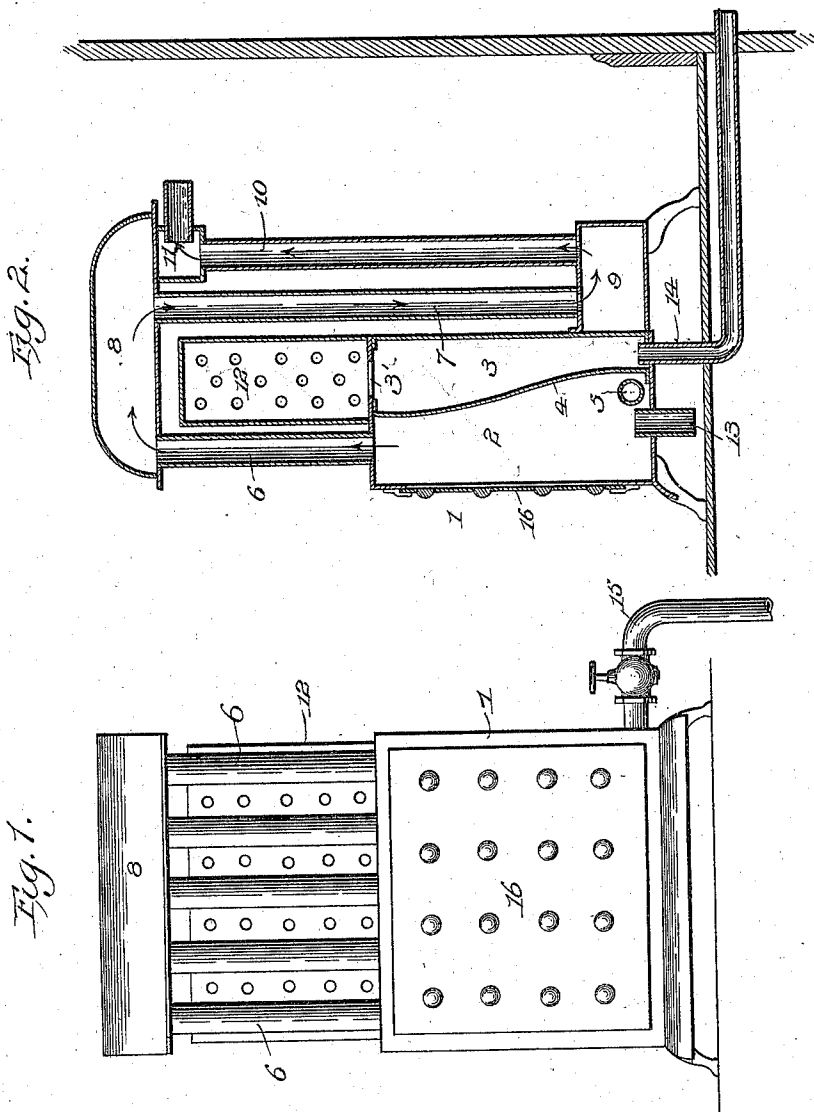


(No Model.)

H. M. MUNK.
GAS STOVE.

No. 576,350.

Patented Feb. 2, 1897.



WITNESSES:

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GAS-STOVE.

SPECIFICATION forming part of Letters Patent No. 576,350, dated February 2, 1897.

Application filed April 27, 1896. Serial No. 589,272. (No model.)

To all whom it may concern:

Be it known that I, HIRAM M. MUNK, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Gas-Stoves; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

As heretofore constructed, burners or heaters for the combustion of natural gas appear to have been defective in draft and in heat-radiating qualities. The insufficiency of draft and undue exposure of flame give rise to the formation of a large quantity of moisture and the escape of noxious odors into the atmosphere of the room, which not only endanger the health of persons, but damage things in the room. The excess of moisture in the winter also causes thick and unsightly crustations of ice on the windows.

The object of my invention is to provide an improved gas heating-stove which shall be adapted to the use of natural gas and overcome the defects stated.

My invention, generally stated, consists in the improved construction hereinafter described and claimed, in which there is a heating-chamber divided into two independent compartments, one for the burner and one for fresh air, with foul and fresh air pipes, having their outlet ends located in close proximity to the burner to rapidly withdraw foul air and to introduce outside air to a point near the burner, and flues for conveying and utilizing the heated foul air as it is carried to the outer air.

In the accompanying drawings, Figure 1 is a view in front elevation. Fig. 2 is a sectional view of the heater from front to rear.

Like characters of reference designate corresponding parts in both views.

1 designates what might be called the "heating-chamber," which has two vertical compartments, namely, a burner-compartment 2 and a hot-air compartment 3. The dividing-wall 4 forms the fireback, and this, if desired, may be provided with asbestos fiber or otherwise made to distribute heat. Entering transversely at the lower part of the front or burner compartment 2 is the burner 5, which

is a pipe provided with numerous perforations on its upper side. The pipe 5 is connected with the natural-gas-supply pipe 15 with proper fittings. The front of the burner-compartment 2 will be provided with a tight door 16. Extending upward from the compartment 2 are a series of vertical pipes or up-flues 6, and extending from a drum or chamber 9, fastened to the lower side of the chamber 8, is another series of vertical pipes or down-flues 7. The flues or pipes 6 and 7 are joined at their upper ends to communicate with and through the chamber or drum 8, preferably rounded on its upper side, which forms the top of the stove. Extending upward from the chamber 9 is a series of flues 10, which are joined to communicate with a chamber 11, that is bolted or otherwise fastened non-communicatingly to the lower rear side of the head chamber or drum 8 of the stove, and the chamber 9 is provided with a collar, by which it is connected, by means of a suitable pipe, with the chimney.

The upper side of the hot-air chamber is furnished with a suitable number of openings 3' for the escape of hot air into a perforated drum 12, arranged above the compartment 3 and between the flues 6 and 7.

Secured in the under side of the base are one or more pipes 13, which extend downward close to the floor and open close to and alongside of the burner. This location of the pipe 13 insures a strong suction and removal of the foul and cold air which settles in the lower part of the room. Secured at the lower end of the air-heating compartment 3 and terminating near the burner 5 is a pipe 14, admitting fresh outdoor air.

From the foregoing description it will be readily seen that with my construction the cold foul air is quickly drawn from the room. As it is heated it is carried upward through the flues 6, head-drum 8, and downward through flues 7 and chamber 9, then upward through flues 10 to the chamber 11, and thence to the chimney. The heated foul air, as well as the deleterious products of combustion, moisture, and offensive odors of the natural gas, are passed through confining flues and chambers to the outer atmosphere; but in its passage to the outer air it is made to yield through radiation a very large proportion of

its heat. The outer air, which takes the place of that thus removed from the room, is heated by its passage through the compartment 3 of the fire-box and into and through the perforated shell at the top of the heating-chamber.

What I claim, and desire to secure by Letters Patent, is—

A gas heating-stove comprising a heating-chamber 1 having two independent compartments 2 and 3, one for the burner and the other for heating fresh air, the burner-pipe 5 located at the bottom of compartment 2, a foul-air pipe 13 having its inlet or lower end near the floor and its outlet terminating in compartment 2 and in close proximity to the burner, a fresh-air pipe 14 having its inlet outside the room and its outlet in the air-heating compartment 3 and near the burner,

the perforated drum or chamber 12 connected with compartment 3 of the heating-chamber, a comparatively large independent chamber or head 8 above drum 12, a series of radiating-pipes 6 connecting compartment 2 and chamber 8, the chamber 9 at or near the bottom of the stove, a series of radiating-pipes 7 connecting chamber 8 and chamber 9, the chamber 11 at or near the top of the stove, and the series of radiating-pipes 10 connecting chambers 9 and 11, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

HIRAM M. MUNK.

Witnesses:

GEO. M. FINCKEL,
JAS. S. RICKETTS.