

G. F. MEIGGS.  
GAS HEATER.

No. 103,222.

Fig. 1. Patented May 17, 1870.

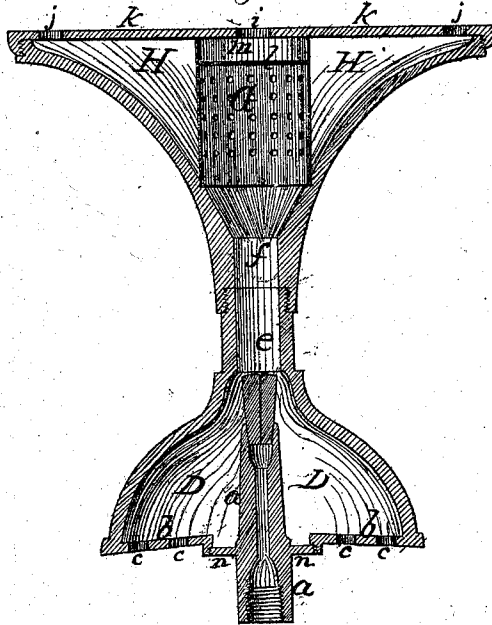


Fig. 3

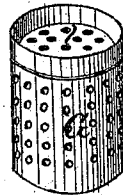
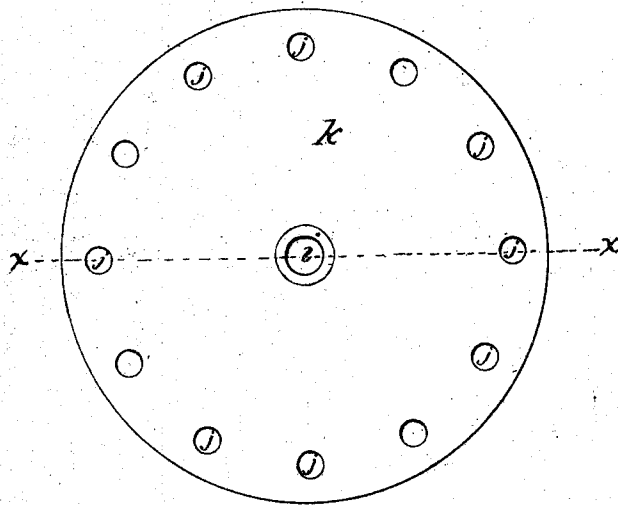


Fig. 2.



Witnesses,

*Erduoy C. Smith*  
*William Styles*

Inventor,

*George F. Meiggs*  
By his attorney *J. C. Robbins*

# United States Patent Office.

GEORGE F. MEIGGS, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO HIMSELF  
AND RETIRE C. STURGES, OF SAME PLACE.

Letters Patent No. 103,222, dated May 17, 1870.

## GAS-HEATER.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, GEORGE F. MEIGGS, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and improved Heating Gas-Burner; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings which form a portion of this specification—

Figure 1 being a vertical section of my improved heating gas-burner in the line *x x* of fig. 2;

Figure 2, a top view of said burner; and

Figure 3, a perspective view of a detached portion of the same.

My heating gas-burner differs from all other contrivances for a similar purpose, in being so arranged that it can be adapted to any desired size of gas-tip; or, in other words, that I can extract with one of my burners all the heat from ten feet or more of gas per hour, without evolving any odor or smoke; whereas, six or seven of any other known description of heating gas-burners would be required to produce an amount of heat equal to that produced by one of my improved heating gas-burners; and this can only be accomplished by the consumption of a considerably larger quantity of gas than is consumed in one of my improved gas-burners in producing a like amount of heat.

In the accompanying drawings, the portion of the gas-heating apparatus indicated by *a* is an ordinary gas-tip.

This gas-tip is provided with a circular flange, *n*, which has screw-threads cut on its periphery to enable it to be screwed into a central aperture in the perforated bottom of the conical air-chamber *D*.

The tubular termination *e* of the air-chamber *D* is screwed into the tubular termination *f* of the outwardly-flaring heating-chamber *H*.

The gas-tip *a* discharges its gas into the tubular termination *e* of the air-chamber *D*, where it mingles with the air that enters said chamber through the

series of perforations *c c* in its bottom *b*, and the aerified gas is carried upward, by the pressure of the gas, into the perforated mixing-chamber *G*.

The said heating-chamber *H* is closed by the perforated head *k*, which may be of any desired shape.

The upper end of the mixing-chamber *G* fits closely against the inner surface of the head *k* of the heating-chamber. The said mixing-chamber *G* has a perforated inner head, *l*, and the aerified gas, which passes through said head into the small compartment *m*, flashes into flame as it escapes through the central aperture *i* in the head *k* of the heating-chamber *H*, whilst the aerified gas that passes outwardly through the perforated sides of the said mixing-chamber into the heating-chamber *H* flashes into flame as it escapes outwardly through the series of apertures *j j*.

My improved heating gas-burner may be combined with stoves or ranges, in any desired manner, to enable it to be used for heating or cooking purposes. The said apparatus may be made of any suitable material, and of any desired shape.

Having thus fully described my improved heating gas-burner,

What I claim therein as my invention, and desire to secure by Letters Patent, is—

The combination and arrangement with each other of the gas-tip *a*, the air-chamber *D*, and the heating-chamber *H*, all substantially in the manner and for the purpose set forth.

Also, the combination of the mixing-chamber *G* with the heating-chamber *H*, the air-chamber *D*, and the gas-tip *a*, substantially as herein set forth.

In testimony that the foregoing is a full and clear description of my improved heating gas-burner, I hereunto subscribe my name.

GEORGE F. MEIGGS.

Witnesses:

JAS. H. HALLETT,  
JOHN W. LINNELL.