

J. PORTEOUS.

Cylinder-Cock.

116485

PATENTED JUN 27 1871

Fig. 1.

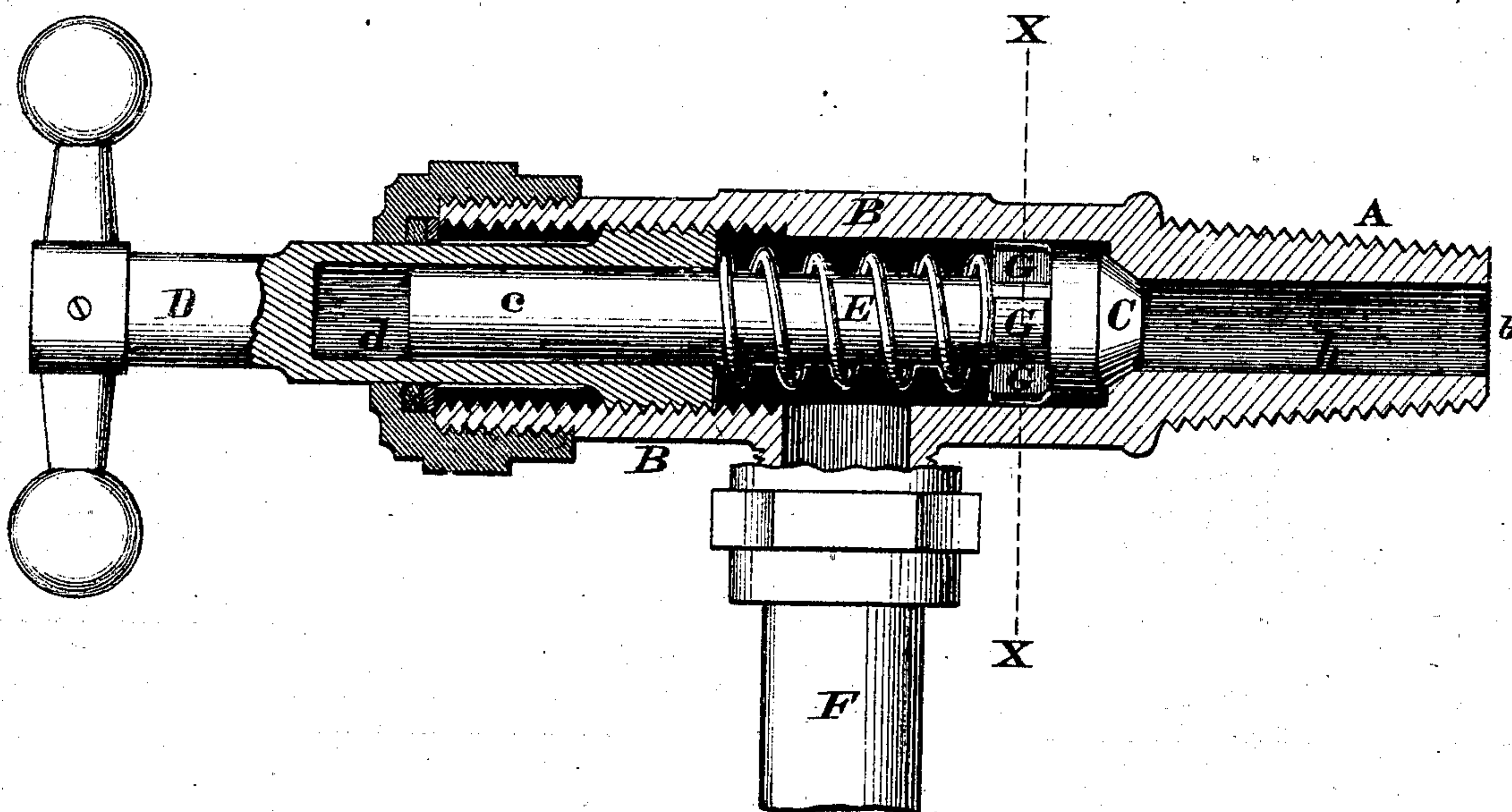
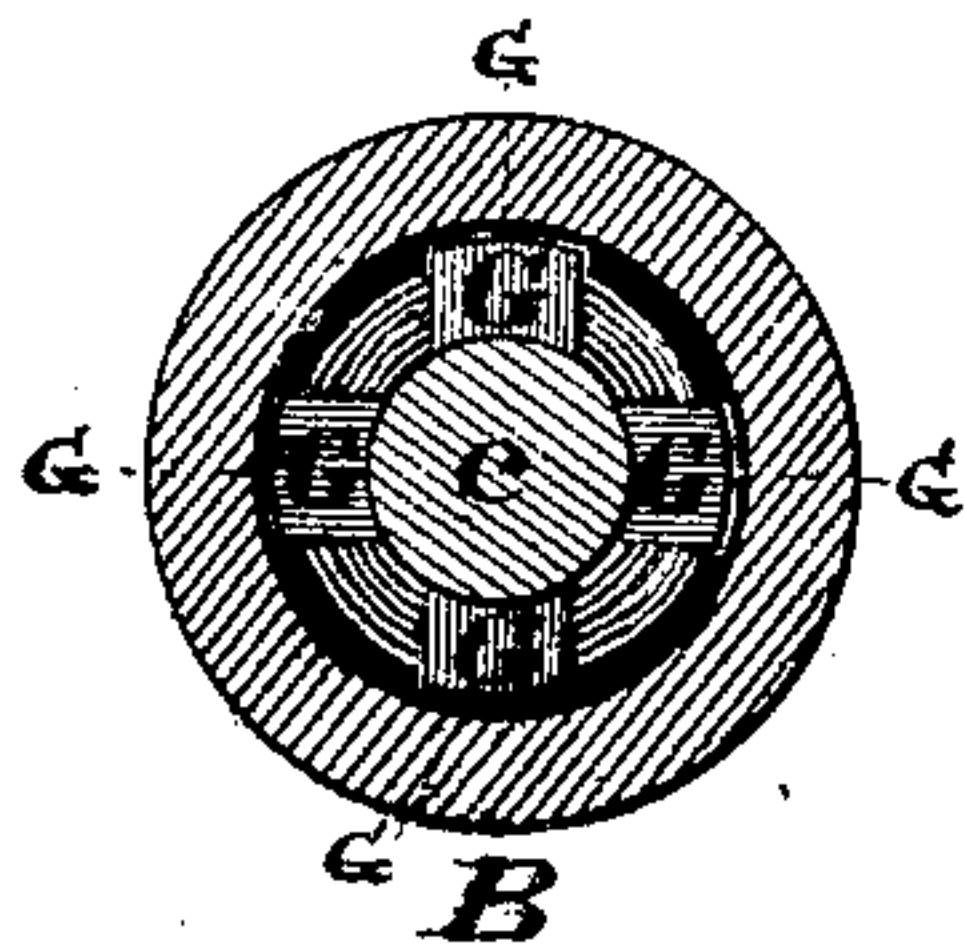


Fig. 2.



ATTEST.  
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# UNITED STATES PATENT OFFICE.

JOHN PORTEOUS, OF CINCINNATI, OHIO.

## IMPROVEMENT IN CYLINDER-COCKS.

Specification forming part of Letters Patent No. 116,485, dated June 27, 1871.

*To all whom it may concern:*

Be it known that I, JOHN PORTEOUS, of Cincinnati, Hamilton county, Ohio, have invented certain Improvements in Automatic Discharge-Cocks for Steam-Cylinders, of which the following is a specification:

This invention relates to that class of cocks or valves which is applied to steam-cylinders for the purpose of discharging the water of condensation from the same; and my improvement consists in constructing said cocks in such a manner that they will automatically open and relieve the cylinder of water as soon as any accumulates, and yet will remain closed against the pressure of steam.

The drawing is an axial section of a cylinder-cock, embodying my improvements.

A represents that portion of the device which is screwed into the steam-cylinder. B is the barrel of my cock, which has the customary longitudinal bore *b*, whose discharging end is capable of being closed by a valve, C, having a stem, *c*, that plays within a chamber, *d*, of the adjustable screw-threaded cap, nut, or handle D. Interposed between the top of valve C and inner end of cap D is a helical spring, E, which serves to retain said valve against its seat as long as no water is in the cylinder; but as soon as any accumulates therein the extra pressure of the same forces the

valve away from its seat and allows all of the water to escape through the downwardly-projecting pipe F. The water of condensation having been discharged, the valve is instantly closed by the action of the spring E and the unnecessary escape of steam is prevented.

It will be seen that this device serves to keep the cylinder free from water without requiring any attention from the engineer, who, by means of the device D *d*, is able, at any time, to adjust the cock to suit the actual pressure of the steam, so as to discharge the water without wasting steam, and that this adjustment can be promptly made at any time without removing any part of the cock; nor can the cock ever be entirely closed by accident or otherwise. The stem *c* is confined to an axial position within the barrel B by means of wings G, which project radially from said stem.

I claim as new and of my invention—

In the described combination with the barrel B *b*, automatically-acting valve C *c*, spring E, and discharge-pipe F, the screw-cap D *d* adjustable from the outside, as and for the object set forth.

In testimony of which invention I hereunto set my hand.

JOHN PORTEOUS.

Witnesses:

GEO. H. KNIGHT,  
JAMES H. LAYMAN.