

(No Model.)

J. E. WRIGHT.
BALANCED VALVE.

No. 264,503.

Patented Sept. 19, 1882.

Fig. 1.

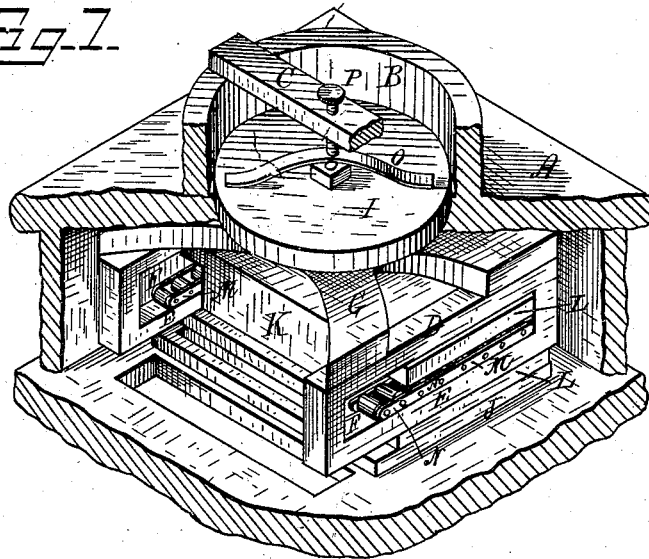


Fig. 2.

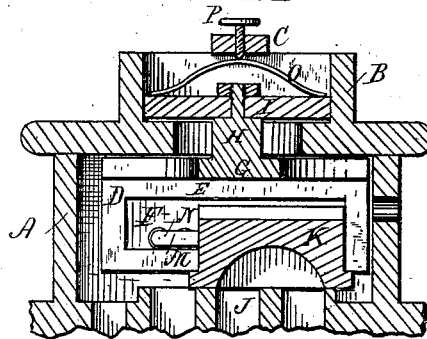
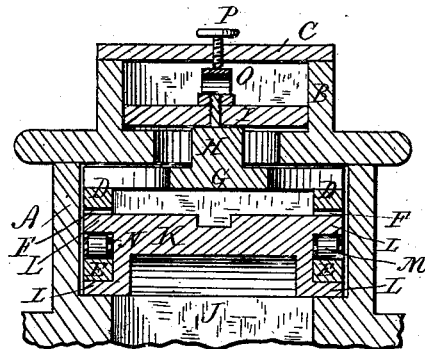


Fig. 3.



WITNESSES

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JOHN E. WRIGHT, OF BARABOO, WISCONSIN.

BALANCED VALVE.

SPECIFICATION forming part of Letters Patent No. 264,503, dated September 19, 1882.

Application filed July 5, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN E. WRIGHT, of Baraboo, in the county of Sauk and State of Wisconsin, have invented certain new and useful Improvements in Balanced Valves; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

Figure 1 is a perspective view, part of the steam-chest having been broken away so as to expose the valve. Fig. 2 is a longitudinal vertical sectional view. Fig. 3 is a vertical transverse sectional view.

Corresponding parts in the several figures are denoted by like letters of reference.

This invention relates to balanced slide-valves; and it consists in certain improvements in the construction of the same, which will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings hereto annexed, A represents the valve-chamber or steam-chest, which is provided with an upward-projecting cylindrical collar, B, having at its upper end a cross-piece or bridge, C.

D is a frame or saddle arranged to slide vertically in the steam-chest, and consisting of side pieces, E E, having longitudinal horizontal slots F F, said sides being connected by a bridge-piece, G, having a central upward-projecting stem, H, carrying a piston, I, which slides in the cylindrical collar B.

J is the valve-seat, and K the valve. The latter is provided at both sides with flanges L L, sliding longitudinally in the slots F in the sides of frame or saddle D.

M M are a set of friction-rollers, journaled between a pair of longitudinal strips or side pieces, N. A set of these rollers is arranged in each of the slots F, under the flanges L of the valve, for which an anti-friction bearing is thus provided.

Between the piston I and the bridge-piece C a spring, O, is interposed, the pressure of which may be regulated by a set-screw, P, working in said bridge-piece.

The operation of my invention will be readily understood from the foregoing description, taken in connection with the drawings hereto annexed. The steam in the box or chest A exercises an upward pressure against the piston I, thereby neutralizing the pressure upon the valve, which is kept to its seat by the downward pressure of spring O upon piston I. It will be understood, of course, that the area of the piston is to be properly proportioned to that of the valve.

Having now fully described my invention, I claim and desire to secure by Letters Patent of the United States—

1. The combination of a steam-chest having an upward-projecting cylindrical collar, a frame or saddle sliding vertically in said steam-chest, and having a piston sliding in said collar, a valve sliding longitudinally in said frame or saddle, a spring arranged above the piston of said frame and forcing the same downward, and a set-screw for regulating the tension of said spring, as set forth.

2. The combination of a steam-chest having an upward-projecting cylindrical collar, a frame or saddle sliding vertically in said steam-chest, and having a piston sliding in said collar, a valve having laterally-projecting flanges sliding longitudinally in slots in the sides of said frame or saddle, friction-rollers interposed under said flanges, a spring arranged above the piston of the frame or saddle and forcing the same downward, and a set-screw for regulating the tension of said spring, as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JOHN E. WRIGHT.

Witnesses:

JNO. BARKER,
M. J. DROWN.