G. L. Grant,

Globe Valve,

No. 68,733, Patented Sept. 10, 1867.

Fig. 1

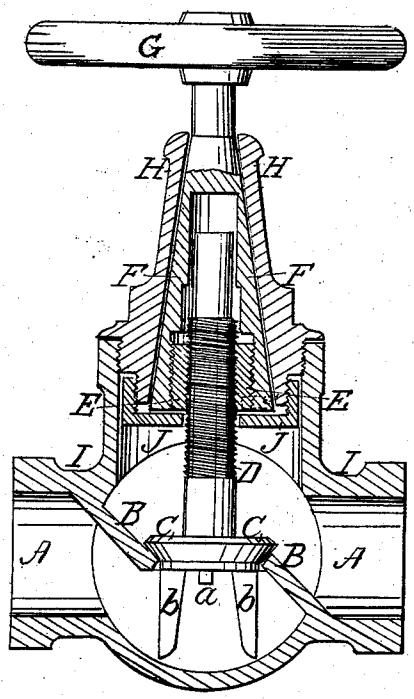


Fig. 2

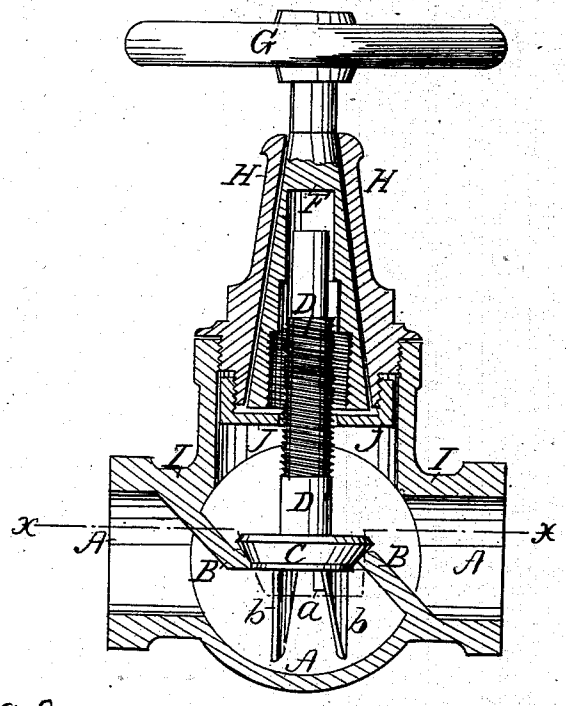
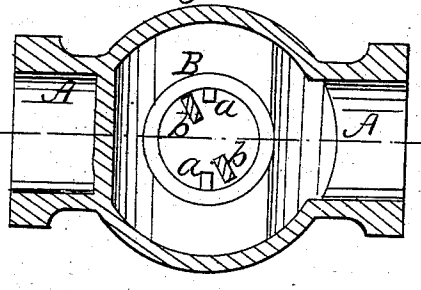


Fig. 3



Witnesses:
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G. L. GRANT, OF ROCKVILLE, CONNECTICUT.

Letters Patent No. 68,733, *dated September* 10, 1867.

IMPROVEMENT IN STEAM-ENGINE VALVES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, G. L. GRANT, of Rockville, in the county of Tolland, and State of Connecticut, have invented a new and useful Improvement in Valves; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a vertical central section of my improved globe-valve.

Figure 2 is a similar view showing it converted into a check-valve.

Figure 3 is a horizontal sectional view of the same, the plane of section being indicated by the line *x x*, fig. 2.

Similar letters of reference indicate corresponding parts.

This invention relates to a valve of novel construction, which is arranged altogether without any packing, which can be used as a globe or check-valve, and which will always keep itself free from dirt.

The lower piece is screwed into the upper or outer piece, and packing is avoided, as the pressure of the steam will always force the conical stem against the shell, and the joints between the two will consequently be kept tight. The lower part of the stem is screwed into a nut, which is screwed into the tubular conical upper stem. By removing this nut the valve will have been changed into a check-valve, as it can freely move up and down.

A represents the pipe in which the seat B for the valve C is arranged, as shown. The valve is ground or fitted upon the seat in the ordinary manner, and is secured in any suitable manner to the lower end of a screw-rod, D. The latter is screwed into a nut, E, which is screwed into the tubular conical upper stem F, on which a hand-wheel, G, is arranged. The conical stem F is fitted and turns in a conical shell, H, which is screwed upon a cylindrical projection, I, of the pipe A. A cap, J, may be screwed around the lower end of the shell H, so as to cover and protect the joints around the nut E and around the stem F, as is clearly shown in fig. 1, but this cap can, if desired, be omitted. *a a*, fig. 3, are two lugs, which project from the inside of the pipe A, and which are arranged below the valve-seat, as shown. *b b* are two lugs, projecting from the under side of the valve C, as shown. When the stem F is turned by means of the hand-wheel G, the valve will also be turned until the lugs *b* strike against the lugs *a*; then the valve will not turn, and will be raised or lowered by the revolution of the stem F. The turning of the valve or its play in a rotary motion has the effect of permitting the lugs *b* to clean the seat from all dirt that may have accumulated on the valve-seat. By removing the nut E from the stem F, the stem D will fit loosely in the tubular stem F, and the weight of the valve alone will keep it upon its seat. A check-valve is thus arranged, as is clearly shown in fig. 2.

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

The arrangement of the lugs *a* and *b*, when the same are made and operating substantially as and for the purpose herein shown and described.

G. L. GRANT.

Witnesses:

R. H. DAWSON,

ORIN BROMLEY.