

G. Shield,
Check Valve,
Nº 50,394, Patented Oct. 10, 1865

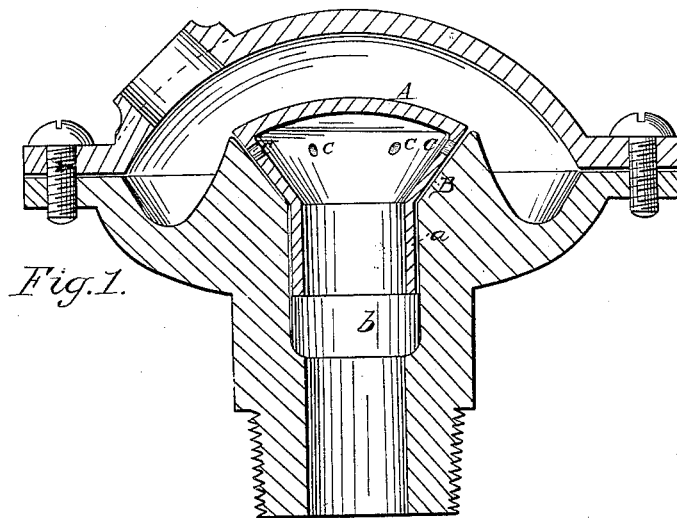


Fig. 1.

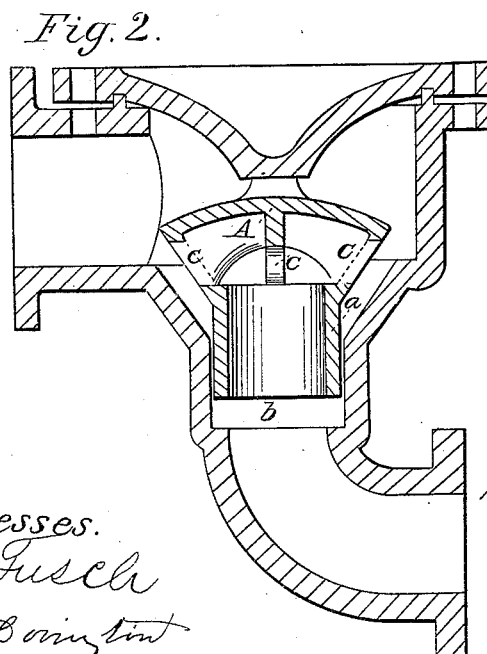


Fig. 2.

Witnesses:
Thos Fusch
W. B. Coimint

Inventor:
Geo Shield
*By *Wm. B. Coimint**
Atty

UNITED STATES PATENT OFFICE.

GEORGE SHIELD, OF CINCINNATI, OHIO.

IMPROVEMENT IN CONE-VALVES.

Specification forming part of Letters Patent No. 50,394, dated October 10, 1865.

To all whom it may concern:

Be it known that I, GEORGE SHIELD, of Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and useful Improvement in Cone-Valves; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a central section of this invention when the valve is closed. Fig. 2 is a similar view of a modification thereof when the valve is open.

Similar letters of reference indicate like parts.

In cone-valves of the ordinary construction used in steam and water works or engines the fluid or liquid discharges between the valve and its seat whenever the valve opens, and both the face of the valve and the seat are liable to be cut, so that the same have to be refitted at short intervals. This difficulty is obviated by the valve which forms the subject-matter of this present invention, and which is made hollow, with apertures passing through its face. When the valve is raised the fluid or liquid discharges through the hollow body of the valve and through the apertures in its face without producing any injurious influence on either the seat or face of the valve, and a valve is obtained which works tight for a long time.

A represents a cone-valve, which is fitted in-

to the seat B by grinding or in any other suitable manner. Said valve is hollow, and it is provided with a tubular stem, *a*, which fits into a corresponding socket, *b*, below the seat, and forms the guide for the valve as the same opens and closes. Said valve is provided with a series of apertures, *c*, passing through its face, as clearly shown in the drawings, the size of these apertures being regulated according to the function which the valve has to perform.

For heavy pumping, such as supplying cities with water, I intend to use a top and bottom beat on the bevel-face of the valve, with large ports and bridging between, so as to give a free discharge to the water. (See Fig. 2.) If the valve is raised from its seat the fluid discharges through the apertures *c*, and it is prevented from cutting either the seat or the face of the valve.

This invention is of great advantage for safety-valves of steam-engines or of hydraulic or other pumps, also for waste-air valves for pumps, or, in fact, for machines or mechanisms of any description whatever in which cone-valves are or may be used.

What I claim as new, and desire to secure by Letters Patent, is—

A hollow cone-valve with a tubular-stem, *a*, and perforated with apertures *c*, substantially as and for the purpose described.

GEORGE SHIELD.

Witnesses:

JOHN HOOD,
JNO. L. BRUNSON.