

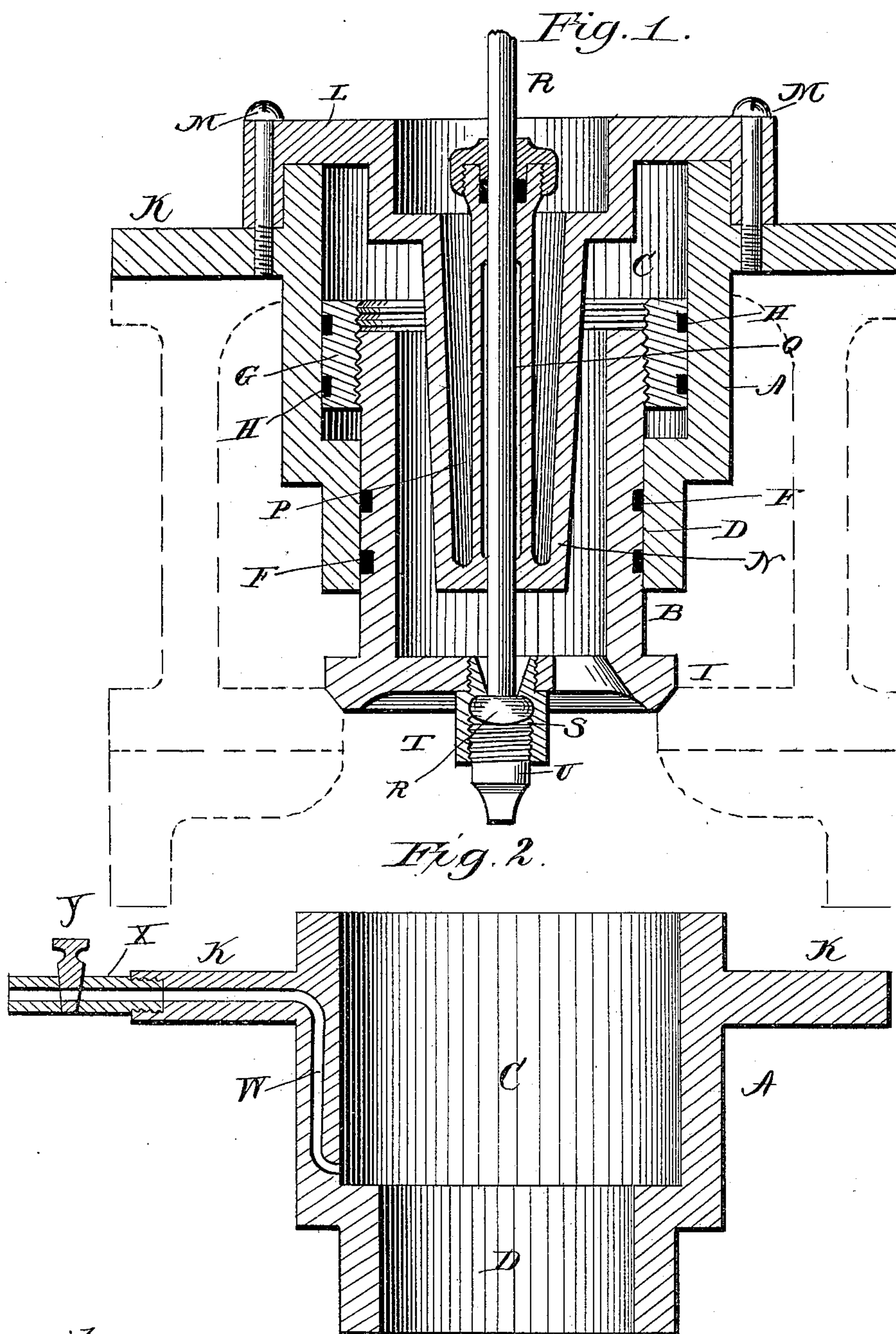
(Model.)

H. F. FRISBIE.

PUPPET VALVE.

No. 248,729.

Patented Oct. 25, 1881.



Witnesses,  
Frank L. Curran

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# UNITED STATES PATENT OFFICE.

HAMLIN F. FRISBIE, OF CINCINNATI, OHIO.

## PUPPET-VALVE.

SPECIFICATION forming part of Letters Patent No. 248,729, dated October 25, 1881.

Application filed April 9, 1881. (Model.)

*To all whom it may concern:*

Be it known that I, HAMLIN F. FRISBIE, of Cincinnati, in the county of Hamilton, and in the State of Ohio, have invented certain new and useful Improvements in Puppet-Valves; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

This invention relates to certain improvements in puppet-valves for steam and other engines; and it has for its objects to provide a means whereby the valve may be cushioned as it is dropped to its seat, in order to prevent the battering and wear of the valve and seat bearings or surfaces, to provide a means of applying the valve and adjusting the respective parts to regulate the cushion, and to provide for the escape of the steam from the cushion-chamber when desired, as more fully herein-after specified.

In the drawings, Figure 1 represents a vertical sectional view of my improved valve; and Fig. 2, a sectional view, showing the means for relieving the cushion of surplus steam.

The letter A indicates a cylindrical shell, in which the valve B is adapted to slide. The said shell is provided with bores C and D of different diameter. In the smaller bore, D, is located the body or main portion of the valve B. The said body is cylindrical, and is provided with annular grooves F, which are filled with suitable packing. The upper end of the valve-body is screw-threaded externally, and has fitted to it a female screw-threaded annulus, G, which is provided with annular grooves H on its periphery filled with packing. The said annulus fits and slides within the larger bore of the shell A, and may be adjusted vertically upon the body of the valve by turning it in proper direction.

The lower end of the valve is provided with a flange, I, which may be varied in diameter according to the force with which it is intended to be held to its seat.

The shell A is provided with a flange, K, which sets on top of the valve-chest in such manner that the shell and valve will extend into the valve-chamber.

The letter L indicates the cap which closes the shell A, and is secured thereto by means of the screws M. The said cap is provided with an inwardly-extending central boss, N, which is chambered, as indicated by the letter P. Through the center of said boss the valve-stem R passes, a space, Q, being formed around the stem to form a water packing. The lower end of the valve-stem is provided with a rounded head, R, which is seated in a recess, S, in the hub T of the valve, and confined therein by means of a plug, U.

These features of my valve are made the object of special attention in another application for patent on improvements in puppet-valves filed April 8, 1881, where they will be found more fully described and claimed.

In the construction shown in Fig. 2, a passage, W, is provided in the wall of the shell, from which extends a pipe, X, provided with a cock, Y, by means of which the steam may be permitted to escape from the cushion-space when desired. The body of the valve, the annulus, and the valve-seat are so located relatively that the annulus will always and under all circumstances leave the proper cushion-space, into which the steam finds its way by the unavoidable leakage around the packings.

Having thus described my invention, what I claim is—

1. In combination with the shell having bores of different diameters, the valve and its screw-threaded annulus, whereby a steam-cushion is formed for the valve, substantially as and for the purposes specified.

2. In combination with the shell, the valve, and its annulus, the pipe provided with suitable valve and the escape-passage leading from the steam-cushion, substantially as and for the purpose specified.

In testimony whereof I affix my signature, in presence of two witnesses, this 9th day of April, 1881.

H. F. FRISBIE.

Witnesses:

J. J. MCCARTHY,  
H. AUBREY TOULMIN.