W. Dillon,

Balanced Valve.

No. 104,715. Patented June 28. 1870.

Fig: 1.

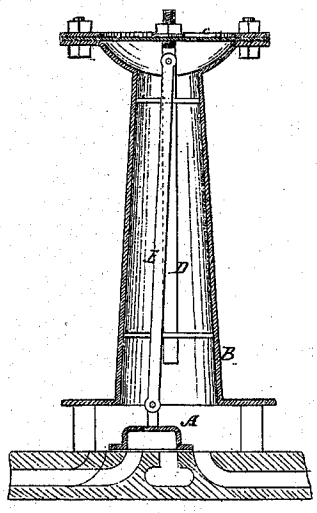
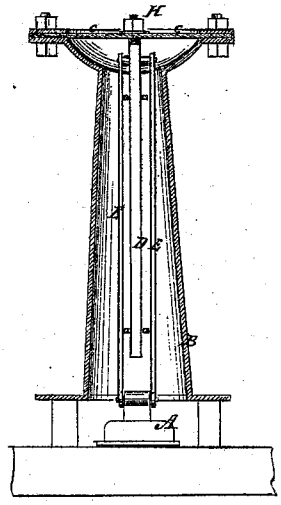


Fig: 2.



Witnesses:

Chas. Nida.
S. S. Mabee

Inventor:

Wm Dillon

Per Munn & Co

Attorneys.

UNITED STATES PATENT OFFICE.

WILLIAM DILLON, OF WHEELING, WEST VIRGINIA.

IMPROVEMENT IN BALANCE SLIDE-VALVES.

Specification forming part of Letters Patent No. **104,715**, dated June 28, 1870.

To all whom it may concern:

Be it known that I, WILLIAM DILLON, of Wheeling, in the county of Ohio and State of West Virginia, have invented a new and Improved Balanced Slide-Valve; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to improvements in the arrangement and suspension of balanced slide-valves; and it consists in providing a guide-rod made vertically adjustable for regulating the movement of the valve, all arranged as hereinafter set forth.

Figure 1 is a sectional elevation through the valve-chest and dome. Fig. 2 is another sectional elevation taken in a plane perpendicular to that of Fig. 1.

Similar letters of reference indicate corresponding parts.

A is the slide-valve; B, the dome above the steam-chest; C, the flexible diaphragm in the top of the dome. D is the adjustable end, and E the rods connecting the valve to the end D.

The area of the diaphragm is such that the pressure on it equals the pressure on the valve. It is made flexible and elastic to yield slightly to the weight of the valve when the rods E are on either side of the vertical line, so as not to lift it off the seat, and the rod D is made adjustable by the nuts H, to regulate the action of the diaphragm on the valve, so as to allow the valve to work snugly on its seat without material friction.

The rod D is arranged in transverse stay-plates, so that its movement must always be in a true vertical line, thus relieving the plate *c* from all lateral or other strain to which it would be subject were the valve-suspending rod or rods pivoted to a rod pivoted to and depending altogether on the spring-plate for support. This arrangement is simple and economical and effective in securing the better or more perfect action of the valve.

I am aware that slide-valves suspended from rods made adjustable by a screw-thread and nut and connected with corrugated metal disks or other springs have been heretofore invented, and to such I lay no claim.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The arrangement of the rods E E, vertically-adjustable guide-rod D, and the transverse and stay-plates, with the valve A, dome B, and spring-disk C, all as shown and described, for the purpose specified.

WILLIAM DILLON.

Witnesses:
WM. H. IRWIN,
HANNIBAL FORBES.