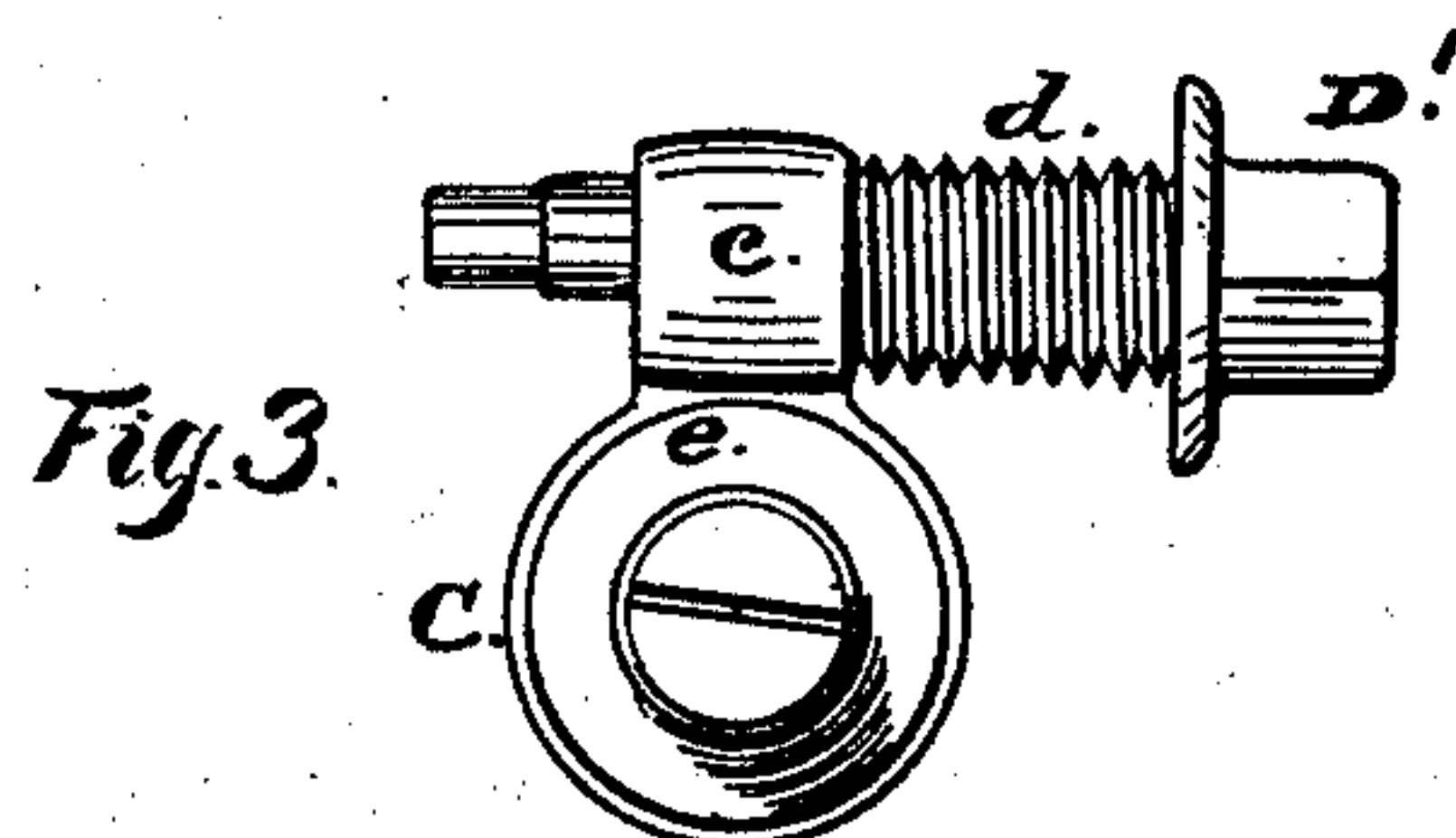
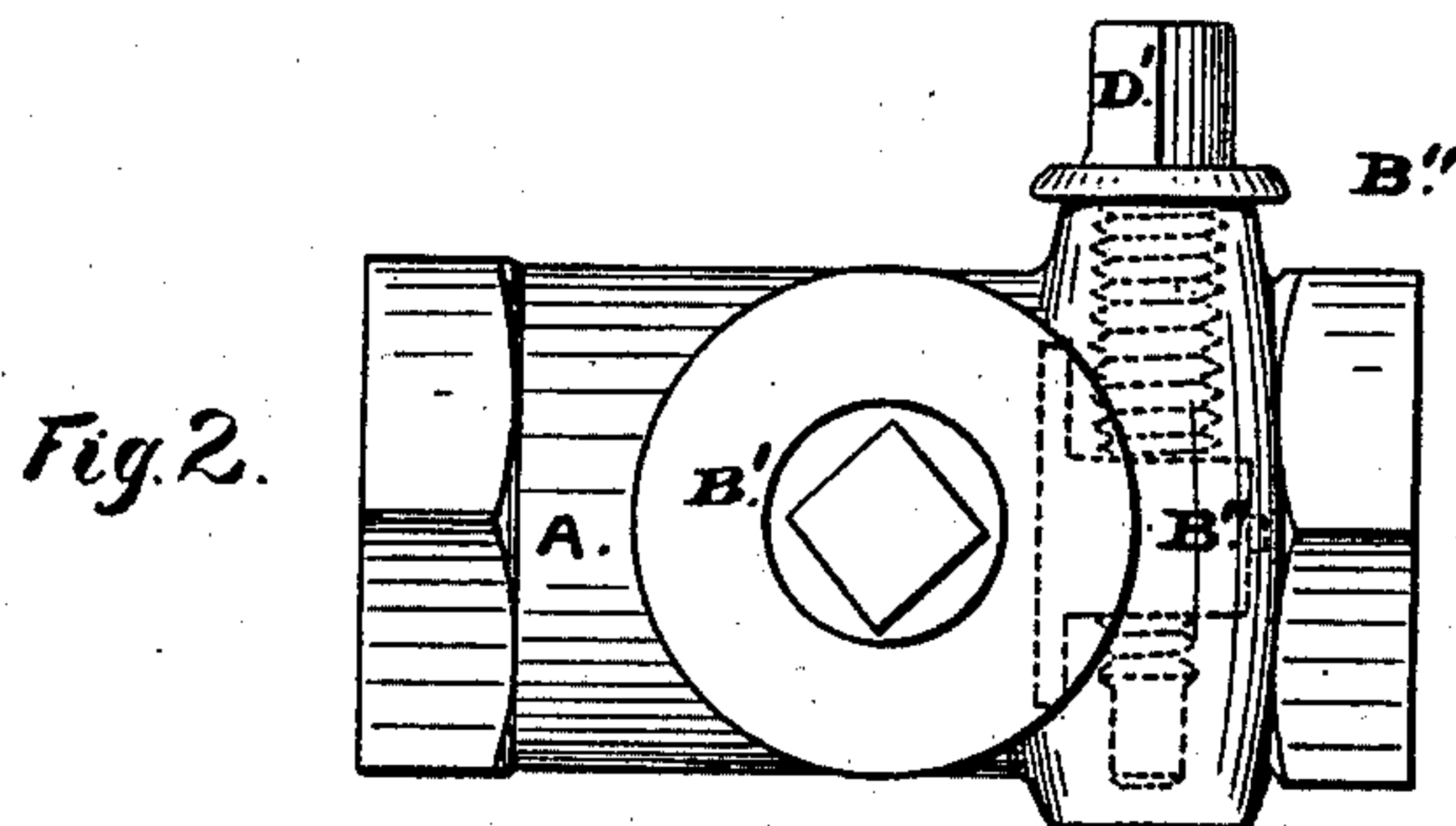
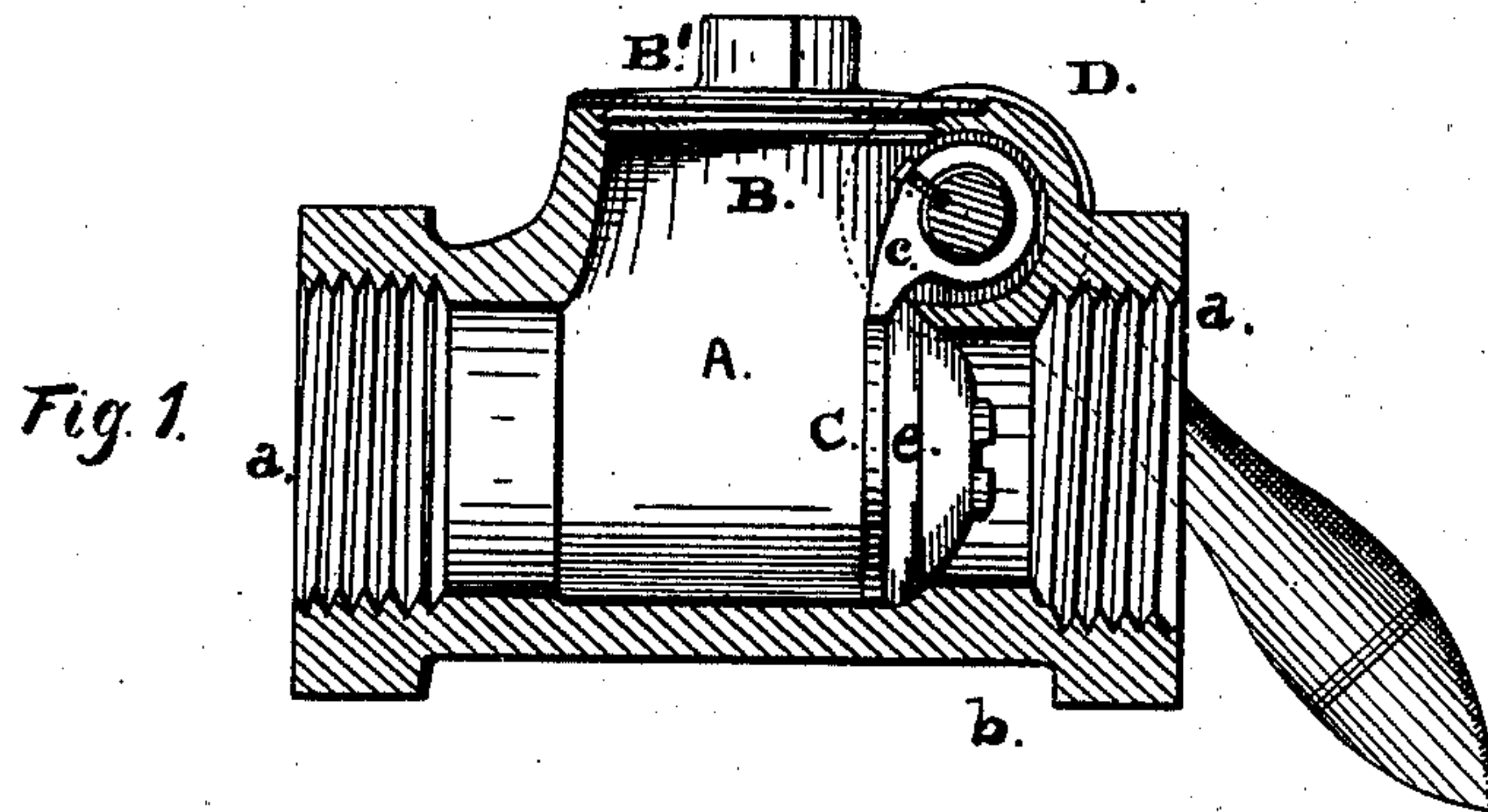


F. WOODWARD.
Valve or Faucet.

No. 222,766.

Patented Dec. 16, 1879.



Witnesses:

John L. Boone

Wm. F. Clark

Inventor:

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UNITED STATES PATENT OFFICE.

FRANK WOODWARD, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN VALVES OR FAUCETS.

Specification forming part of Letters Patent No. **222,766**, dated December 16, 1879; application filed September 19, 1879.

To all whom it may concern:

Be it known that I, FRANK WOODWARD, of the city and county of San Francisco, in the State of California, have made and invented a certain new and useful Improvement in Cocks and Faucets; and I do hereby declare that the following is a full, clear, and exact description of my invention, reference being had to the accompanying drawings, forming a part thereof.

My invention has reference to cocks and faucets for controlling the discharge of water, steam, and other fluid and gaseous bodies; and it relates more particularly to the manner of constructing and applying the valve, so that when it is open it will not contract or reduce the area of the passage through the pipe or cock.

My valve has also the peculiar advantage of being held to its seat by the pressure behind it, all as hereinafter described.

Referring to the said drawings, Figure 1 is a vertical longitudinal section through the body of the faucet having my improvement combined therewith. Fig. 2 is a top view of Fig. 1. Fig. 3 is a detail view of the valve and its spindle.

A represents a valve or faucet body. This I provide with a straight and clear passage, unobstructed by curves or partitions, and at or near one end, behind one of the screw-connections *a*, I form a valve-seat, *b*.

At one side of the body I make an enlargement or chamber, B, which, for the convenience of inserting and removing the valve C, I close and seal by a screw-cap, B'. This chamber is for the purpose of receiving the valve when it is turned up, so as to give a free and clear outlet and discharge of the area, or nearly so, of the passage through the body A.

The valve C is made to fit the seat, and it has a lug or extension, *c*, projecting from one side of it, which fits into a recess in the chamber B, and is provided with a hole through it to receive the pin or short shaft D. The valve is secured upon this shaft, and is operated by the handle or a wrench applied to the end thereof. This pin or shaft D works in a socket, B'', formed upon one side of the faucet-body, and one end of it projects therefrom and has the head D' to receive the handle.

I prefer to secure this shaft in place by employing the screw-thread *d*, that takes into the screw-thread cut into the socket at the point next the handle, and by causing the point of the shaft to work against a solid head on the other end of the socket, as by this mode I secure tight joints, which will not become loose by wear, although the shaft may be also held by means of a nut and screw-thread upon the point, which will then project through the end of the socket at the side of the body.

By this arrangement and manner of hanging the valve C it turns down in the direction of the discharge when being closed against its seat, and consequently the full pressure of the stream is received upon its rear or inner side, and it will be held firmly to its seat by the pressure.

It will be noticed that in consequence of the valve being turned up into a chamber outside of the passage it operates to give a free opening through the entire faucet of equal area with the valve-seat.

I obtain a close joint between the valve and its seat by securing around the rim of the former a packing, *e*, of any suitable substance.

In opening the faucet, the rapidity with which the opening increases when the valve moves away from its seat causes the pressure against the back of the valve to rapidly decrease, and therefore the valve can be readily opened with a short lever, and no great application of force is required to operate it.

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

The pipe or faucet A, having the chamber or enlargement B and barrel or socket B'', in combination with the hinged valve C, with its shaft D and lever-handle, substantially as set forth.

In witness whereof I have hereunto set my hand and seal.

FRANK WOODWARD. [L. S.]

Witnesses:

JNO. P. BELL,
EDWD. E. OSBORN.