G. W. HATCH.

Argand Gas-Burner.

No. 128,307. Patented June 25, 1872.

Fig. 1.

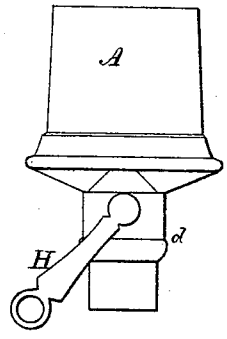


Fig. 2.

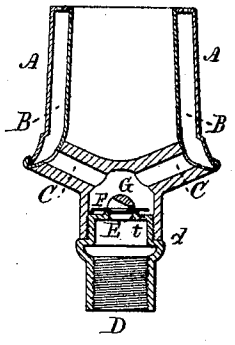


Fig. 3.

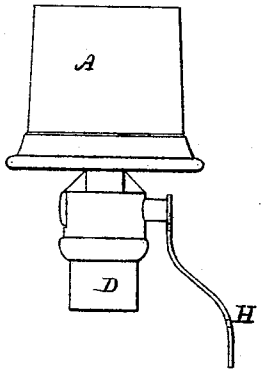
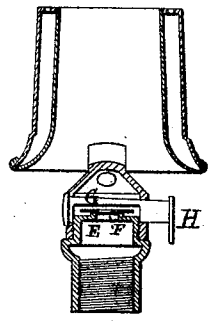


Fig. 4.



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UNITED STATES PATENT OFFICE.

GEORGE W. HATCH, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN ARGAND GAS-BURNERS.

Specification forming part of Letters Patent No. 128,307, dated June 25, 1872.

Specification describing certain Improvements in Argand Gas-Burners, invented by GEORGE W. HATCH, of the city of Brooklyn, county of Kings, and State of New York.

This invention has for its object the perfect control of the gas in its supply to the burner by a cheap and novel arrangement of a spring-valve at the base of the burner, which remains open by means of its own elastic force, but can be closed by a cam-shaped shaft and lever, working in combination with it.

Drawing.

Figure 1 is an exterior view in elevation of the burner complete, and showing the actuating lever of the valve-cam. Fig. 2 is a vertical sectional view of the same through the center of the burner, and in a plane at a right angle to the cam-shaft. Fig. 3 is an exterior view of the burner at a right angle to Fig. 1. Fig. 4 is a sectional view of the same in a plane parallel with the axis of the cam-shaft.

A represents a burner, made in the usual form, having an exterior and interior cylinder connected at their upper ends, at which point the holes are made for the issue of the small jets of gas for supplying the flame. These cylinders are also joined at their lower ends, thereby forming a chamber, as at B, into which the gas flows through a tube or tubes, C, leading from the supply-tube D, which is connected with the gas-reservoir. The burner proper is attached to the tube D by a screw-thread formed on its inner face, and a corresponding thread on the exterior of the tube D itself, which holds them together. The lower end of the burner-tube, or that from which the branches C spring to support the chamber B, rests, also, upon a shoulder on the tube D, as shown at *d*, and thereby makes a close joint between the two, as well as a firm support to the burner, which has also to support the shade and chimney, and globe if one be used. The upper end of the tube D is partially closed, as may be seen at E, and a hole, smaller than the tube, is made through the end of the tube, as shown, above E. This partially-closed end of the tube D forms a valve-seat, over which a spring-valve, F, is arranged, as shown in the sections 2 and 4. This valve F is simply a disk of thin sheet metal, circular in shape, to fit upon the end of the tube, and also to serve as a kind of spreader to the current of gas on its way to the burner; and it is held a short distance above the end of the tube D by a small projection of itself, or an equivalent thereof, which is bent down and is attached to the tube in some firm manner. The upward action of the gas, also, will tend to lift the slight spring-disk or valve F, so that the gas may pass easily into the chamber B to supply the flame at the top of the burner. But to check the flow of the gas or reduce its supply to the point of combustion, a small axis of wire, as at G, is arranged across and above the spring-disk F and through the tubular base of the burner; and to one end of said axis a lever is attached, as at H, to reciprocate or partially rotate said axis; and the under side of axis is flattened, as shown in the drawing, and placed so nearly upon the top of the spring-disk when it is open or raised to its full height that a slight turn of the axis will cause one corner of the flattened portion to rest upon the top of the spring-disk like a cam, and thereby to depress it, as the axis is rotated by the lever H, to whatever degree desired, even to the closing of the end of the tube D. In case the gas should be completely cut off by a greater motion of the lever H than is intended, a small hole, as at *t*, Fig. 2, is made in the upper end of the tube D, to supply a slight quantity of gas to the burner to sustain sufficient combustion to avoid the necessity of relighting it, which would be the case were the supply completely cut off.

I am aware that valves of various kinds have already been used in combination with such burners, and I therefore do not claim, broadly, any devices; but

I do claim—

An Argand gas-burner provided with a spring-valve operated by a flattened axis or cam, as described, and for the purposes set forth.

Witnesses: GEORGE W. HATCH.
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