

J. F. WHITNEY.
Check-Valve.

No. 200,678.

Patented Feb. 26, 1878.

Fig. 1.

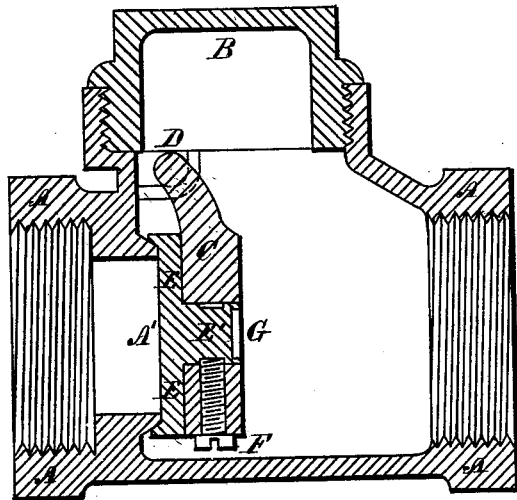


Fig. 2.

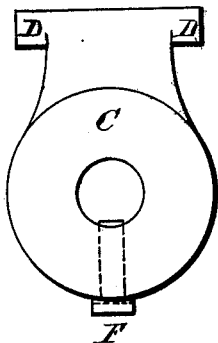


Fig. 3.

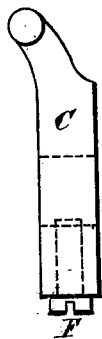


Fig. 4.

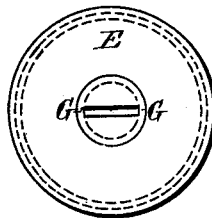
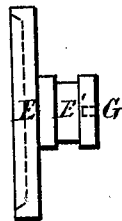


Fig. 5.



Witnesses.

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UNITED STATES PATENT OFFICE.

JAMES F. WHITNEY, OF HARTFORD, CONNECTICUT.

IMPROVEMENT IN CHECK-VALVES.

Specification forming part of Letters Patent No. **200,678**, dated February 26, 1878; application filed January 7, 1878.

To all whom it may concern:

Be it known that I, JAMES F. WHITNEY, of Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Check-Valves; and I do hereby declare that the following is a full, clear, and exact description thereof, whereby a person skilled in the art can make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

Like letters in the figures indicate the same parts.

My improvement relates more particularly to the class of valves known as "check-valves;" but it is also applicable to other forms of valves where it is desirable to have a perfectly tight joint, so as to prevent leakage through the valve-seat.

The object of my invention is to provide for the accurate fitting of the valve-seat when the valve is originally constructed, and to permit of its being readily refitted when it becomes worn, or from any other cause is not perfectly tight.

My invention consists in the construction and arrangement of the several parts, as will be hereinafter described.

In the accompanying drawing, Figure 1 is a longitudinal vertical section through the middle of my improved valve. Figs. 2, 3, 4, and 5 are details, which will be hereinafter described.

A is the shell which contains the valve. It is furnished with hollow screw-threads at the ends, as shown in the drawing, for connecting it with the pipes through which the water or other liquid is supposed to pass. In this shell the valve-seat is formed at A'. B is a cap, which screws into a socket in the top of A. This cap is removable, and closes an opening in the top of the shell A, through which the parts of the valve are inserted or removed. C is a clapper, forming the movable part of the valve. This is shown more particularly in Figs. 2 and 3, which represent a front and side view of this part removed from the shell. It has projections D at the sides, on the top, which rest in sockets in the shell, so as to form a hinge-joint. They are held in the sockets by the cap B when it is screwed into its seat. E is a rotating disk, (shown more

particularly in Figs. 4 and 5,) which represent a front and side view of this part. This disk forms the part of the valve which rests directly upon the valve-seat. It is attached to the clapper C by means of an axis, E', which passes through an opening in C, and is fitted in such a manner as to turn easily upon this axis, when desired. Around the part E' is a groove, into which the end of a screw, F, enters, to prevent the parts E and C becoming separated, although it allows the disk E to turn freely. Upon the rear end of the axis E' is a slot, G, for the purpose of introducing a tool by which the disk E can be rotated and ground onto the valve-seat.

By means of my invention the valve, when first made, can be ground and fitted perfectly after the parts are all in place by rotating the disk E, and thus insure a tight joint when the valve is closed; and also, when the valve-seat becomes worn so as to leak, the disk E can again be ground into its place without removing any of the parts of the valve from the shell. The hinge-joint D is made with some play in the sockets, to allow of the disk E accommodating itself to a new bearing.

It is obvious that my improved valve can be arranged differently in the shell A. It may be placed either vertically or horizontally; or it can be in line with the inlet and outlet, as shown in the drawing; or it can be placed in a position at right angles to this. In this latter case, instead of introducing a tool for rotating the disk E through one of the openings for the pipe, a separate opening will have to be made in the side of the shell for the purpose. This will, in some cases, be an advantage, as the shell would not have to be unscrewed from the pipe to refit the valve-seat.

What I claim as my invention is—

1. The combination of the rotating disk E with the hinged clapper C, substantially as herein described.

2. The combination of the clapper C, the disk E, and the screw F, substantially as herein described.

JAMES F. WHITNEY.

Witnesses:

THEO. G. ELLIS,
JAMES E. ABBE.