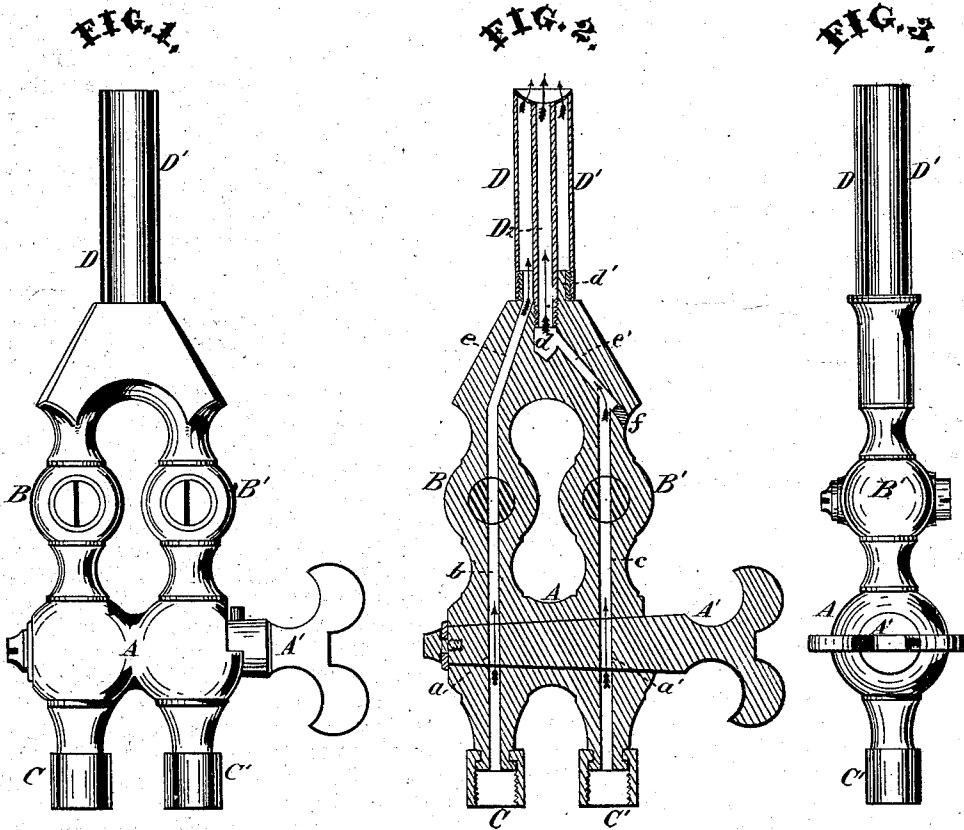


A. E. DELOUEST.

Stop-Cocks and Regulators for Gas-Burners.

No. 135,895.

Patented Feb. 18, 1873.



Witnesses.

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UNITED STATES PATENT OFFICE

AMÉDÉE E. DELOUEST, OF BUFFALO, NEW YORK, ASSIGNOR OF ONE-HALF
HIS RIGHT TO POH AND RAICHLE, OF SAME PLACE.

IMPROVEMENT IN STOP-COCKS AND REGULATORS FOR GAS-BURNERS.

Specification forming part of Letters Patent No. 135,895, dated February 18, 1873.

To all whom it may concern:

Be it known that I, AMÉDÉE E. DELOUEST, formerly of Paris, France, now of Buffalo, in the county of Erie and State of New York, have invented a new and Improved Stop-Cock and Regulator for Oxygen and Hydrogen Gas Burners, of which the following is a specification:

My invention relates, first, to the combination, with a gas-burner arranged for burning two gases, of a double shut-off cock (composed of one key with two holes drilled through it, which operates to simultaneously shut off and turn on the supply of gases at the burner) and regulating-cocks or other devices for regulating the supply of each of the gases used; second, in the peculiar arrangement of the passages leading from the two holes in the double key to the two compartments of the burner.

Figure I is a front elevation. Fig. II is a vertical section. Fig. III is a side elevation.

A is the double stop-cock, of which A' is the plug having the two holes *a* and *a'* drilled through it to correspond with the passages *b* and *c*. B and B' are the regulating devices, which in this case are placed between the stop-cock and the burner. They may also be placed below the stop-cock, or at any distance therefrom. These regulating devices, in the drawing, are shown in the shape of small cocks, but a conical-pointed screw, or other device applicable for the purpose, may be used. C and C' are coupling-nuts with internal threads, fitted to the lower extremities of the double cock. If the regulating devices were placed below the double cock these coupling-nuts would be similarly attached to them. D is the burner, which is composed of an outer shell or tube, D¹, having a perforated concave tip, the center being provided with an enlarged hole, into which the center tube D² is fitted. The inner or smaller tube is screwed into a tapped hole, *d*, while the outer or larger tube has an internal thread corresponding with a thread cut on the projection *d'*. The passage *b* is connected with the annular space inclosed by the tube D¹ by a passage, *e*, drilled from the top, and leading into it, while the passage *c* is connected with the cavity *d* communicating with the small tube D² by a tube or passage, *e'*, drilled from a point, *f*, above the regulating-cock B' at an angle thereto, and into the cavity *d*. The end *f* of the passage *e'* is plugged or stopped up, as shown in the drawing.

The object of my invention is to provide a stop-cock and regulator for oxygen and hydrogen gas burners which shall be simple and independent of each other in operation, and so made as to be operative in shutting off and turning on both gases at a time without disturbing the proportion of the two gases that gives the best light; and to provide separate regulators, by which the quantity of each gas to be supplied to the burners can be regulated, without interfering with the cock for turning on and shutting off the supply of both gases.

The passages *e* and *e'* may be drilled from both sides at right angles to the vertical passages *b* and *c*, thus making a square top, instead of the one shown in the drawing. Still this would be an equivalent of the construction shown and above described.

The operation of the invention is as follows: The coupling-nuts C C', having been connected with the two pipes conveying the gases, the double plug A' and the regulating-cocks B B' being turned open, when the two gases will escape through the top of the burner, the hydrogen passing through the hole *a b e* into the annular space inclosed by the tube D¹, and out through the small perforations in the direction shown by the arrows, while the oxygen passes through the hole *a' c e'* into the cavity *d*, thence up through the center tube in the direction of the arrow, Fig. 2. The regulating-cocks B and B' are set to pass the required quantity of each gas.

I make no claim in this application to the double burner itself; but

What I do claim, and desire to secure by Letters Patent, is--

1. The combination of the double cock A, having two distinct and separate pipes, C C', leading to it, and the regulating devices B B', and the burners D D¹, all constructed and arranged substantially as and for the purpose specified.

2. The combination and arrangement of the double cock A, passages *a a' b c e e'*, substantially as shown and described.

3. The peculiar arrangement of the passages *b, c, e, e'*, and *d*, as shown and described.

AMÉDÉE E. DELOUEST.

Witnesses:

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