

P. KELLER.
GAS REGULATOR.
APPLICATION FILED MAY 27, 1914.

1,144,040.

Patented June 22, 1915.

Fig. 1.

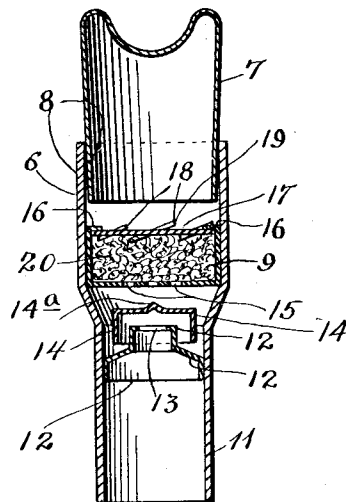


Fig. 2.

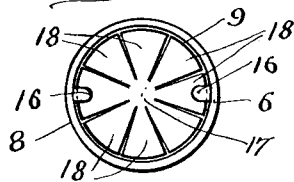


Fig. 4.

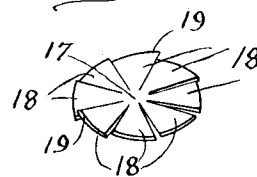


Fig. 3.

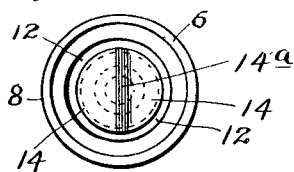
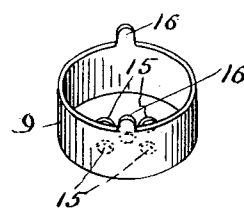


Fig. 5.



Witnesses:

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PETER KELLER, OF CHICAGO, ILLINOIS.

GAS-REGULATOR.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, PETER KELLER, a citizen of the United States, residing at the city of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Gas-Regulators, of which the following is a specification.

The object thereof is to provide a simple, cheap and effective check or regulator for use in connection with gas burners of any kind, whereby the pressure of gas in the service pipe may be controlled so that when delivered at the burner tip, the gas pressure will be of uniform, economical and effective consumption.

The principles of my invention are illustrated in the drawings, in which—

Figure 1 is a vertical sectional view of my improved regulator. Fig. 2 is a top plan view with burner tip removed. Fig. 3 is a top plan view of the regulator with the retarding chamber removed and showing floating valve in position. Fig. 4 is a perspective view of the retarding chamber cover. Fig. 5 is a perspective view of the retarding chamber.

Further describing my invention with reference to the drawings, in which like numerals of reference denote like parts throughout, 6 represents the shell or pillar of the gas burner.

7 is a nonfusible tip.

The upper portion 8 of the pillars is adapted to receive the tip 7, also a check or retarding chamber 9, which rests within the pillar 6 and upon the tapered walls 10 of said pillar. The lower portion 11 of the pillar 6 is drawn to a smaller dimension to allow of its being connected to any standard sized gas bracket. Within the lower portion 11, is an inverted funnel shaped shell 12, having an opening 13, in the neck thereof; over said neck is placed a floating cap or valve 14, having a small ridge or projection 14^a on its closed end, and adapted to operate between the funnel shaped portion of the shell 12, and the lower portion of the chamber 9, with respect to the amount of pressure of gas in the service pipe. The bottom of the retarding chamber 9 has a series of perforations 15, and on the upper edge

of said chamber are lugs 16 that retain in position a flat disk 17. This disk serves as a cover to the retarding chamber 9, which is filled with finely cut steel or other metallic shavings 20, so as to greatly check the gas passing through said chamber.

Fan like blades, or sectors 18 are formed in the disk 17, and bent at a slight angle as at 19 (see Figs. 1 and 4 of the drawing) to allow of the passage of the gas through the retarding chamber 9 to the burner tip, as is further described below.

Fig. 1 of the drawing illustrates my device in operation under low pressure, the gas flowing upwardly through the opening 13 into the float valve 14, and around the lower walls of said valve, thence upwardly into the perforations 15 in the bottom of the retarding chamber 9.

Any excess of gas pressure above that required for economical consumption will raise the float until the projection 14^a contacts with the bottom of the retarding chamber 9, thus allowing only such quantity of gas to pass through said retarding chamber as will flow over and between the closed end of the valve 14, and the bottom of the retarding chamber.

A standard of resistance is established in the retarding chamber 9, which is packed with mineral wool, finely cut shavings of steel or other elastic metal; this metal packing acts not only as a flexible resisting body in checking the flow of gas, but serves to cleanse the impurities of the gas and when heated produces a soft, clear and brilliant flame, and at a much less cost than when gas is burned under ordinary conditions.

The forming of the blades or sectors 18 in the disk 17, and bending them at a slight angle, give much better results than allowing the gas to escape through a single slot or perforated surface, as the gas is given a swirling motion between the disk 17, and the top of the tip 7, the agitation thus caused, giving a better mixture of the gas at the flame point.

I claim:

1. In a gas regulator a pillar containing a retarding chamber suitably packed with a filtering substance, said chamber contain-

ing a disk or cover formed with fan like blades or sectors.

2. In a gas regulator a pillar, containing a retarding chamber suitably packed with
5 a filtering substance, said chamber containing a disk or cover formed with fanlike blades or sectors, bent at a slight angle, and

a suitable gas pressure regulating mechanism placed below said retarding chamber, substantially as shown.

PETER KELLER.

Witnesses:

CHAS. E. GORTON,
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."