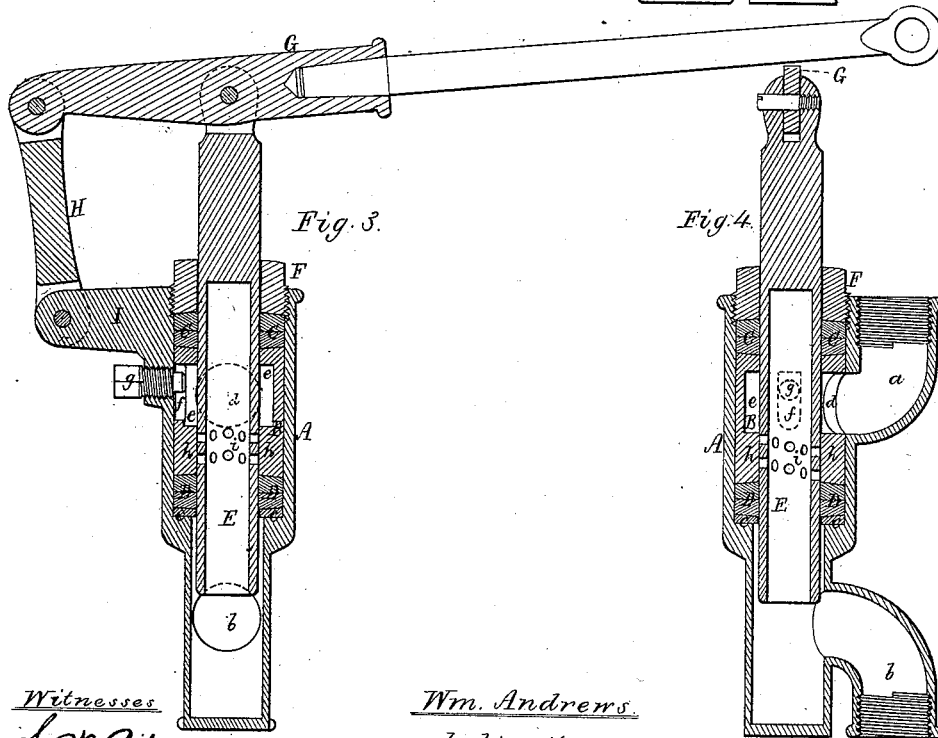
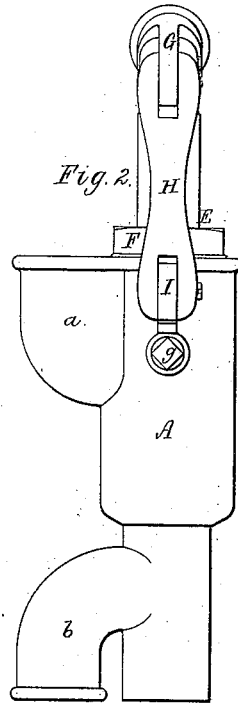
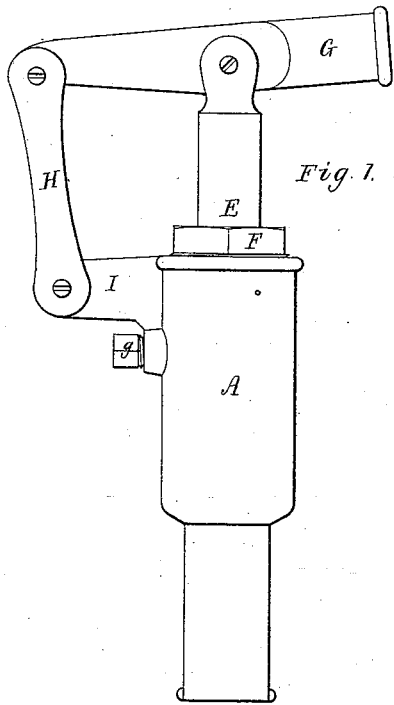


W. ANDREWS.  
STEAM-VALVE.

No. 193,134.

Patented July 17, 1877.



Witnesses  
*S. H. Piper*  
*L. H. Miller*

*Wm. Andrews*  
by his attorney  
*R. H. Eddy*

# UNITED STATES PATENT OFFICE.

WILLIAM ANDREWS, OF LISBON FALLS, MAINE.

## IMPROVEMENT IN STEAM-VALVES.

Specification forming part of Letters Patent No. **193,134**, dated July 17, 1877; application filed June 9, 1877.

*To all whom it may concern:*

Be it known that I, WILLIAM ANDREWS, of Lisbon Falls, of the county of Androscoggin, of the State of Maine, have invented a new and useful Improvement in Steam Cocks or Faucets; and do hereby declare the same to be described in the following specification and represented in the accompanying drawings, of which—

Figures 1 and 2 are side elevations, and Figs. 3 and 4 vertical sections, of a cock or faucet of my improved kind.

It contains within its case A, provided with elbows or a branch induct, *a*, and a branch educt, *b*, arranged as shown, a tubular sleeve, B, which is disposed between annular packings C D, and with such encompasses a tubular valve, E, arranged concentrically within the case.

A screw-nut, F, encircles the stem, and screws into the top of the case A and against the upper packing.

The lower packing rests on a seat or shoulder, *c*, arranged in the case in manner as represented. On screwing down the nut the upper packing will be compressed between it and the sleeve, and the sleeve will be forced down upon the lower packing.

The case is closed at its lower end, and the tubular valve is open at its lower end, and such valve is jointed to a lever, G, having its fulcrum at the upper end of a link, H, that is jointed to an arm, I, extending from the valve-case.

The sleeve B has in it an induct or hole, *d*, and is chambered, as shown at *e*, such hole being arranged directly in rear of the induct of the case. Furthermore, there is a slot, *f*, made lengthwise in the sleeve, to receive the end of a screw, *g*, which is screwed laterally into the case, and, with the slot, serves to keep the sleeve from revolving in the case, but allows of it being moved lengthwise or up and down therein.

The part *h* of the sleeve which is below the chamber *e* fits to the tubular valve E, and not only serves as a seat therefor, but to insulate the lower packing from the steam when in the said chamber *e*.

The tubular valve has, as shown, a series of holes or inducts, *i*, made through it laterally, all of which are arranged so as to be covered at once by the insulator while encompassing them.

Of these inducts or holes there may be one or more; but, in carrying out my improvement, each must be so situated that all may be covered at once by the insulator, as in such case, no matter how much any one or more of such holes may be above or below the insulator, the lower packing will be so insulated by the insulator and the tubular valve as to be completely protected from being cut by the steam, for all the holes will be closed before any may be forced down to the said packing.

The elbows or branch induct and educt of the case admit of induction and eduction pipes being disposed in line with each other when coupled with the case by means of such extensions from or adjuncts of it.

I do not claim a gage-cock constructed as represented in the United States Patent No. 81,027, in which the steam in flowing through it has to pass upward, and the valve has to be raised to cut off the steam.

In the said gage-cock the case operates to close the induction of the valve and insulate the lower packing from the inrushing steam; but in my faucet the sleeve, or the part thereof termed the "insulator," is employed to accomplish such, and the valve has to be depressed in order to close the faucet. Besides, in my faucet, as shown, the valve is open at its lower end, and the case is there closed, and is provided with an educt over the closure, all of which render my faucet specially useful and advantageous.

I claim as my invention as follows—that is to say:

1. In combination with the tubular sleeve provided with the induct and the insulator, and arranged in the valve-case with two packings and a compression-screw applied thereto, as set forth, the movable tubular valve, having each of its inducts so arranged that while taking steam it shall extend above the insulator, and shall, on the valve being forced downward, be closed by the insulator before

reaching the lower packing, all being substantially as specified and represented.

2. The valve-case A, open at top, closed at bottom, and provided with the branch induct *a* and educt *b* and the packing-seat *c*, arranged as set forth, in combination with the clamp-nut F, the packings C D, the perforated and insulating sleeve B, and the tubular open

valve E, provided with one or more inducts, *i*, all being constructed and applied substantially as shown and explained.

WILLIAM ANDREWS.

Witnesses:

R. H. EDDY,  
JOHN R. SNOW.