

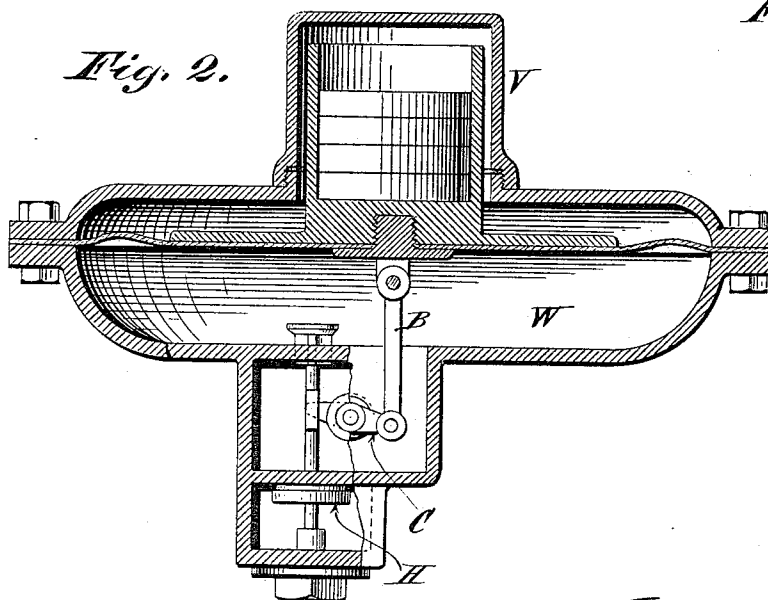
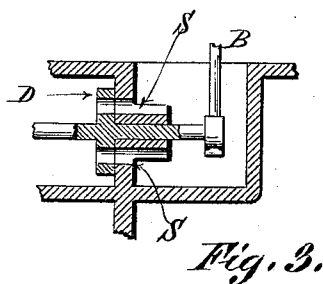
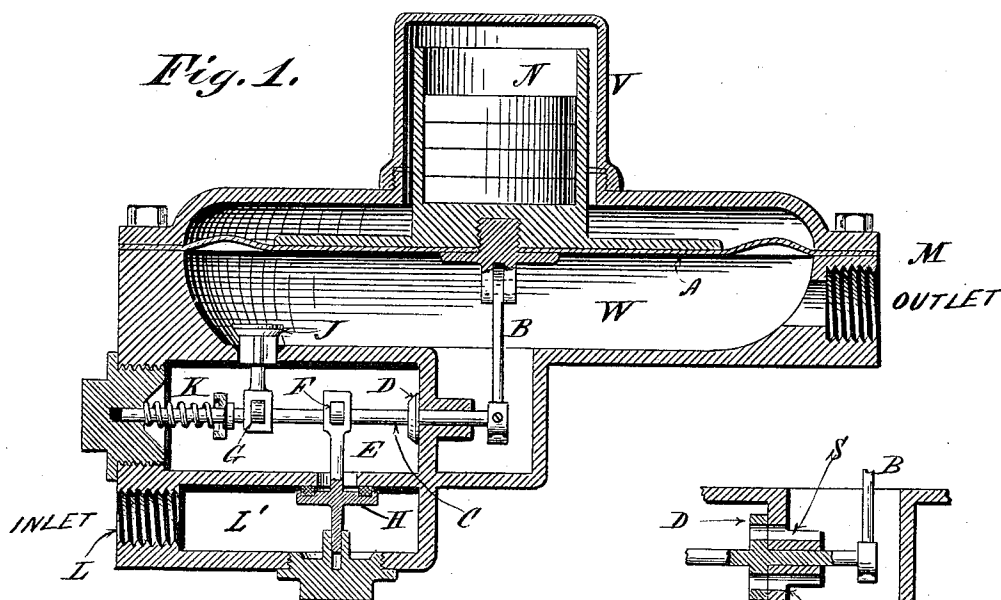
(No Model.)

T. J. KIELEY.

GAS REGULATOR AND CUT-OFF.

No. 362,973.

Patented May 17, 1887.



Witnesses:
Geo. H. Miall
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UNITED STATES PATENT OFFICE.

TIMOTHY J. KIELEY, OF NEW YORK, N. Y.

GAS-REGULATOR AND CUT-OFF.

SPECIFICATION forming part of Letters Patent No. 362,973, dated May 17, 1887.

Application filed February 17, 1887. Serial No. 227,022. (No model.)

To all whom it may concern:

Be it known that I, TIMOTHY J. KIELEY, of the city, county, and State of New York, have invented a new and useful Improvement in
5 Gas-Regulators and Cut-Offs, of which the following is a full, true, and complete description, reference being had to the accompanying drawings.

This invention relates to improvements in
10 apparatus by which the pressure-supply to a building may be regulated and at times cut off.

My invention will be readily understood from the accompanying drawings, in which similar letters refer to similar parts.

15 Figure 1 is a cross section of the entire apparatus. Fig. 2 is a cross-section at right angles to Fig. 1. Fig. 3 is a view of a modification.

The diaphragm A is inclosed in a suitable
20 chamber. Connected in the bottom of this diaphragm is the link B, which operates the rock-shaft C. This rock-shaft is provided with a ground-disk, D, which makes a substantially tight joint against the side of the chamber E. Two arms, F and G, connected with
25 the rock-shaft operate valves H and J, as shown. The spring K tends to hold the disk D against the side of the chest. It will be observed that the valves J and H open and close
30 alternately. Gas enters the apparatus at L and escapes at M. The diaphragm is held down by suitable weights, N, for which a spring could be substituted. Under the ordinary conditions of operation the valve H, between the chambers E and L', is open. Gas
35 passes said valve H and valve J into the chamber W, beneath the diaphragm. When this pressure is sufficient to raise the weights, the regulating-valve J tends to close. In case
40 of an entire cessation in the gas-pressure, the diaphragm falls, thereby closing the valve H, as shown in Fig. 2. In order to again admit gas to the apparatus, the dome V must be unscrewed and the diaphragm raised, when the
45 valve H will again open.

In Fig. 3 I have shown a modification in

which the disk D is formed into a valve and is substituted for J. Under these circumstances the disk is provided with one or more openings, as shown, corresponding to openings
50 S in the chest. These openings are so arranged as that when the diaphragm A is raised the ports will be closed. The operation is the same as before.

What I claim as my invention, and desire to
55 secure by Letters Patent, is—

1. The combination, in a gas-regulator, of a suitably-supported diaphragm, A, link B, rock-shaft C, and valves H and J, operated by
60 arms projecting laterally from said rock-shaft, substantially as described.

2. The combination, in a gas-regulator, of a suitably-supported diaphragm, A, link B, rock-shaft C, and valves H and J, operated by
65 arms projecting laterally from said rock-shaft, said rock-shaft being provided with ground-disk D and closing spring K, substantially as described.

3. The combination, in a gas-regulator, of a suitably-supported diaphragm, A, link B,
70 rock-shaft C, provided with rotating disk D, having openings therein, in combination with the ports S in the valve-chest, substantially as described.

4. In a gas-regulator, a casing inclosing a
75 chamber, L', in communication with the main supply-pipe, a chamber, W, in communication with the delivery-pipe, and a chamber, E, in communication with said chambers L' and W, in combination with a diaphragm in said cham-
80 ber W, valves closing communication between said chambers E, L', and W, and a rock-shaft controlling said valves and controlled by said diaphragm, substantially as described.

In testimony whereof I have signed my name
85 to this specification in the presence of two subscribing witnesses.

TIMOTHY J. KIELEY.

Witnesses:

ANTHONY GREF,
H. CANTAUT.