

G. W. HAMBRIGHT.

GAS-REGULATOR.

No. 178,134.

Patented May 30, 1876.

Fig. 1.

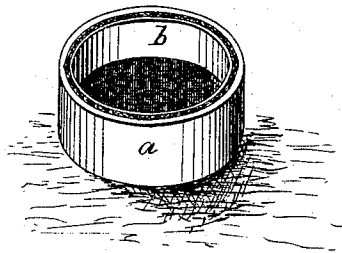
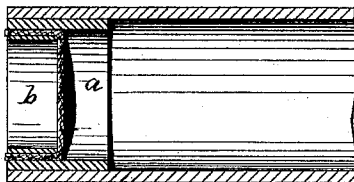


Fig. 2.



Witnesses;
Grenville Lewis
McKenny.

Inventor
Geo. W. Hambright
By H. E. Ellsworth
His Atty.

UNITED STATES PATENT OFFICE.

GEORGE W. HAMBRIGHT, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVEMENT IN GAS-REGULATORS.

Specification forming part of Letters Patent No. **178,134**, dated May 30, 1876; application filed May 26, 1876.

To all whom it may concern:

Be it known that I, GEORGE W. HAMBRIGHT, of Washington, District of Columbia, have invented a new and useful Improvement in Gas-Regulators; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a perspective view of the improved device, detached from the pipe; and Fig. 2 is a longitudinal section of the apparatus placed within the pipe, as it would be in use.

Similar letters of reference in the accompanying drawings denote the same parts.

My invention relates to an apparatus for regulating the flow of illuminating-gas in house-pipes; and has for its purpose particularly the prevention of what is called "blowing," whereby the gas is wasted, and the meter is made to misrepresent the amount of gas consumed. It consists more particularly of a diaphragm fitted to be placed at any desirable point in the pipe.

The device in which I have embodied the invention is of very simple construction. It consists of an outer ring or section of tube of a diameter calculated to fit closely within the gas-pipe to which it is to be applied, and of length sufficient to hold the material used for the diaphragm. This diaphragm may consist of a simple piece of woollen cloth, or any equivalent material, laid over the end of the short section of pipe, such as is shown in the drawing, and marked *a*. A smaller and shorter piece of pipe, marked in the drawing *b*, is then placed over the cloth and driven in, carrying the cloth with it.

The inner pipe, it is obvious, should be of a diameter just sufficient to allow it to be driven into place. It will hold the cloth across its inner end, tightly stretched like the head of a drum, while the edge of the cloth, between the inner and outer rings, forms a packing for the two, holding the parts securely in place.

Other ways may be easily suggested for holding the diaphragm in the outer section of tube, and other material may be used than cloth; but it is essential that the device should be so made that it can be placed directly within the ordinary gas-pipe.

In this way, at small expense, those using

the ordinary illuminating-gas can apply in their own pipe, before its connection with the meter of the company furnishing the gas, an effectual guard against the undue forcing of the gas before referred to. Obviously, the same device may be applied to any part of the pipe with beneficial effects either in the house or street pipes.

The action of the diaphragm is equally obvious. The texture is such as to permit a free percolation of the gas, but at the same time it prevents any sudden gusts or blasts or excessive pressure calculated to set the meters in too rapid motion, or to force the gas too rapidly, and to waste it at the burners. I am aware that packing has been suggested for this general purpose, and that regulators, to be attached to the pipe, at the burner, or between sections of the pipe, have been before known. Such, broadly, I do not claim.

The device which I have described is adapted to be placed within the ordinary gas-pipe, leading from the meter, and has these advantages, that it can be made at a trifling cost, and sold as an article of manufacture, and can be readily and easily applied by an ordinary workman, and, as there are no moving parts, and the whole is very simple, there is no liability to get out of repair.

This regulator may be easily inserted and removed, since it is not necessary that it fit within the pipe gas-tight.

Any slight escape of the gas past the short tube would not be detrimental, or defeat the object of my invention.

If desired, a packing may be placed on the outside of the tube, to render more easy the insertion of the regulator in its place.

I claim as my invention—

1. A gas-regulator consisting of a suitable diaphragm, held in a rim or ring, which is adapted to be placed within the ordinary gas-pipe.

2. A gas-regulator consisting of a suitable diaphragm, held in a short section of tube, and adapted to be placed within the ordinary gas-pipe.

3. The gas-regulator composed of an inner and outer tube, with cloth or other suitable material held between them, as set forth.

G. W. HAMBRIGHT.

Witnesses:

FRANK MCKENNY,
GRENVILLE LEWIS.