M. F. GALE.

ARGAND GAS-BURNER.

No. 180,336. Patented July 25, 1876.

Fig: 1.

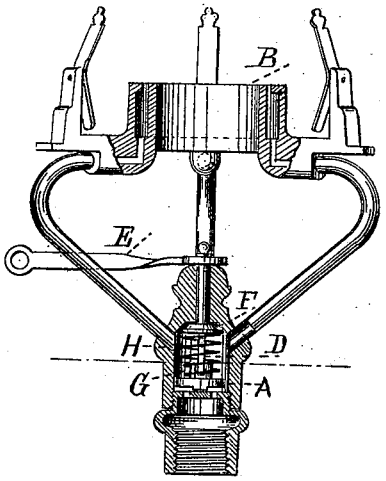


Fig: 4.

Fig: 6

Fig: 7.

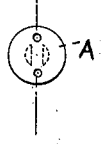


Fig: 2.

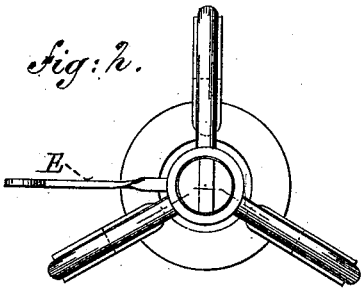


Fig: 5.

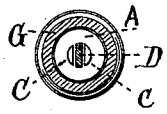


Fig: 8.

Fig: 3.

Fig: 9.

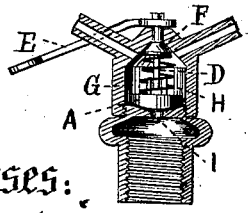


Fig: 10.

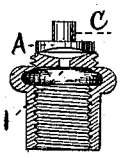
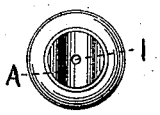


Fig: 11.



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UNITED STATES PATENT OFFICE.

MOSES F. GALE, OF BROOKLYN, E. D., NEW YORK.

IMPROVEMENT IN ARGAND GAS-BURNERS.

Specification forming part of Letters Patent No. **180,336**, dated July 25, 1876; application filed May 5, 1876.

To all whom it may concern:

Be it known that I, MOSES F. GALE, of Brooklyn, E. D., county of Kings, and State of New York, have invented certain new and useful Improvements in Argand Gas-Burners, of which the following is a full and exact description, in connection with the accompanying drawings.

Figure 1 is a side elevation and partial section of the burner complete. Fig. 2 is a plan or top view. Fig. 3 is a side elevation of the valve shown in Fig. 1. Fig. 4 is a plan of the valve-seat in Fig. 1. Fig. 5 is a top view of the valve on its seat. Figs. 6, 7, 8, 9, 10, and 11 are views of various modifications of valves and seats, as will appear hereinafter in the specification.

This invention pertains to the devices known as the Argand gas-burner, and has for its object chiefly the proper regulation of the flow of the gas; and therefore it consists, chiefly, in the combination of the parts that constitute the regulating-valve of the burner and its attachments.

The valve itself (shown at A in the several figures) is known as the "rotating disk-valve," which, by a partial rotation upon its seat, uncovers holes or a port for the escape of the gas to the burner proper, as shown at B, and which may be of any of the well-known or other suitable forms. Said valve is made in the form of a disk, as shown in Figs. 3, 5, 6, and 7, and is furnished on its back with a forked stem, as at C, the slit in which is flat on both sides, to receive a secondary stem, for turning it like a key. Said secondary stem is shown at D, Figs. 1 and 9, and upon its outer end is shown the handle, as at E, for turning it, and thereby turning the valve. To prevent the gas from escaping around the outer end of the stem D, it is made with a conical projection or plug, as at F, which projects upward against a seat on the inner face of the valve-chamber, as at G; and between the back of said plug and the back of the valve there is interposed a spiral spring, as at H, which presses the two in opposite directions, and against their seats, as their stems are in separate pieces, and thereby keep both gas-tight when desired.

The valve shown in Figs. 1 and 3 is a plain disk, with a flat rib on its face wide enough to cover the two holes or ports shown in Fig. 4, which serves as its seat. The object of the disk is to spread the gas as it flows to the burner through the valve, to prevent a very common humming noise in such burners.

A modification of such a valve is shown in Figs. 6, 7, and 8, where the part that fits on the seat, as at Fig. 4, is perforated with holes to correspond to the holes in the seat when so turned, and the spreading-disk is placed on the stem a little above the valve-face, with a space between them, as at K, Figs. 6 and 8.

Another form of the disk-valve is shown at Figs. 9, 10, and 11, where the face of the valve is slightly convex, and the seat concave, and the two surfaces fit together to cover the inlet, as at L in Fig. 9; but when turned one-quarter round the valve will be fully open, as in Fig. 10. A plan of the seat is shown at Fig. 11.

Either of said forms operates equally well with the same stem-handle, plug, and spring.

I therefore claim—

1. In an Argand gas-burner, the combination of the valve A, the plug-stem F, and the spring H, substantially as described.

2. The combination of the plug-stem F and spring H with the convex valve and concave seat, substantially as described.

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Attest:

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