W. U. FAIRBAIRN.

GAGE-COCK.

No. 184,070. Patented Nov. 7, 1876.

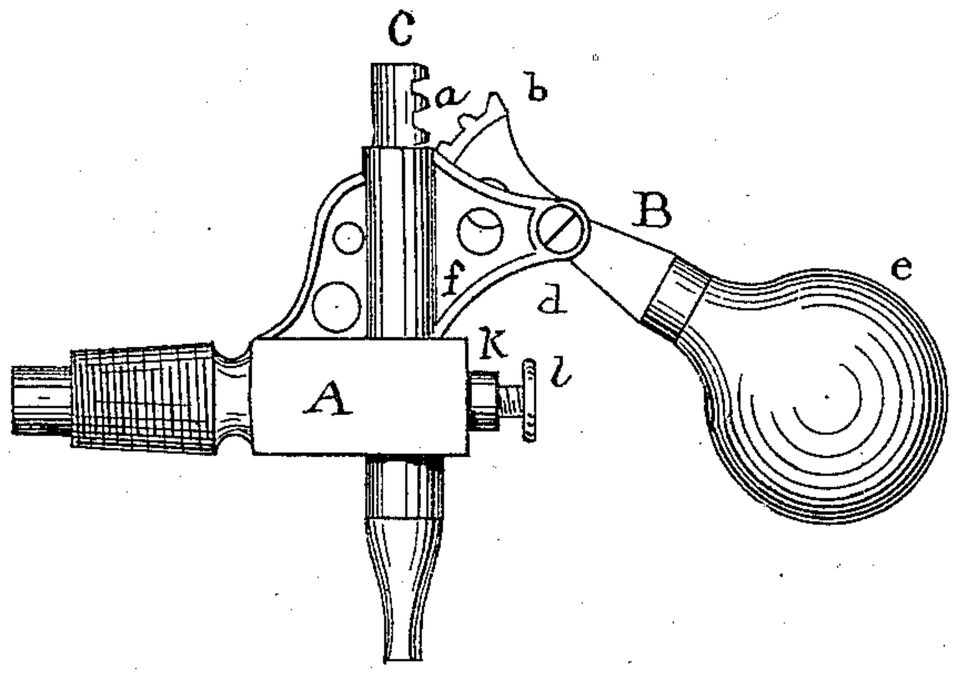

Fig. 1.

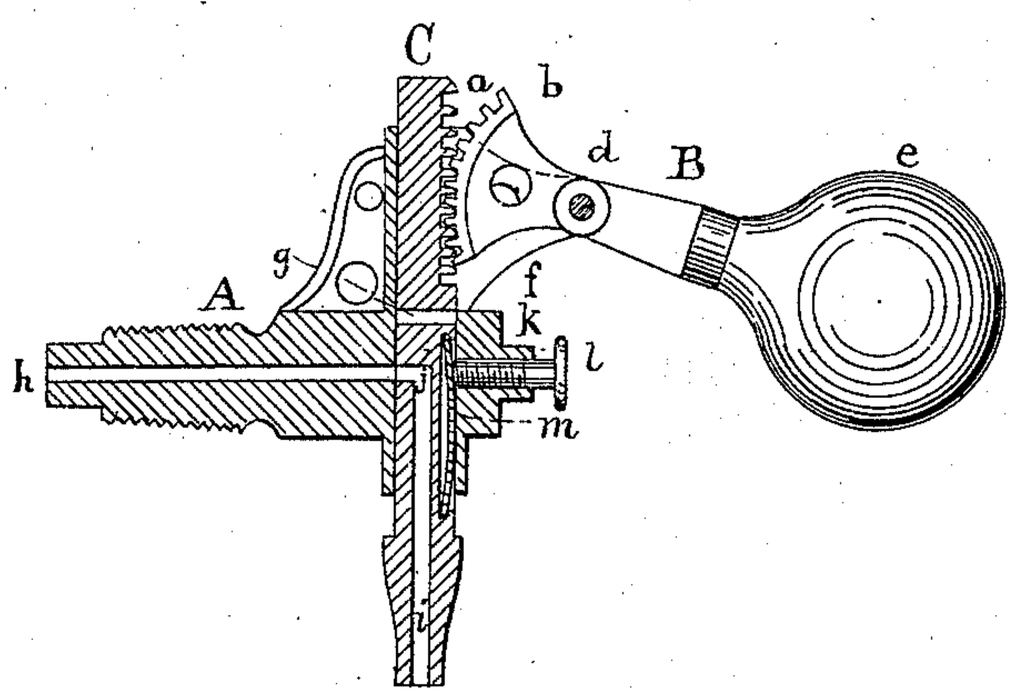

Fig. 2.

WITNESSES

F. F. Raymond 2d.
T. R. Raymond.

INVENTOR

Wm. U. Fairbairn

UNITED STATES PATENT OFFICE.

WILLIAM U. FAIRBAIRN, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO HIMSELF AND ROBERT B. FAIRBAIRN, OF SAME PLACE.

IMPROVEMENT IN GAGE-COCKS.

Specification forming part of Letters Patent No. **184,070**, dated November 7, 1876; application filed September 27, 1876.

To all whom it may concern:

Be it known that I, WILLIAM U. FAIRBAIRN, of Boston, Massachusetts, have invented Improvements in Gage-Cocks, of which the following is a specification:

This invention relates to that class of gage-cocks which employ a slide quill-valve; and it consists, first, in the location of a pressure-spring upon the quill opposite the water-way in the body of the valve, and in its combination with an adjusting pressure-screw in the body of the valve, serving also as a stop for the piston movement; second, in the location of a straight-way clearing-channel through the piston, above the quill, to be brought in line with the water-way channel and nut of the pressure-screw only on removal of the screw.

In the drawings, Figure 1 is an elevation. Fig. 2 is a vertical longitudinal section.

The figures are lettered alike in like parts.

A is the body of the cock, B is its handle, and C is the piston. This is a rod of metal formed as a rack, *a*, in its upper portion, to engage with the toothed quadrant *b* of the handle B. The handle B is pivoted at *d* in a bracket, *f*, on the neck of the cock, and it has a knob, *e*, on its outer end, which may be weighted.

It is obvious that in lieu of a quadrant or sector on the end of a lever-handle, a toothed wheel to engage in the rack may be employed, and similarly weighted, if desired.

The piston C has a straight-way channel transversely through it, *g*, which may, if desired, be brought in line with the water way or channel *h* in the body of the cock. The lower part of the piston C is formed with a channel, *i*, which has an offset-channel, *j*, to connect, as desired, with the water way or channel *h*. On the body of the cock opposite the channel or water way *h* is a boss, *k*, in which is cut a nut in line with the water way or channel *h*. On the front side of the piston, below channel *g*, is a recess, in which is inserted spring *m*, and the screw *l* is inserted in the boss *k* bearing on said spring *l*.

The piston is moved up and down by the action of the handle, rack, and pinion in an obvious manner. It is tightened to its seat in the body of the valve by the spring *m* compressed to the proper balancing strength by the adjusting-screw *l*. The point of this screw, projecting into the recess of the piston, serves as a stop to limit the movement of the piston. While the screw is in, the movement of the piston is limited to a movement of the offset-channel *j* of the channel *i* into and from communication with the water way or channel *h*. When necessary to clean the valve, the screw *l* is removed and the piston dropped till channel *g* coincides with the water way or channel *h*, when a wire may be passed through to clear the same.

It will be noticed that all the bearings in this cock are metallic, and that there is no packing, wear being compensated by the spring and adjusting-screw.

I claim and desire to secure by Letters Patent—

1. In a piston-valve gage-cock, the combination of the reciprocating piston C, recessed on its front opposite the water way or channel *h*, and offset-channel *j*, and channel *i*, with the pressure-spring *m*, and adjusting-screw *l*, substantially as described.

2. In a piston-valve gage-cock, the straight-way channel *g* located above the offset-channel *j* and spring *m*, substantially as and for the purpose described.

WM. U. FAIRBAIRN.

Witnesses:

F. F. RAYMOND, 2d.,

T. R. RAYMOND.