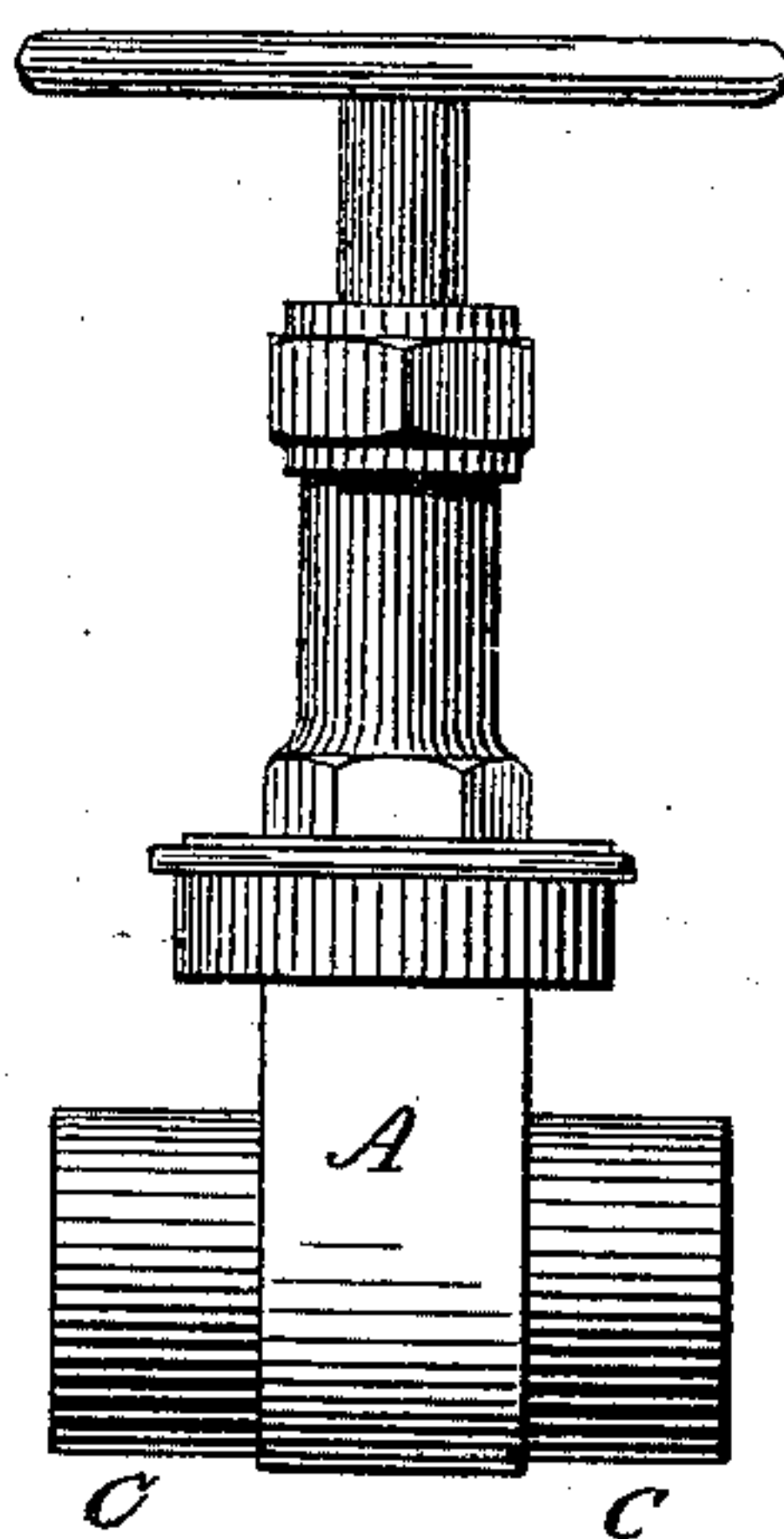


**D. G. PHIPPS.**  
**Valves for Water-Pipes.**

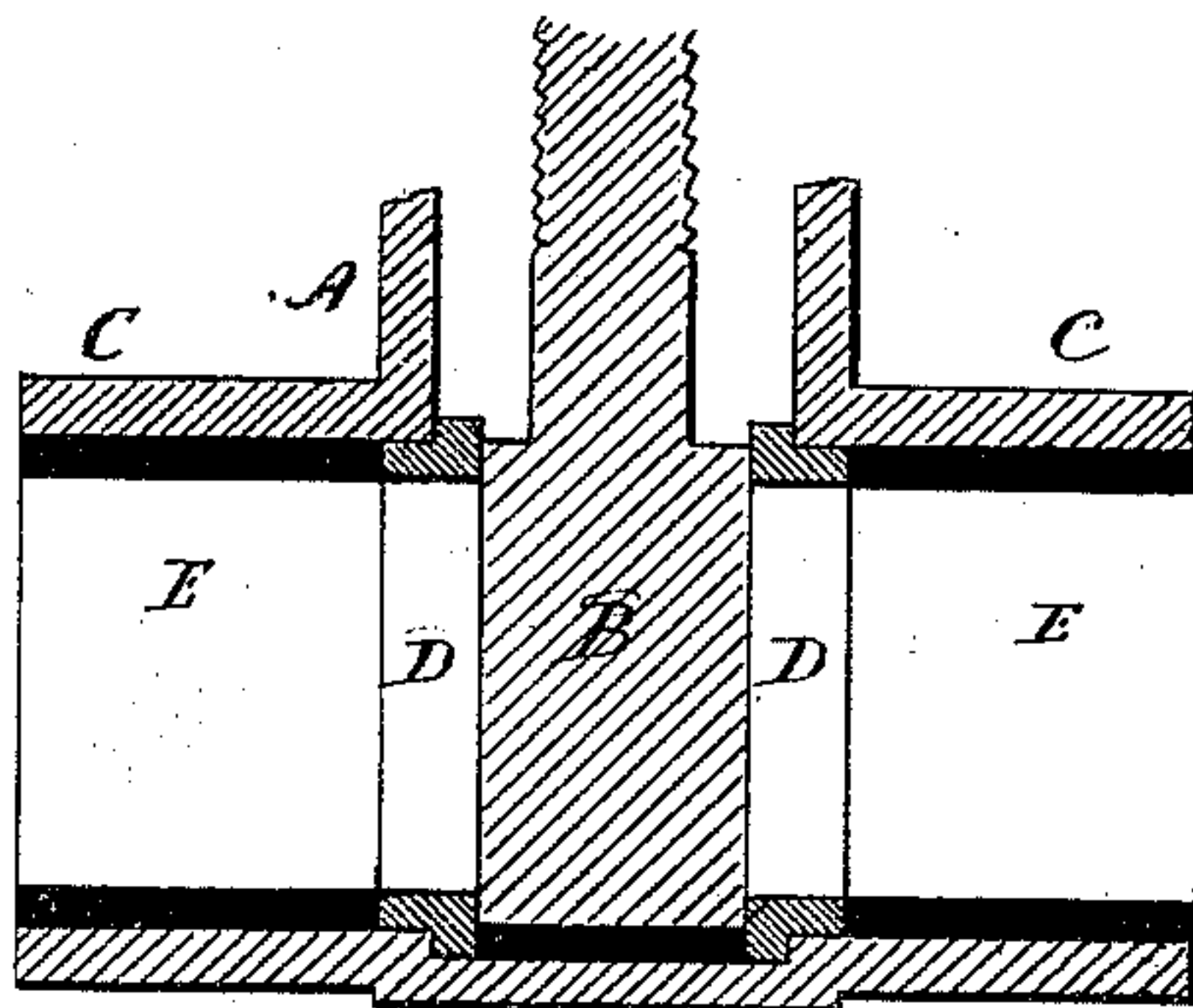
No. 144,356.

Patented Nov. 4, 1873.

*fig. 1.*



*fig. 2.*



*Witnesses*

*J. H. Shumway*  
*A. J. Tibbitts*

*D. Goffe Phipps*  
*Inventor*

*By Atty.*

*John O. Earl*

# UNITED STATES PATENT OFFICE.

D. GOFFE PHIPPS, OF NEW HAVEN, CONNECTICUT.

## IMPROVEMENT IN VALVES FOR WATER-PIPES.

Specification forming part of Letters Patent No. **144,856**, dated November 4, 1873; application filed August 27, 1873.

*To all whom it may concern:*

Be it known that I, D. GOFFE PHIPPS, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Valve for Water-Pipes; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a side view, and in Fig. 2 a longitudinal central section enlarged.

This invention relates to an improvement in valves for introduction to cement-lined water-pipes. In valves for this purpose it is desirable that the coupling between the pipe and valve should be made the same as for the sections of pipe—that is, so that a sleeve may be slipped over the joint between the valve and pipe, and there cemented in the usual manner; but, as the section which must be attached to the valve for this purpose must be cast with the valve, it exposes a large amount of surface of the iron to the action of the water, which rapidly corrodes or oxidizes. The object of my invention is to overcome this difficulty; and it consists in constructing the valve with a neck projecting from each side, the external diameter corresponding to the pipe with which the valve is to be connected—that is to say, so that a sleeve may pass over and cover the joint between the pipe and the neck of the valve—and coating the neck from the valve-seat outward with cement.

A is the case, within which the valve B is arranged, and from each side a tubular projection or neck, C, is formed, corresponding to the diameter of the pipe to be connected. D D are valve-seats, which are made from brass or other metal which will not oxidize to any

extent by contact with water. These are set into the valve-chamber, as shown in Fig. 2, and between which the valve B works.

The valve may be operated in any known manner.

The internal diameter of the neck C is less than that of the valve-seat D, so that the seat D forms a shoulder in the neck. From the seats D the projections C are internally coated with a cement lining, E, as denoted in solid black, Fig. 2, the internal diameter corresponding to the diameter of the pipe to be connected.

In making connections, the end of a section of pipe is butted against the end of one of the projections, and the joint covered and secured in the usual manner of connecting cement pipe.

Thus I protect the water-way in the valve, so that the water flowing through does not come in contact with the metal; and I am enabled to couple the pipe to the valve in the same manner as sections of pipe are coupled; and I avoid the difficulties of the common valve.

In some valves, and particularly in large valves, I coat the valve-chamber between the valve-seats with cement, as denoted in solid black below the valve in Fig. 2.

I claim as my invention—

The herein-described valve for water-pipes, consisting of the valve-chamber proper and the valve working therein, the said chamber formed with projections or necks C concentric with the valve-seats, and the interior of the necks, from the valve-seats outward, lined with cement, substantially as described.

D. GOFFE PHIPPS.

Witnesses:

A. J. TIBBITS,  
J. H. SHUMWAY.