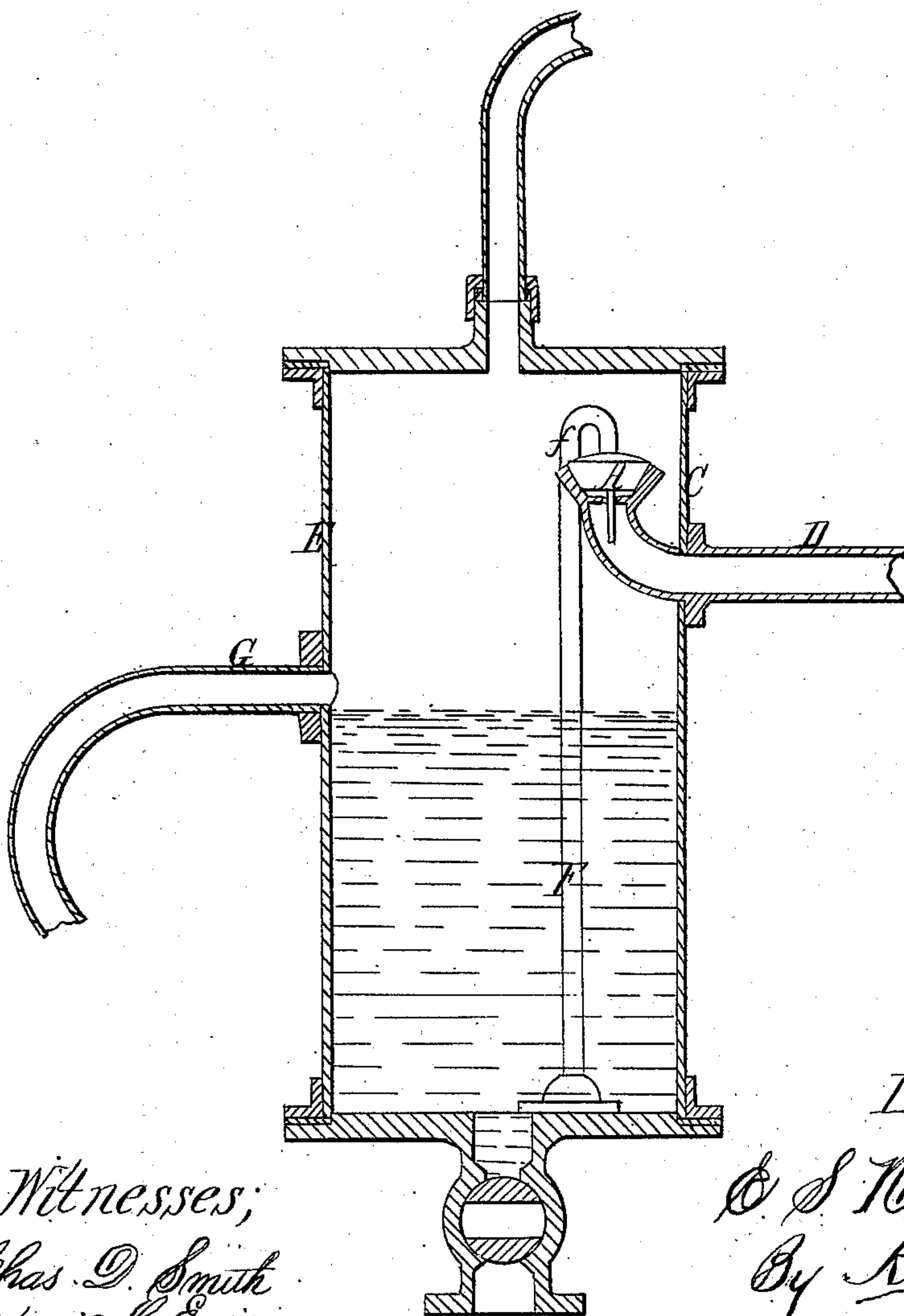


*E. S. Hutchinson.*

*Spirit-Meter Check-Valve.*

*N<sup>o</sup> 68,080.*

*Patented Aug. 27, 1867.*



*Witnesses;  
Abas D. Smith  
James E. Ewin*

*Inventor;  
E. S. Hutchinson  
By Knight & Co.  
Attorneys*

# United States Patent Office.

ELIAS S. HUTCHINSON, OF BALTIMORE, MARYLAND.

*Letters Patent No. 68,080, dated August 27, 1867.*

## IMPROVED CHECK-VALVE FOR LIQUID-METERS.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, ELIAS S. HUTCHINSON, of the city and county of Baltimore, and State of Maryland, have invented a new useful Automatic Check-Valve for Liquid-Meters and other purposes; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing, which is made a part of this specification, and which represents a sectional view of a distilling apparatus embodying my invention.

This invention consists in the application, to a pump pipe, of a thermo-dynamic valve, governed by an expansible rod, and employed to seal or close the pipe when the apparatus is in its cold or inoperative condition. Thus, as it is only necessary, in the legitimate operations of a still, to pump into the doubler while the apparatus is heated, I propose to arrange a valve in the pump pipe or discharging pipe, said valve to be securely closed while the doubler is cold and not in operation, and allowed to open when the doubler is heated, by the contraction and expansion of a brass or other suitable metallic rod or tube, as hereinafter explained. By thus closing the valve it becomes impracticable to perpetrate fraud by pumping high wine back into the doubler, when the apparatus is cold, so as to add to the amount recorded by the credit-meter of the still.

A represents a metallic valve, having a seat, C, within the inlet pipe D leading from the pump to the doubler or distilling vessel E. As the doubler cools the enclosed metallic rod F contracts, and its free extremity *f* being bent downward, as represented, assumes a position in contact with the valve A, which is thereby held snugly to the seat C, thus effectually closing communication with the still through the pipe D while the apparatus is in its cool or inoperative condition. As the doubler becomes heated, the rod F expands, and its extremity *f* receives sufficient motion to place it out of the way of interference with the upward motion of the valve A, which opens freely in the direction of the incoming current, when the apparatus is in its heated or operative condition. The valve A may, if desired, be applied to the pipe G, through which the liquid is introduced for the first operation.

I do not wish to be understood as confining the application of the valve to a doubler, as it may be employed in other pump pipes without departing from the essential principles of the invention.

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

The application to a pump pipe of a thermo-dynamic valve, substantially as described.

To the above specification of my automatic check-valve for liquid-meters I have signed my hand this second day of May, 1867.

ELIAS S. HUTCHINSON.

Witnesses:

HENRY SCHMITZ,  
W. H. HAYWARD.