

J. S. HAMILTON.

Gage-Cock.

No. 159,920.

Patented Feb. 16, 1875.

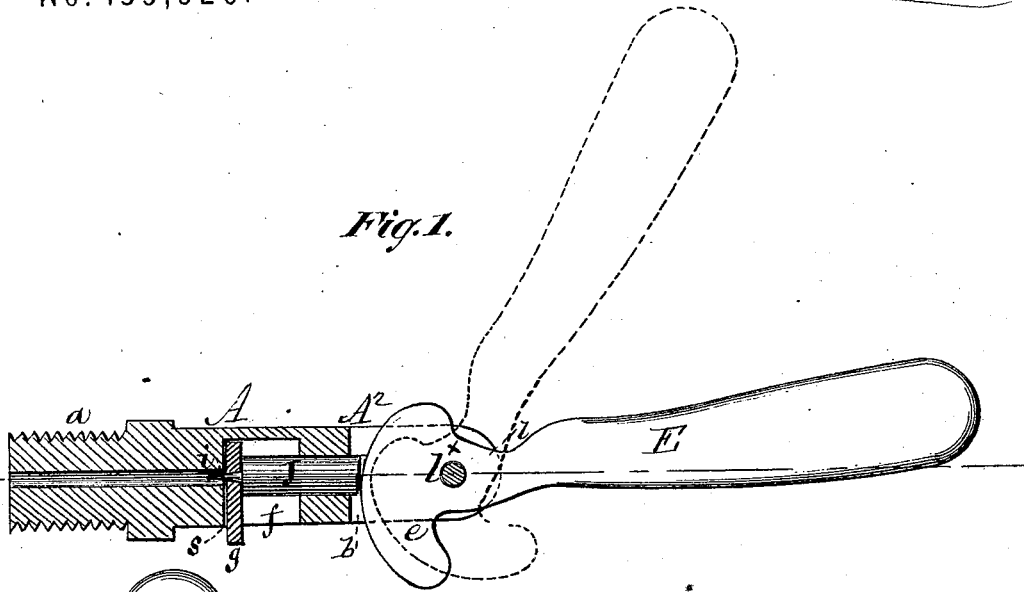


Fig. 1.

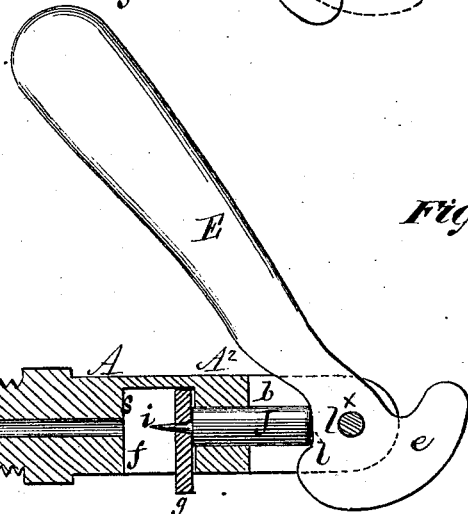


Fig. 2.

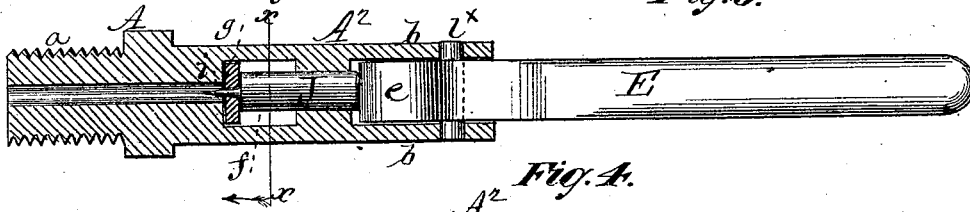


Fig. 3.

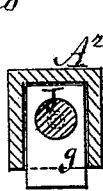


Fig. 4.

Witnesses:  
John Becken  
Fred Haynes

Jos. S. Hamilton  
by his Attorneys  
Brown & Allen

# UNITED STATES PATENT OFFICE.

IRA S. HAMILTON, OF CORNING, NEW YORK, ASSIGNOR OF ONE-HALF HIS RIGHT TO BENJAMIN N. PAYNE AND DAVID W. PAYNE, OF SAME PLACE.

## IMPROVEMENT IN GAGE-COCKS.

Specification forming part of Letters Patent No. 159,920, dated February 16, 1875; application filed December 1, 1874.

*To all whom it may concern:*

Be it known that I, IRA S. HAMILTON, of Corning, in the county of Steuben and State of New York, have invented an Improved Gage-Cock; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making part of this specification.

This invention consists in a gage-cock of a novel and very simple and cheap construction, which is but little liable to get out of order, and which never requires regrinding, but has its valve-face renewed when necessary by the application of a piece of india-rubber or other soft material.

In the accompanying drawing, Figure 1 is a longitudinal vertical section of my improved gage-cock, showing it open. Fig. 2 is a similar view, showing it closed. Fig. 3 is a horizontal section. Fig. 4 is a transverse section in line  $x x$  of Fig. 2.

A is a tube, constituting the body of the cock, having a screw-thread,  $a$ , on its inner end, for attaching it to the boiler, and having its inner end slotted or formed with lugs  $b b$ , for the reception of the cam-lever E, which closes the valve, and which is pivoted by a fulcrum-pin,  $l^x$ , passing through said lugs. Some distance in rear of the slotted portion or lugs  $b b$  there is provided in the said tube a cavity or chamber,  $f$ , which opens downward, and the rear face  $s$  of which constitutes the valve-seat. The portion  $A^2$  of the tube between the chamber  $f$  and the slotted portion or lugs  $b b$  is bored to receive and serve as a guide for the plunger or slide-bolt J, the front end of which is armed with a sharp point or spur,  $i$ , for the reception of a packing-piece,  $g$ , of vulcanized sheet-rubber, which constitutes the valve-face, the said spur entering, when the valve is closed, into the portion of the tube behind the seat  $s$ , and so preventing the displacement of the valve. The lever E has a long arm, which serves as the

handle of the cock, and a short one, which forms a cam,  $e$ , for operating on the rear end of the plunger or slide-bolt J. At the back or heel of the cam  $e$  is a notch or depression,  $l$ , which may be brought directly in line with the plunger and the fulcrum  $l^x$  by turning the lever up and pressing it back to the position shown in Fig. 2. When in that position the plunger may be moved outward until its outer end engages with the notch  $l$ , when the packing  $g$  may be removed and replaced by a new one, if desired.

When a new packing is inserted it is placed in position in the recess  $f$ , and the lever E is turned down to the position shown in full lines in Fig. 1, when the cam  $e$  presses the plunger inward, forcing the spur  $i$  through the packing and into the end of the tube, and thus holding the packing in place.

When the lever is raised to the position shown in dotted lines in Fig. 1 the plunger J is free to slide in the portion  $A^2$  of the tube, when forced outward by the pressure of steam or water in the boiler. When the lever is pressed down to the position shown in full lines the cam bears against the outer end of the plunger J and forces it inward, so as to press the packing  $g$  closely against the valve-seat  $s$ , and prevent the escape of steam or water. When the lever is elevated, and the steam or water escaping, the tube having no opening on its upper side, the steam or water is compelled to pass downward through the recess  $f$ , and the hand of the operator is protected.

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

The lever E, constructed with the cam  $e$  and notch or depression  $l$ , in combination with the slide-bolt J, having the spur  $i$  and movable valve  $g$ , substantially as and for the purpose described.

IRA S. HAMILTON.

Witnesses:

A. C. PLACE,  
C. E. GREENFIELD.