(No Model.)

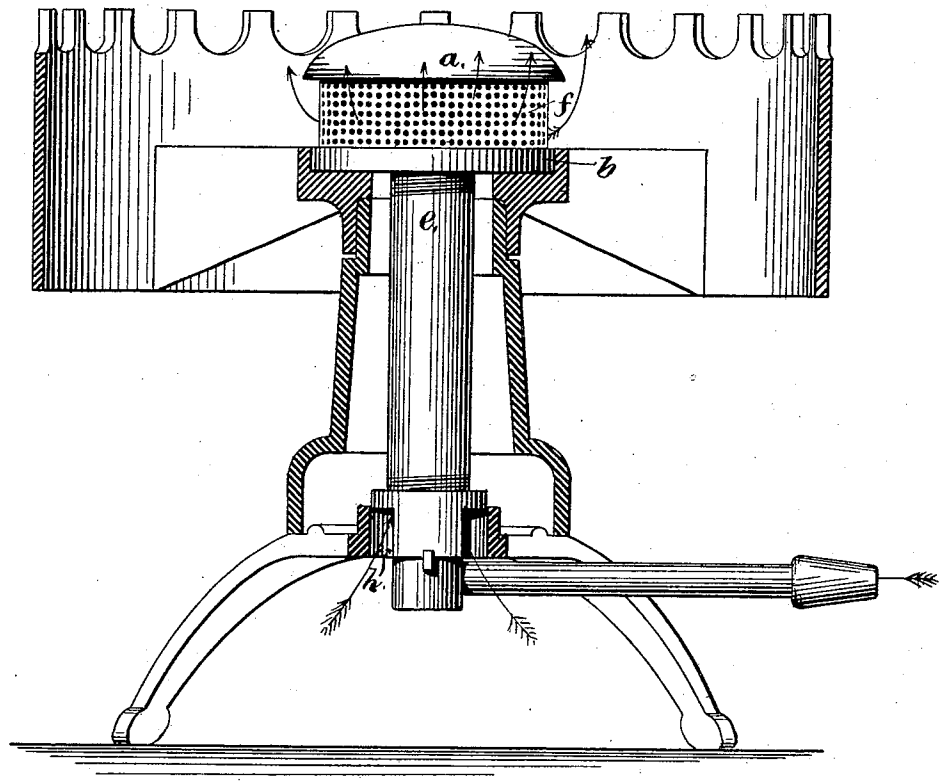
2 Sheets—Sheet 1.

W. A. TURNER.

GAS STOVE.

No. 245,416. Patented Aug. 9, 1881.

Fig. 1.



WITNESSES:

J. A. Miller Jr

Wm. L. Coop.

INVENTOR:

William A Turner

by Joseph A Miller

atty

N. PETERS, Photo-Lithographer, Washington, D. C.

(No Model.)

2 Sheets—Sheet 2.

W. A. TURNER.

GAS STOVE.

No. 245,416. Patented Aug. 9, 1881.

Fig. 2.

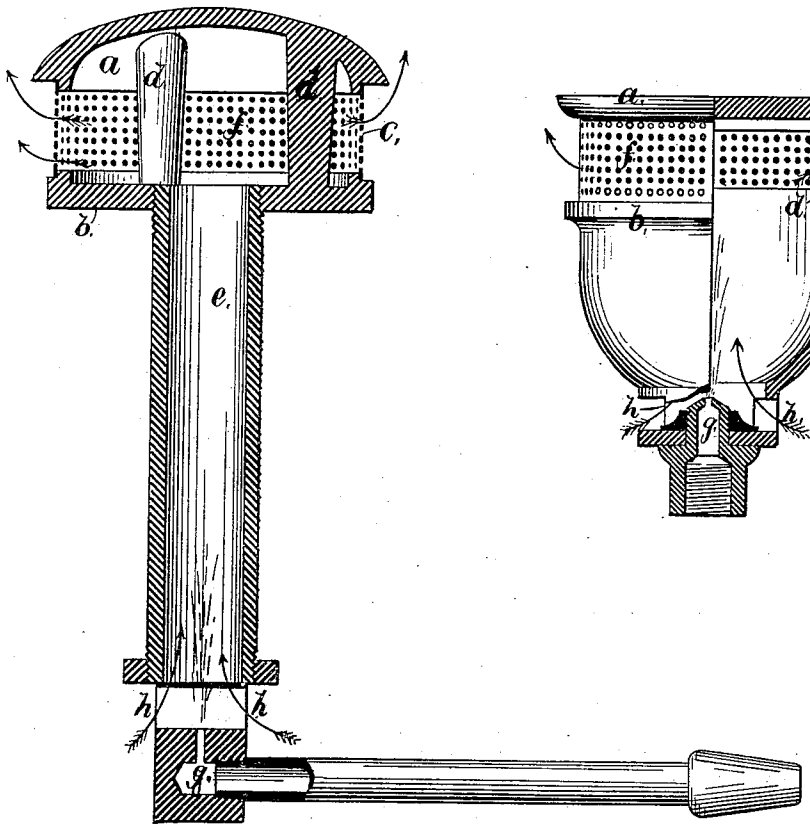


Fig. 3.

WITNESSES:

J. A. Miller Jr

Wm. L. Roop

INVENTOR:

William A Turner

by Joseph A Miller

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N. PETERS. Photo-Lithographer. Washington. D. C.

UNITED STATES PATENT OFFICE.

WILLIAM A. TURNER, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR TO THE RETORT GAS STOVE COMPANY, OF SAME PLACE.

GAS-STOVE.

SPECIFICATION forming part of Letters Patent No. 245,416, dated August 9, 1881.

Application filed February 5, 1881. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. TURNER, of the city and county of Providence, and State of Rhode Island, have invented a new and useful Improvement in Gas-Stoves; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention has reference to an improvement in the construction of gas-burners for gas-stoves; and it consists in the peculiar construction of the burner, as will be more fully set forth hereinafter.

To construct a durable burner for a gas-stove a cast-metal head and plate are required, between which the orifices for burning the gas are located, so that the gas will burn around the closed head, and the heat acquired by the head will be partly utilized to heat the gas before it is burned.

In such gas-burners as heretofore constructed, the top was secured to the lower plate by means of wrought-iron bolts, and usually perforated plates or perforated sheet-metal gauze was thus secured between the head and plate, or, as it may be termed, between the upper and lower part of the burner. Such bolts are liable to get loose by reason of the constant expansion and contraction of the cast metal and the wrought-iron bolts, caused by the high heat to which they are exposed when the burner is in use and the low temperature when not in use.

To avoid this difficulty and cheapen the manufacture of gas-burners for stoves is the main object of this invention.

Figure 1 is a sectional view of a gas-stove provided with my improved burner, which is shown in elevation. Fig. 2 is a sectional view of the burner. Fig. 3 is a view, partly in section, of what is usually called a "nursery" burner.

Similar letters of reference indicate corresponding parts.

In the drawings, *a* is the head, and *b* the bottom, of the burner.

c is an annular opening for the escape of the gas. Shoulders are formed on the head *a* and lower part, *b*, of the burner, against which a screen of wire-gauze or perforated sheet metal is seated to inclose the space between the head and lower part of the burner, and divide the gas issuing from such inclosed space or chamber *c* into a large number of fine jets.

d d are two or more stays extending from the lower to the upper part of the burner.

The head *a*, the lower part, *b*, and the stays are all cast in one piece, and the burner so made is not liable to the varying expansion, as the whole is cast in one piece of one kind of metal, no bolts, nuts, or other loose part being used.

The burner-head is molded from a pattern having suitable core-prints, and a core is then set into the mold, so as to fill up all the interior space, excepting where the stays *d* are required. After casting the core is removed and the burner is ready to be tapped to receive the gas-tube *e;* and if a wide annular opening is made, a band of perforated sheet metal, *f*, is secured over the same, making a substantial, cheap, and durable gas-burner for gas-stoves. The large interior space forms a heating and mixing chamber for the gas and air before they are burned on the outside of the head of the burner. The gas is supplied from the opening *g* and the air enters by the openings *h h*.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The combination, substantially as before set forth, of the burner composed of a circular base-plate and a solid head supported thereon by stays, all cast in one piece, and the screen drawn around shoulders formed respectively on the base-plate and head, and having its ends suitably united, so as to encircle the space between the base-plate and head, to form therewith a gas and air mixing chamber.

WILLIAM A. TURNER.

Witnesses:
JOS. A. MILLER,
J. A. MILLER, Jr.