(No Model.)

C. C. & C. BALDERSTON.

REVERSE WAY COCK.

No. 302,537. Patented July 29, 1884.

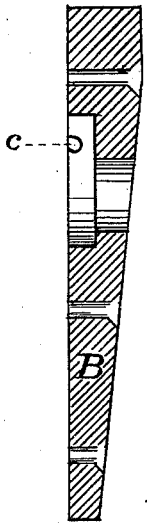

Fig. 3

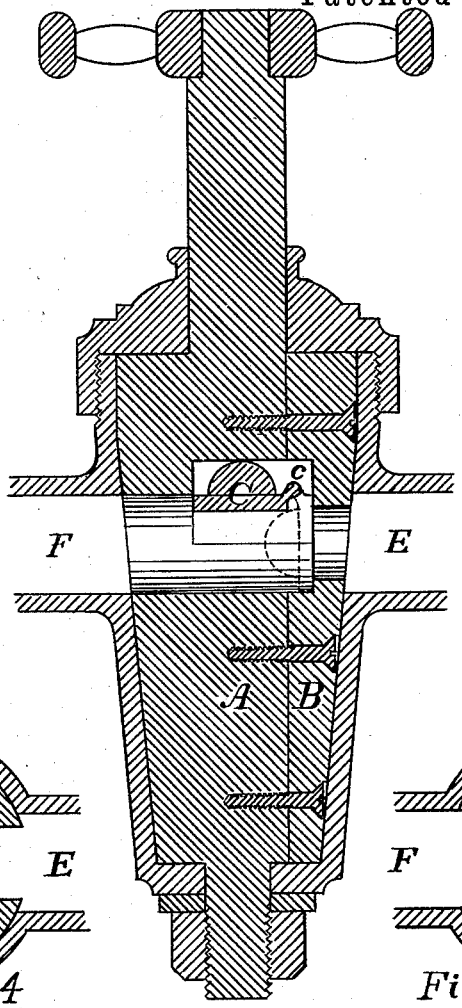

Fig. 1

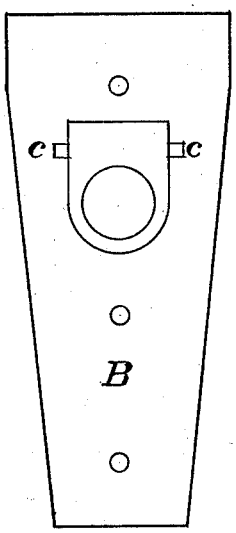

Fig. 2

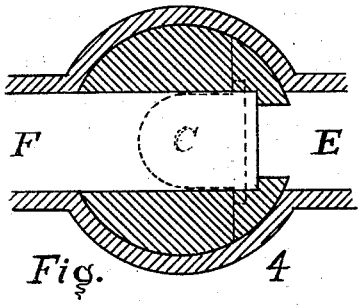

Fig. 4

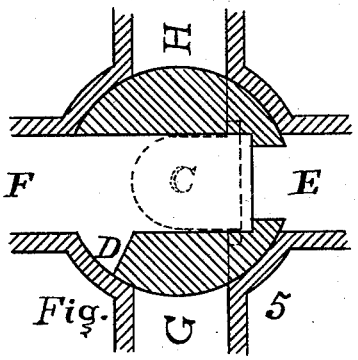

Fig. 5

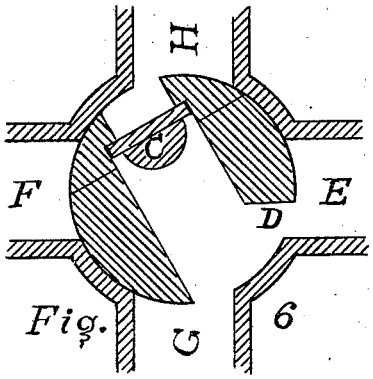

Fig. 6

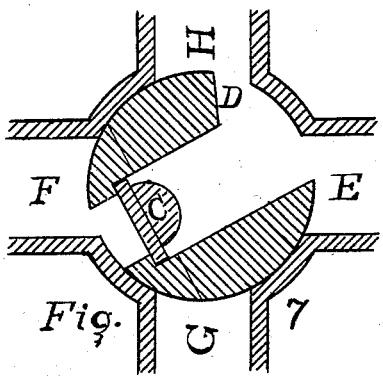

Fig. 7

Witnesses

Inventors

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UNITED STATES PATENT OFFICE.

C. CANBY BALDERSTON, OF WESTTOWN, AND CHARLES BALDERSTON, OF PHILADELPHIA, PENNSYLVANIA.

REVERSE-WAY COCK.

SPECIFICATION forming part of Letters Patent No. 302,537, dated July 29, 1884.

Application filed January 29, 1884. (No model.)

To all whom it may concern:

Be it known that we, C. CANBY BALDERSTON, of Westtown, in the county of Chester, in the State of Pennsylvania, and CHARLES BALDERSTON, of the city and county of Philadelphia, in the aforesaid State, citizens of the United States, have invented certain new and useful Improvements in Reverse-Way Cocks; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

Our invention relates to reverse-way cocks; and it consists of a check-valve arranged in the opening of the plug of a stop-cock, and so adjusted that steam, gas, or liquid may be directed into two or more discharge-pipes, or from one vessel to another, in one direction only, which direction can be changed or reversed at the will of the operator, such valve being applicable to any simple stop-cock situated in a pipe between communicating vessels.

Figure 1 is a sectional elevation of a stop-cock having a valve situated in the opening of the plug, that makes it either a two-way cock, like Fig. 4, or a four-way cock, like Fig. 5. The plug, as shown in Fig. 1, is in two parts, A and B, and has the opening enlarged, as shown in Figs. 5, 6, and 7, at D, thereby increasing the size of the passages for gas, steam, or liquids. Fig. 2 is a face view of that portion of the plug to which the check-valve is applied and hinged. Fig. 3 is a detached sectional elevation of the part B, illustrated in Fig. 2, showing opening *c*, into which the valve C fits and hinges. Fig. 4 is a horizontal section of a two-way cock with the valve open. Fig. 5 is a horizontal section of a four-way cock with the valve open, and showing enlargement of the opening of the plug D, as shown before. Figs. 6 and 7 are horizontal sections of four-way cocks with the valves closed and the communication open between the pipes at right angles to each other, by reason of the enlargement D, before described.

This valve may be used to advantage in place of the ordinary valves in force-pumps, and any place where the direction of gas, steam, or liquid needs to be changed. By means of this valve a condensing air-pump may be instantly converted into an exhaust-pump, and vice versa. The construction consists in placing an ordinary check-valve (marked C) in the opening of the plug of a stop-cock. The plug is made in two parts, A and B, which are fastened together by means of bolts or screws. By making the plug in the two parts A and B, which are easily separable, it allows for the proper grinding of the valve-seat, and also affords the means of hinging the valve C, which fastens into the opening *c*, Fig. 3, and is hinged, as shown in Fig. 1, to the part B of the plug, so as to close by gravity or by back-pressure. The portion A and B being separable also renders repairing easy.

What we claim as our invention, and desire to protect by Letters Patent, is—

The combination of the plug of the stop-cock, made up of the two parts A and B, having an enlargement of the opening D, and the valve C, hinged at *c*, substantially as shown and described.

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CHAS. BALDERSTON.

Witnesses:
IRVINE E. MAGUIRE,
CHARLES ADAMSON.