

No. 632,340.

Patented Sept. 5, 1899.

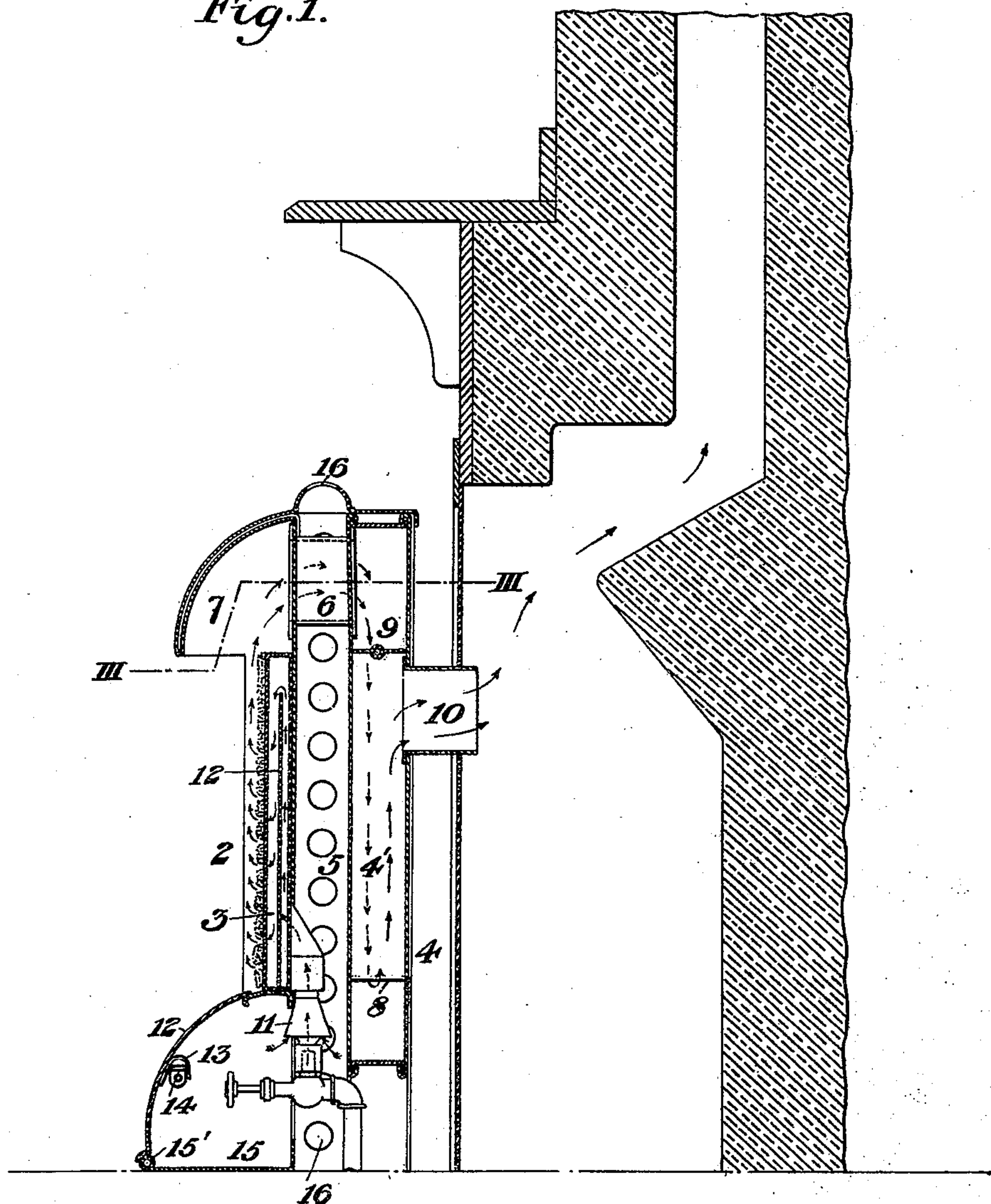
E. J. DASCHBACH.  
GAS STOVE.

(Application filed Oct. 2, 1896.)

(No Model.)

2 Sheets—Sheet 1.

*Fig. 1.*



WITNESSES

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2 Sheets—Sheet 2.

Fig. 2.

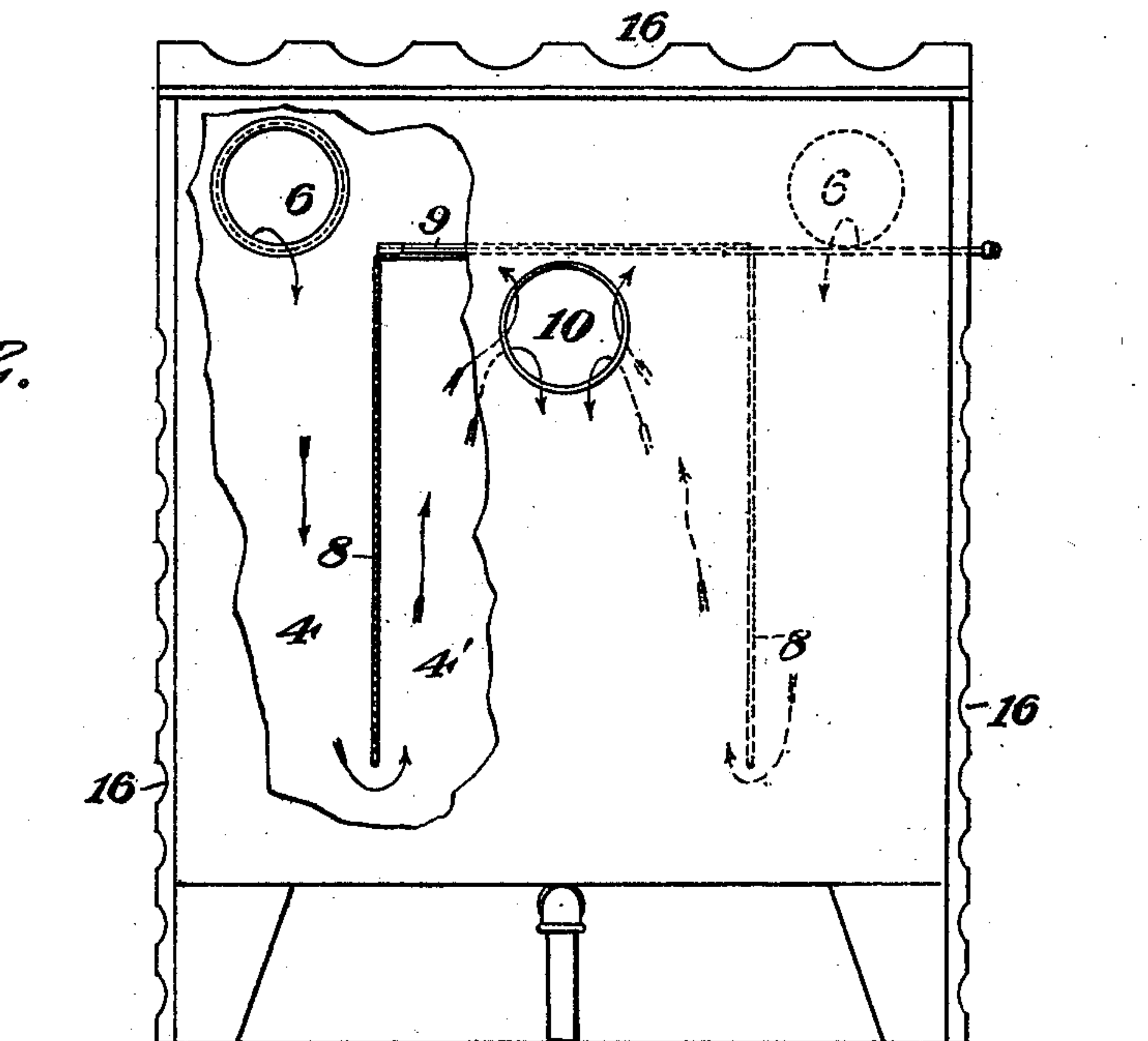
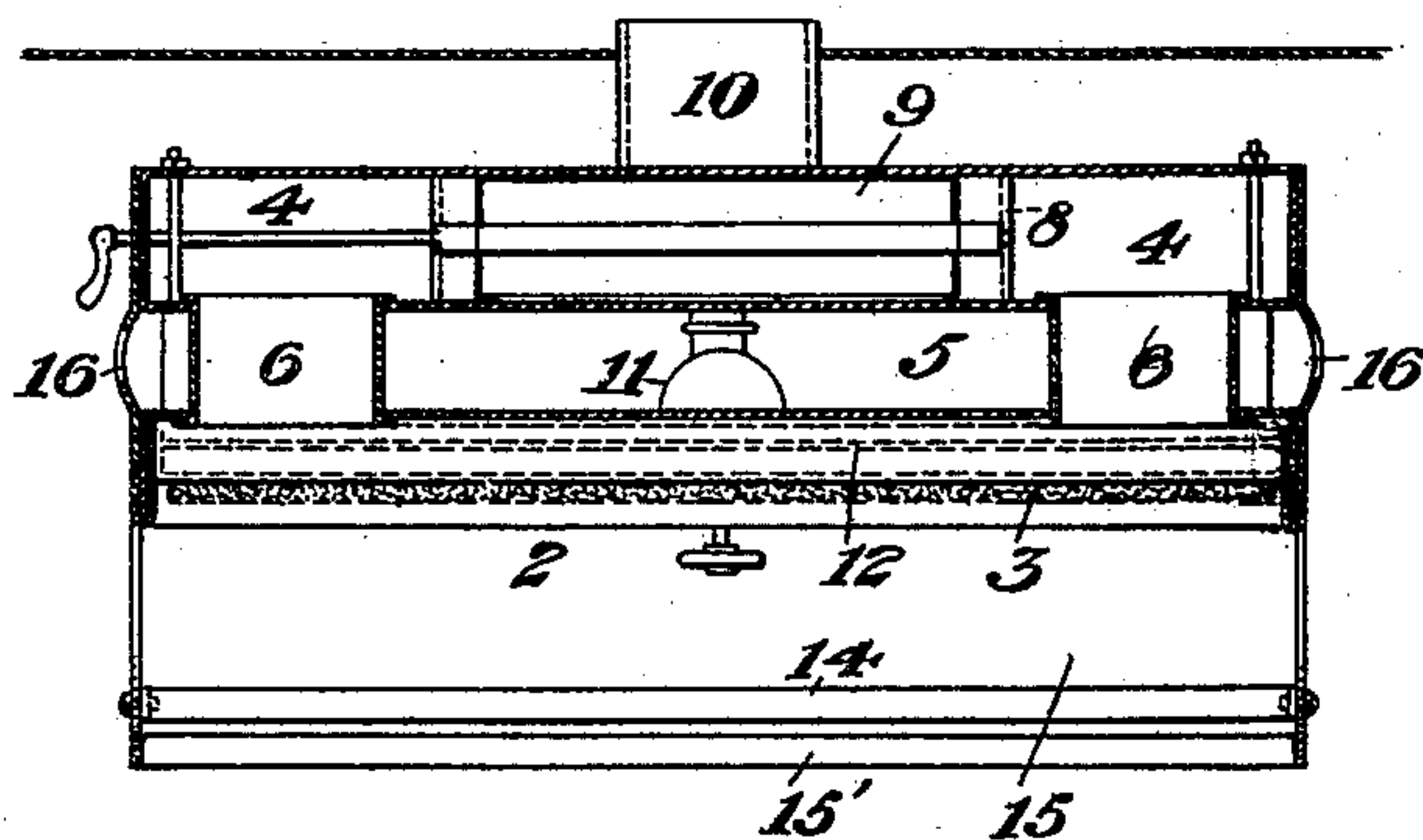


Fig. 3.



WITNESSES

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# UNITED STATES PATENT OFFICE.

EDWARD J. DASCHBACH, OF PITTSBURG, PENNSYLVANIA.

## GAS-STOVE.

SPECIFICATION forming part of Letters Patent No. 632,340, dated September 5, 1899.

Application filed October 2, 1896. Serial No. 607,680. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD J. DASCHBACH, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Gas-Stoves, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical cross-section of my improved gas-stove. Fig. 2 is a rear view, partly broken away; and Fig. 3 is a horizontal section on the line III III of Fig. 1.

My invention relates to that class of open-front gas-stoves wherein a rear chamber for the products of combustion separated from the front burner by an air-space is used, and is designed to improve the economy and increase the heating power of the stove by causing the products to take a circuitous path through a second chamber contained within the rear chamber for the products.

In the drawings, 2 represents the face of the stove, which is upright, open at the front, and has a vertical hollow burner 3, hereinafter described, and 4 is a vertical rear chamber separated from the chamber 2 by an intervening air-space 5, which is open at the sides and top. The chamber 4 has at its upper end short pipes or flues 6, opposite to the mouth of which is a hood 7, adapted to collect the products of combustion and to direct them into said flues. In the middle of the chamber 4 is a chamber 4', open at the bottom, being constituted by side walls 8 and an upper damper 9.

10 is an outlet-flue leading from the upper part of the middle chamber 4' and adapted to enter a hole made in a plate set in front of and closing an ordinary open fireplace.

The burner 3 is a hollow plate or slab having in its face perforations arranged, preferably, in parallel rows and with intermediate strips of asbestos fiber or the like. Gas is admitted into the burner through a gas-mixer 11 of the ordinary Bunsen type, which enters the burner-chamber back of a vertical partition 12 therein. Said partition does not extend to the top of the burner, but stops short thereof, and thus divides the burner internally into two compartments communi-

cating at the top, the front compartment communicating directly with the perforations and the rear compartment receiving gas and air from the mixer and serving to heat the same by conduction and radiation from the rear of the burner face-plate.

The operation of the apparatus as above described is as follows: Gas is admitted into the burner-chamber and draws with it a supply of air through the mixer. The mixed gas and air ascend in the burner-chamber back of the partition and, passing over the top of the partition, enter the front compartment of the burner, whence the mixture passes through the perforations and, being ignited at the face of the burner, covers the same with a body of flame and heats the asbestos fiber to incandescence. The products of combustion, ascending, are caught by the hood and pass through the pipes 6 to the rear chamber 4. At the beginning of the operation of the stove the damper 9 is preferably opened, so that the products of combustion pass directly with a clear draft to the outlet-flue 10 and thence up the chimney; but after the draft of the stove has been well established the damper is closed, and then, as shown by the arrows in Fig. 2, the products of combustion entering the chamber 4 must pass down below the side walls 8 and thence up into and through the chamber 4' before passing out through the flue 10. In this way the heat of the products of combustion is well extracted and given out to the air of the room by radiation from the front, back, and sides of the chamber 4 before they escape to the chimney.

At the lower part of the stove, covering the mixer 11 and its pipe, I prefer to set a curved fender 12, having on the inner side a hook 13, adapted to fit over a cross-bar 14, which connects the forwardly-projecting side walls of the stove and braces the same. These side walls are also connected by a bottom plate 15, the front edge 15' of which is curled over in cylindrical form. This construction stiffens the stove and renders it very steady and durable. The tops and sides of the air-space 5 are preferably covered with an ornamental perforated facing 16.

The stove has marked advantages, since

it gives a maximum of heat. It is very ornamental and is simple and cheap in construction.

I claim—

- 5 1. An open-front gas-stove having an upright burner at the front, a rear upright chamber separated from the front by an air-space and arranged to receive the products of combustion from the burner, and a second  
10 chamber within the said chamber having side walls and an opening remote from the entrance of the first-named chamber, the second chamber having an exit-flue, whereby  
15 the products of combustion are caused to take a circuitous path through the first-named rear chamber.

2. An open-front gas-stove having a burner

at the front, a rear upright chamber separated from the front by an air-space and adapted to receive the products of combustion from the burner, and a second chamber  
20 contained within the first and having a damper-closed passage in the direct path of the products of combustion, a second opening at a remote point, and an exit-flue, whereby by  
25 operation of the damper the products of combustion can be caused to assume a direct or circuitous path to the exit-flue, as desired.

In testimony whereof I have hereunto set my hand.

EDWARD J. DASCHBACH.

Witnesses:

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