

(No Model.)

W. ARMENDINGER.
GAS REGULATOR.

No. 350,182.

Patented Oct. 5, 1886.

Fig. 1.

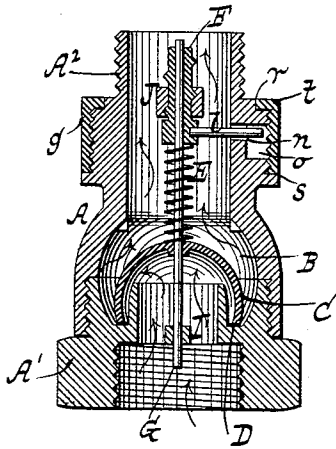


Fig. 2.

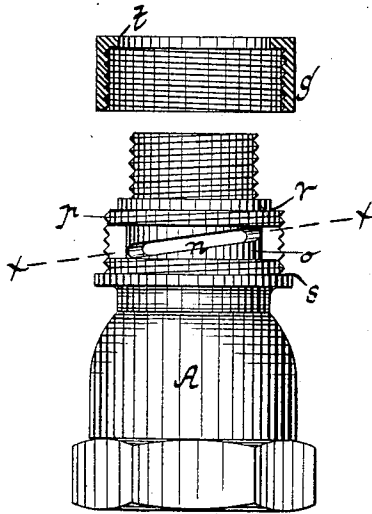


Fig. 3.

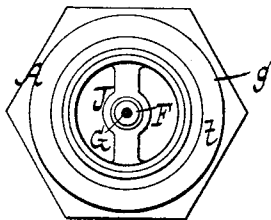


Fig. 4.

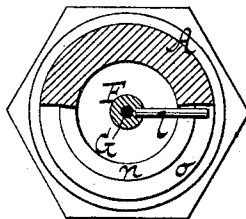
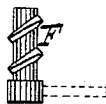


Fig. 5.



WITNESSES:

Chas. Wahlers.

H. F. Kircher

W. Armendinger. INVENTOR

BY John A. Diederichs

ATTORNEYS.

UNITED STATES PATENT OFFICE.

WILLIAM ARMENDINGER, OF NEW YORK, N. Y.

GAS-REGULATOR.

SPECIFICATION forming part of Letters Patent No. 350,132, dated October 5, 1886.

Application filed March 23, 1886. Serial No. 196,329. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM ARMENDINGER, a citizen of the United States, residing at New York, in the county and State of New York, have invented a new and useful Improvement in Gas-Regulators, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 represents a longitudinal section of a regulator embodying my invention. Fig. 2 represents a side view thereof with one of the parts detached. Fig. 3 represents a plan or top view thereof. Fig. 4 represents a cross-section thereof on the line *x x*, Fig. 2. Fig. 5 represents a side view of a detached portion thereof.

Similar letters indicate similar parts.

My invention relates to that class of gas-regulators in which a gravitating valve is used in connection with a spiral spring for depressing the valve and a set-screw for adjusting the tension of the spring; and my invention consists of the novel devices hereinafter described for permitting effective adjustment of the set-screw at all times when the apparatus is in use.

Referring to the drawings, the letter A designates a shell, in the interior of which is formed a valve-chamber, B, and which is made in two parts or sections, A' A², both having suitable screw-threads for connecting the same together and connecting the same to a gas-pipe and gas-meter, respectively.

C designates the valve having its seat on a shoulder, D, formed in the lower shell-section, E the valve-spring, and F the set-screw. The valve C is secured to a stem, G, the lower end of which is fitted in a hole of a cross-bar, I, formed on the lower shell-section, and the upper end of which is fitted in the set-screw F, which is made hollow for this purpose, so that the valve is guided in a vertical plane by that means—namely, in its operation by the pressure of the gas, which flows into the valve-chamber from a downward direction. The spring E is arranged on the valve-stem G intermediate of the valve C and set-screw F, so that the tension of the spring can be adjusted, causing it to exert a greater or less pressure on the valve by means of the screw, the latter being fitted in a suitably-threaded hole of a cross-bar, J, formed on the upper shell-section.

From the set-screw F projects in a lateral direction an operating-rod, *l*, the outer or free end of which extends into a transverse slot, *n*, of the upper shell-section, it terminating at or within the outer edge of the slot, so that said end of the rod is accessible from the outside of the shell, and by moving the same in one or the other direction the set-screw may be turned to effect the desired adjustment of the spring. The slot *n* is preferably inclined in its longitudinal plane to correspond with the pitch of the screw F, and the outer edge or portion of said slot is widened, forming at that point a recess, *o*, large enough to admit the finger, whereby the act of pushing the rod *l* in the desired direction is facilitated. At a point opposite to the slot *n* the upper shell-section is provided with an external screw-thread, *p*, which extends both above and below said slot, and onto which is fitted a screw-ring, *g*, so that when the latter is put in place the slot is entirely covered by its means, the effect of which is to prevent the escape of gas from the valve-chamber through the slot as well as to protect the operating-rod *l* against accidental displacement.

In order to increase the sealing effect of the screw-ring *g*, the upper shell-section is provided with shoulders *r s* at the upper and lower ends or terminals of the screw-thread *p*, one being within and the other without the diameter of said thread, and said ring is provided on the upper edge with an inwardly-projecting flange, *t*, of corresponding width to the upper and inner shoulder, *r*, so that if the screw-ring is put in place from an upward direction the lower edge of the ring may abut against the lower shoulder and said flange against the upper shoulder, thereby forming a plane joint at both edges of the ring, the tightness of which joint may be increased by the use of suitable washers.

If desirable, figures or other characters may be marked on a suitable part of the shell to indicate by means of the operating-rod the position of the set-screw and the consequent condition of the spring.

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

1. In a gas-regulator, the valve-shell made in two sections, one having a transverse slot and an external screw-thread extending above

and below said slot, and the screw-ring fitted to said thread, in combination with the valve, the valve-stem, the valve-spring, the hollow set-screw, and the operating-rod projecting laterally from said screw into said slot of the shell, the whole adapted to operate substantially as herein described.

2. In a gas-regulator, the valve-shell made in two sections, one having a transverse slot provided with a recess on the outer edge and having an external screw-thread extending above and below said slot, and the screw-ring fitted to said thread, in combination with the valve, the valve-stem, the valve-spring, the hollow set-screw, and the operating-rod projecting laterally from said screw into said slot of the shell, the whole being adapted to operate substantially as herein described.

3. In a gas-regulator, the valve-shell made in two sections, one having a transverse slot,

an external screw-thread extending above and below said slot, and a shoulder at both the upper and lower ends of said thread, and the screw-ring fitted to said thread and constructed with an inwardly-projecting flange on the upper edge to abut against said upper shoulder, the lower edge of the ring abutting against said lower shoulder, in combination with the valve, the valve-stem, the valve-spring, the hollow set-screw and the operating-rod projecting laterally from said screw into said slot of the shell, the whole being adapted to operate substantially as herein described.

Signed at New York, in the county of New York and State of New York, this 15th day of February, A. D. 1886.

WILLIAM ARMENDINGER.

Witnesses:

FRANZ RUCKLE,
CHAS. WAHLERS.