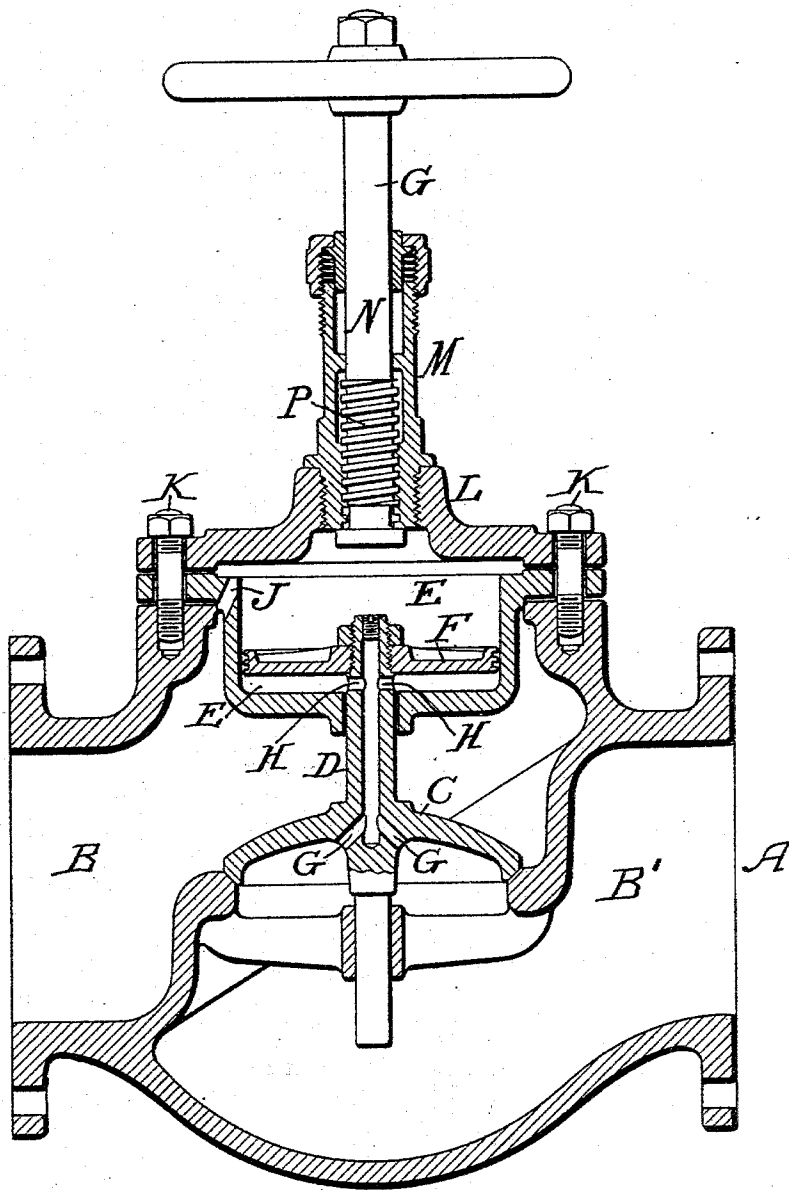


(No Model.)

T. M. EYNON.
BALANCED CHECK VALVE.

No. 515,578.

Patented Feb. 27, 1894.



WITNESSES:

Wm C. Wiedersheim,
A. P. Jennings.

INVENTOR

INVENTOR
Thomas M. Synon

BY

John A. Diederich

ATTORNEY.

UNITED STATES PATENT OFFICE.

THOMAS M. EYNON, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE EYNON-EVANS MANUFACTURING COMPANY, OF PENNSYLVANIA.

BALANCED CHECK-VALVE.

SPECIFICATION forming part of Letters Patent No. 515,578, dated February 27, 1894.

Application filed April 24, 1893. Serial No. 471,542. (No model.)

To all whom it may concern:

Be it known that I, THOMAS M. EYNON, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Balanced Check-Valves, which improvement is fully set forth in the following specification and accompanying drawing.

My invention consists of a balanced check valve having a valve proper, and a piston which is connected with said valve by means of a tubular stem, said piston occupying the dash pot, which latter is in communication with the receiving chamber of the valve, whereby the valve proper may be raised and its descent made gentle, as will be hereinafter set forth.

It also consists in providing the body of the valve with a stem for controlling the closed position of the valve by limiting the ascent or open motion of the same.

The figure represents a vertical section of a valve embodying my invention.

Referring to the drawings: A designates a valve having the chambers B, B' on opposite sides of the valve C, rising from which latter is a tubular stem D, which passes through the dash pot E, and has connected with its upper end the piston F, which occupies said dash pot.

In the stem D are ports G, which form a communication with the chamber B' of the valve, said stem having also the ports H therein which form communication with the dash pot, it being noticed that said ports G and H communicate with the passage in the stem D.

J designates a port in the upper part of the dash pot the same forming a communication between said pot and the chamber B. The dash pot is suspended from the top of the shell of the valve, and secured thereto by means of bolts K, which also connect the cap L in position.

In the neck M is a stem N which is threaded as at P, and has its lower end above the top of the stem D in the dash pot E, so as to act as a stop for adjusting the extent of elevation of said stem D, and the consequent opening of the valve C. It will be seen that steam from the chamber B' enters the stem D through the port G, and escapes therefrom through the port H into the dash pot below the piston F, by which provision the

valve C may be lifted from its seat and is held balanced, and owing to the steam that may remain in the dash pot below the piston, acting as a cushion, the valve C when lowering is prevented from forcibly striking its seat, it being noticed that the steam in the dash pot returns through the ports H, passage D and port G into the chamber B'. Should there be leakage of steam in the dash pot around the piston F, said steam may escape through the port J into the chamber B of the valve.

When it is desired to allow steam to pass from the chamber B' to B, the stem N is raised as shown in the figure, and the force of the steam lifts the valve from off its seat permitting the passage of the steam. When it is desired to stop the flow of steam, the stem N is lowered, so that it forces the stem D downward, causing the valve C to be seated. When no steam is in the chamber B', the valve C will seat itself by its own weight, the steam under the piston F acting as a cushion, preventing any clattering of the same in its descent.

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

1. A valve shell with communicating chambers, a valve having a hollow stem, a dash pot within said valve having a piston therein secured to said valve stem, and a cap covering said dash pot, and having a stem working therein, said hollow stem of the valve having ports opening into one of said chambers and said dash pot, said parts being combined substantially as described.

2. A valve shell with communicating chambers B and B', a dash pot secured therein, a cap secured to said shell and pot, a stem working in said cap, a valve controlling the communication between said chambers B and B' and provided with a hollow stem having a piston on one end fitting in said dash pot and with ports communicating with said chamber B' and with the dash pot, and said dash pot having a port communicating with the chamber B, said parts being combined substantially as described.

THOMAS M. EYNON.

Witnesses:

JOHN A. WIEDERSHEIM,
R. H. GRAESER.