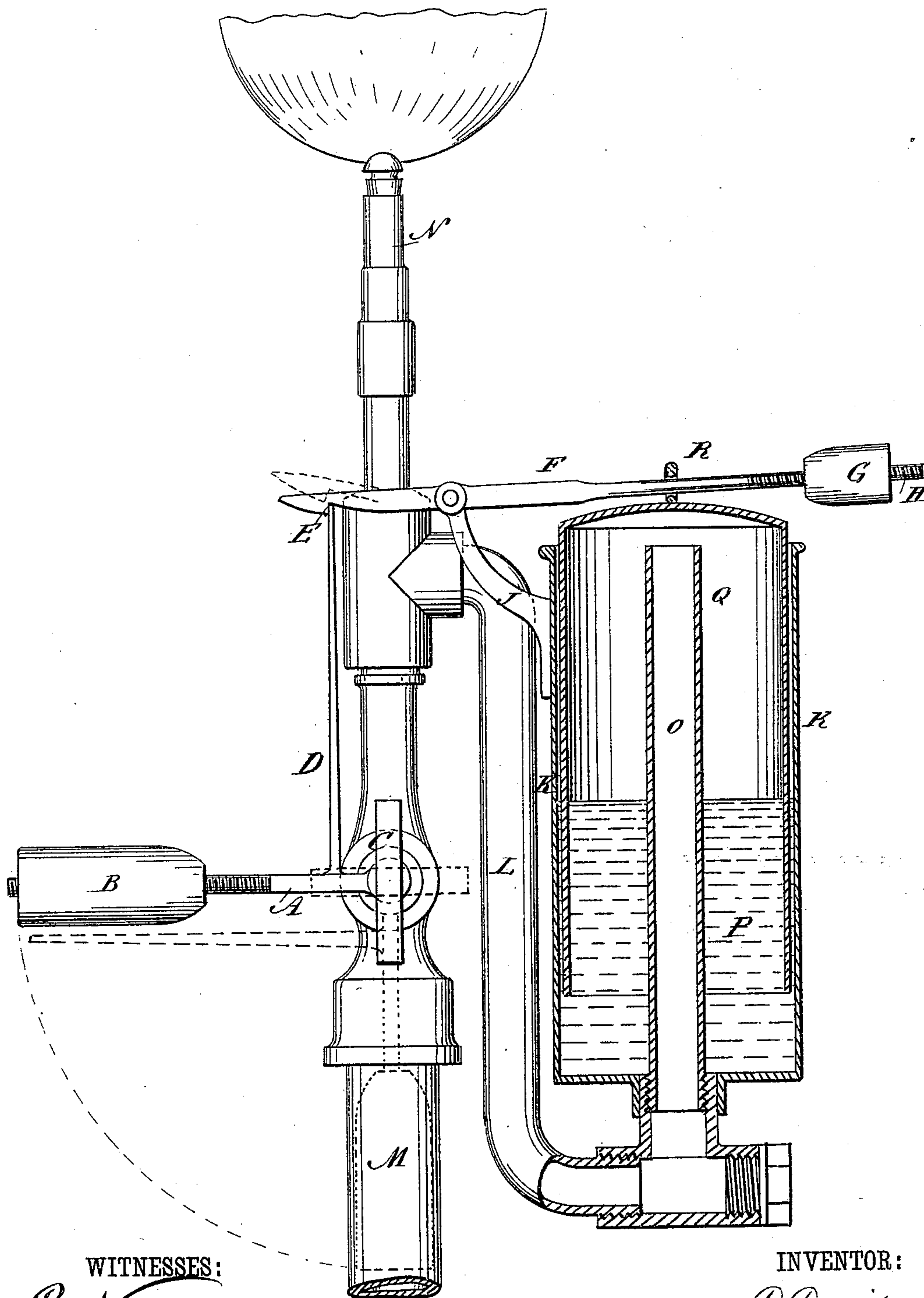


(No Model.)

D. DAVIS.
GAS EXTINGUISHER.

No. 249,021.

Patented Nov. 1, 1881.



WITNESSES:

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UNITED STATES PATENT OFFICE.

DANIEL DAVIS, OF IOWA CITY, IOWA.

GAS-EXTINGUISHER.

SPECIFICATION forming part of Letters Patent No. 249,021, dated November 1, 1881.

Application filed May 25, 1881. (No model.)

To all whom it may concern:

Be it known that I, DANIEL DAVIS, of Iowa City, in the county of Johnson and State of Iowa, have invented a new and Improved Gas-
5 Extinguisher, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved device for extinguishing
10 certain gas-jets in a line of gas-pipes from the works by reducing the pressure of the gas and without interfering with the other jets that are not to be extinguished.

The invention consists in a weight attached to the gas-cock, which weight is held elevated
15 by a balanced trigger-lever connected with a bell or inverted cup, which is placed in a cylinder containing a non-freezing liquid, which forms a seal, into which cylinder gas is conducted by a branch-pipe, so that as long as
20 the gas-pressure is uniform it keeps the bell elevated to its highest point; but as soon as the gas-pressure is reduced the bell descends, thereby releasing said trigger-lever, whereby the weight which is attached to the cock drops
25 and closes the cock, shutting off the gas.

In the accompanying drawing a front elevation of my improved gas-extinguisher is shown, the bell, cylinder, and lower part of the branch pipe being shown in section.

30 An arm, A, with an adjustable weight, B, is attached to the cock C, this arm being preferably threaded to facilitate the adjustment of the weight B. This arm A is provided with an arm, D, preferably at right angles thereto,
35 and the upper end of this arm D fits into a recess forming a shoulder, E, toward the outside in the lower edge of the outer end of a trigger-lever, F, provided at the opposite end with an adjustable weight, G, this end of the lever being
40 provided with a screw-thread, H, for the adjustment of the weight. This lever F is pivoted to the end of the arm J of a cylinder, K, which rests upon a downward-projecting branch pipe, L, of the pipe M, conducting gas
45 to the burner N. A pipe, O, extends upward into the cylinder K, projecting to about the top of the same. The lower part of the cylinder K is filled with a non-freezing liquid, P, and a bell or inverted cup, Q, fitting in the

cylinder K is placed into the same in such a
50 manner that the open end of the bell Q passes into the liquid, which forms a seal to prevent the escape of gas. This bell Q is provided with an eye or hook, R, at the upper end, through which eye the lever F passes. The
55 lever F may be provided with a projection in place of the recess forming the shoulder E.

The operation is as follows: The weight B is raised, thereby opening the cock C, and is held by the lever F, against the shoulder E of
60 which the end of the arm D rests, and the weight G of this lever F is so adjusted that the normal pressure of the gas entering the cylinder K and bell Q through the pipes L and O can keep the bell Q raised, thereby locking
65 the weight B and the arm D in the position described above. If the pressure of the gas is reduced the bell Q will descend and the shoulder end of the lever F will be raised, thereby releasing the arm D and the weight B, causing
70 the latter to drop, thereby closing the cock C and shutting off the gas and extinguishing it. The weights G of all those burners that are to be closed at a certain time are so adjusted that they can overcome a certain pressure of gas,
75 being assisted by the weight of the bell, and as soon as the pressure is changed correspondingly all the jets on the line that have been so adjusted will be extinguished without interfering with the other lights of the line. The
80 weights can be so adjusted that a number of jets will be extinguished at a certain pressure of gas, another set may be adjusted to be extinguished at a still lower pressure, and in this manner all the lights can be controlled from
85 the gas-works. Before lighting the gas the arm D need only be raised to catch on the shoulder E.

This apparatus is very economical, as the services of the persons employed to extinguish
90 the lights can be dispensed with, and all the desired lights are extinguished at the same time without fail.

This apparatus can also be constructed to operate when the pressure of the gas is in-
95 creased instead of being decreased. In that construction the weight G is suspended from the other arm of the lever F, so that this weight

which holds the end of the lever F provided with the shoulder E, will be held down by the weight G, and thus hold the upper end of the arm D. If the pressure is increased the bell Q is raised and the arm D is thus released, permitting the weight B to drop, thereby closing the cock C in the manner desired.

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

1. In a gas-extinguisher, the combination, with an adjustably-weighted gas-cock, of an adjustably-weighted trigger-lever for holding it, and a bell connected with the said lever and contained within a gas-receiver connected with the gas-pipe, substantially as herein shown and described, and for the purpose set forth.

2. In a gas-extinguisher, the combination,

with the cock C, of the arm A, provided with an arm, D, and a weight, B, of the trigger-lever F, the weight G, the arm J, the cylinder K, containing a non-freezing liquid, P, the pipe L and O, and the inverted bell Q, substantially as herein shown and described, and for the purpose set forth.

3. The combination, with the gas-burner pipe M, of a cock, C, having the weighted arm A, carrying a vertical arm, D, the lever F, notched near one end and weighted at the other, and the bell Q, having eye R, said bell being placed in a gas-receiver over a supply-pipe, O, as shown and described.

DANIEL DAVIS.

Witnesses:

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LOVELL SWISHER.