable by means of a thread or other device passing through the chamber under the seat C, and held in its place by the lock-nut D, or any other device answering the like purpose. The stem B is made hollow down from upper face A to the upper face of seat C, which is so formed for the purpose of equalizing the expansion. The plate A is made the same diameter as the opening in or through seat C. E is the cup-valve, and is made with the seat F inside and fitted to match the upper face of plate A. The openings marked *k k k k* on cup-valve are for the purpose of admission of pressure to the plate A. The face of valve E,

when brought in contact with seat C, brings seat F with plate A, forming a "balance-valve." Valve E is attached to stem G, on which, when used for throttle or stop valve, I form a thread, commencing at a line with the top of standard H, when the valve is open, and extending upward the width of lock-nut, and working through packing such as commonly used for packing stems for the purpose of regulating the opening of valve E.

One of the advantages claimed for this valve is, that each seat can be ground separate and adjusted at will. The object of having a thread on stem G to work in the packing, is to allow for the expansion when the valve is firmly seated.

In operation, with the valve open, the steam, gas, water, or other fluid under pressure entering at I, passes, as indicated by the arrows, through the annular aperture under the plate A, and surrounds the cup-valve E, entering the same through the apertures K, thus forming a balance-valve which can be adapted for use as a puppet-valve for steam-engines, governor-valve or throttle, cylinder-cock, mud-valve, or in any place where a balance-valve may be required.

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

The combination of the adjustable plate A having a hollow stem, B, with the cup-valve E and apertures K, substantially as described.

J. H. STOMBS.

Witnesses:

E. H. GLEASON,
JOHN C. BROMLEY.