(No Model.)

W. JACKSON.

BALANCED STOP VALVE.

No. 329,650. Patented Nov. 3, 1885.

Fig. 1.

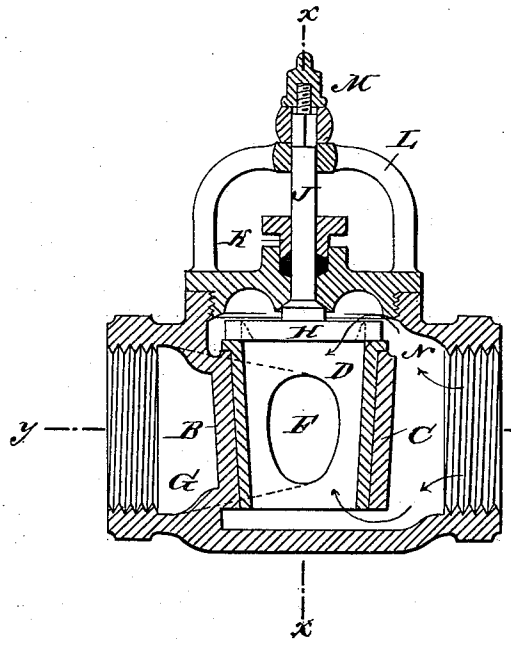


Fig. 2.

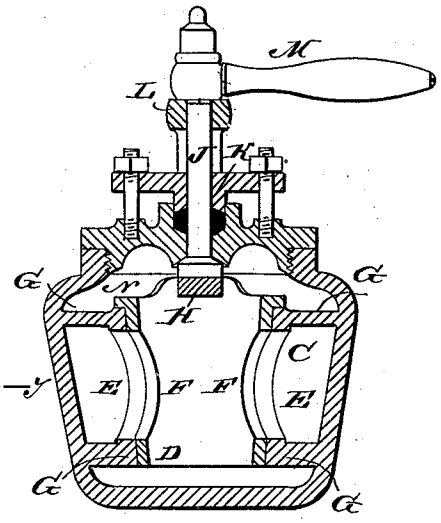
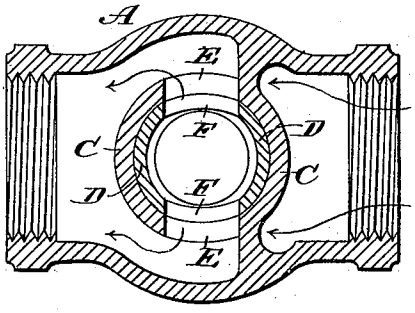


Fig. 3.



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UNITED STATES PATENT OFFICE.

WILLIAM JACKSON, OF ALLEGHENY, PENNSYLVANIA, ASSIGNOR TO THE SPECIALTY MANUFACTURING COMPANY, (LIMITED,) OF SAME PLACE.

BALANCED STOP-VALVE.

SPECIFICATION forming part of Letters Patent No. 329,650, dated November 3, 1885.

Application filed March 24, 1885. Serial No. 160,009. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM JACKSON, of Allegheny, Allegheny county, Pennsylvania, have invented a new and Improved Balanced Stop-Valve, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved balanced valve which can be turned very easily and is not liable to break or get out of order.

The invention consists of the combination of parts, including their construction, substantially as hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a longitudinal sectional elevation of my improved balanced stop-valve. Fig. 2 is a cross-sectional elevation of the same. Fig. 3 is a sectional plan view of the same on the line *x x*, Fig. 1.

The casing or shell A is provided with the transverse partition B, on which the valve-seat C is formed, which is tapered from the top to the bottom to receive and fit the valve-plug D which is also hollow and tapered. The circular seat C has two diametrically-opposite apertures, E, which face the sides of the shell or casing, and the plug D also has two diametrically-opposite apertures, F. The plug is open at the top and bottom, and the sides of the seat C are connected with the casing or shell A at the top and bottom by the horizontal partitions G. In opposite notches or recesses in the top edge of the plug or valve D fits a cross-piece, H, to which is connected and from which the stem or spindle J passes upward through the stuffing-box K and yoke or stirrup L on the casing, and is provided with the handle M for turning it. An outwardly-projecting flange, N, is formed on the top of the tapered plug and rests upon the top of the seat. The steam, gas, &c., enter in the direction of the arrows, Figs. 1 and 3, pass under and over the partition C, as shown in Fig. 1, and into the tubular tapered plug D, and through the side openings of the same, which register with the apertures in the seat, and then out of the casing. When the valve is closed, the apertures in the plug and casing do not register, and the steam, gas, &c., can pass into the plug in the manner described, but not out of it, as the top and bottom of the seat are connected by solid walls G with the shell or casing A. There is an equal pressure on all parts of the valve, and thus very little power is required to turn the plug. The flange N prevents the plug from settling in the seat and binding, but at the same time, as the flange N wears, it allows the valve to drop into seat, thus compensating for the wear.

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

1. In a balanced stop-valve, the combination, with the casing or shell having the internal circular seat open both at its top and bottom, and having in its sides opposite openings, of the hollow or tubular valve or plug having openings both in its bottom and top, and in its sides, substantially as and for the purpose set forth.

2. In a balanced stop-valve, the combination, with the casing or shell having the internal circular seat open both at its top and bottom, and having in its sides opposite openings, of the hollow or tubular valve or plug having openings both in its bottom and top, and in its sides, and provided with a flange at its top edge, and the stem or spindle with its lower end cross-piece fitting in opposite notches or recesses in the top edge of the valve or plug, said stem or spindle having a handle, substantially as and for the purpose set forth.

WILLIAM JACKSON.

Witnesses;
R. E. MCCLURE,
JAS. E. CREIGHTON.