No. 676,855. Patented June 18, 1901.

H. SHOEMAKER.

PRESSURE REGULATING VALVE.

(No Model.) (Application filed Mar. 23, 1901.)

Fig. 1.

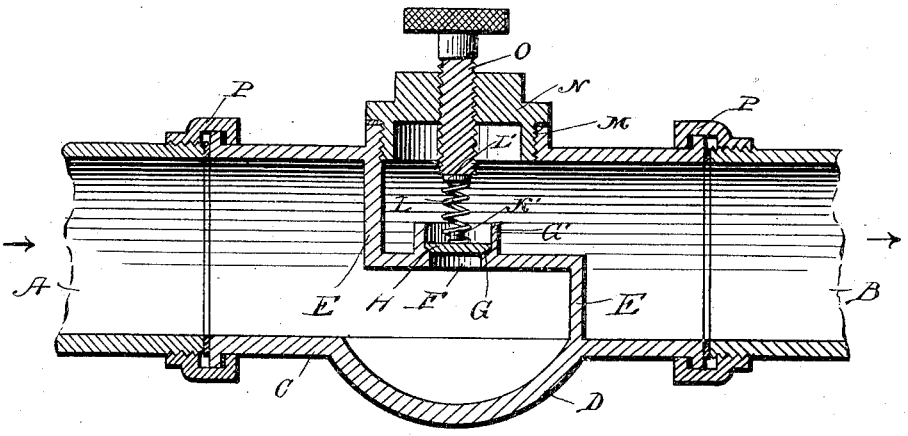


Fig. 3.

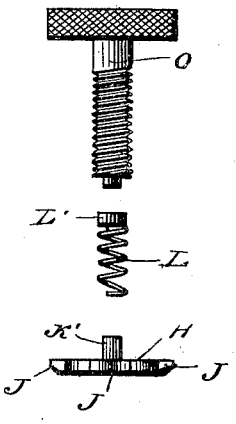
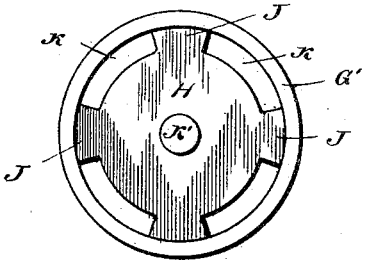


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

HARRY SHOEMAKER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO GUSTAVE P. GEHRING AND MARIE V. GEHRING, OF SAME PLACE.

PRESSURE-REGULATING VALVE.

SPECIFICATION forming part of Letters Patent No. 676,855, dated June 18, 1901.

Application filed March 23, 1901. Serial No. 52,570. (No model.)

To all whom it may concern:

Be it known that I, HARRY SHOEMAKER, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Pressure-Regulating Valves, of which the following is a specification.

This invention relates to improvements in pressure-regulating valves; and the main object of my invention is the provision of a valve and casing which can be connected to a pipe, such as mains or conduit-pipes from meters and tanks, by simply forming a coupling between the ends of said pipes.

Another object of my invention is the production of a valve which will regulate the flow of gas from any source where a nearly-constant pressure is maintained, so as to deliver it to the burners at a pressure that will be best for illumination or for the desired purposes, this pressure being regulated at the same amount when one jet is burning as it would with a great number of jets burning.

Another object of my invention is the provision of a pressure-regulating valve which is very simple, durable, and inexpensive in construction and one which can be easily and readily attached, thus producing a thoroughly efficient and practical article.

To attain the desired objects, my invention consists of a pressure-regulating valve embodying novel features of construction and combination of parts, substantially as disclosed herein.

In the drawings, Figure 1 is a longitudinal sectional view of the ends of two pipes and my pressure-regulating valve causing communication therebetween. Fig. 2 is an enlarged top plan view of the valve and casing, and Fig. 3 is a detail view of the valve and adjusting-stem.

Referring by letter to the drawings, A designates an inlet port or pipe, and B the outlet-pipe, between the ends of which pipes is adapted to be secured by gas-tight joints the casing C. This casing is provided with an enlarged portion D, which is in about the center of the coupling. Fitting in said coupling and extending zigzag from the top to the bottom wall thereof is a wall or partition E. Provided in the horizontal portion of said wall is a circular opening F, the upper edges of which are provided with the inclines G, and surrounding said opening and edges are the walls which form a collar or guide G′ for the valve or disk H. This valve is provided with the four dovetail-shaped wings J, which provide the spaces K therebetween for the admission of gas. Upon the top of this disk or valve is formed a lug K′, to which is connected a spiral spring L, having a cap L′ secured to its upper end. Directly above this division-wall is provided a threaded opening M, in which is adapted to fit the circular plug or cap N, in whose central threaded opening is mounted the thumb or adjusting screw O, whose lower end fits in the cap of the spring and allows the tension of the spring to be adjusted to give the proper pressure to the valve. In order that this casing may be readily secured to a pipe, I provide it with the well-known adjustable coupling P, and by this means my valve can be secured to any gas-pipe by simply cutting a portion of the pipe away, threading the ends thereof, and coupling said ends together by means of my valve-casing.

From this description, taken in connection with the drawings, the operation of my pressure-regulating valve is readily understood and its numerous advantages fully appreciated; but, briefly stated, it is as follows: The gas is admitted through the inner port or pipe, and by adjusting the thumb-screw a proper tension is given the coil-spring to allow a certain pressure of gas to pass through the opening of the division-wall into the supply-pipe, the gas not being admitted, however, therethrough unless a jet is turned on, and as a greater number of jets are employed the valve admits sufficient gas to give the proper pressure to the burners, thus insuring a steady flame.

It is evident that I provide a pressure-regulating valve which is the embodiment of simplicity, durability, and cheapness and one which by reason of its ready adaptability for use is thoroughly efficient and practical.

I claim—

1. In a pressure-regulating valve the combination with a valve-chamber having inlet

and outlet ports, a valve-seat between said ports, a collar surrounding said valve-seat, a valve or disk having wings fitting in said collar, a coil-spring connected to said valve and an adjusting device to regulate the tension of said spring to normally hold the valve seated.

2. In a pressure-regulating valve the combination with a valve-chamber having an inlet and outlet port and an opening in the top thereof, a valve-seat between said ports, a collar surrounding said valve-seat, a spring-actuated valve fitting in said collar, a plug fitting in the opening of said casing and a thumb or adjusting screw mounted in said plug and adapted to engage said spring-actuated valve to adjust the tension of the spring.

In testimony whereof I affix my signature in presence of two witnesses.

HARRY SHOEMAKER.

Witnesses:
WM. J. MOSS,
R. LEAMAN.