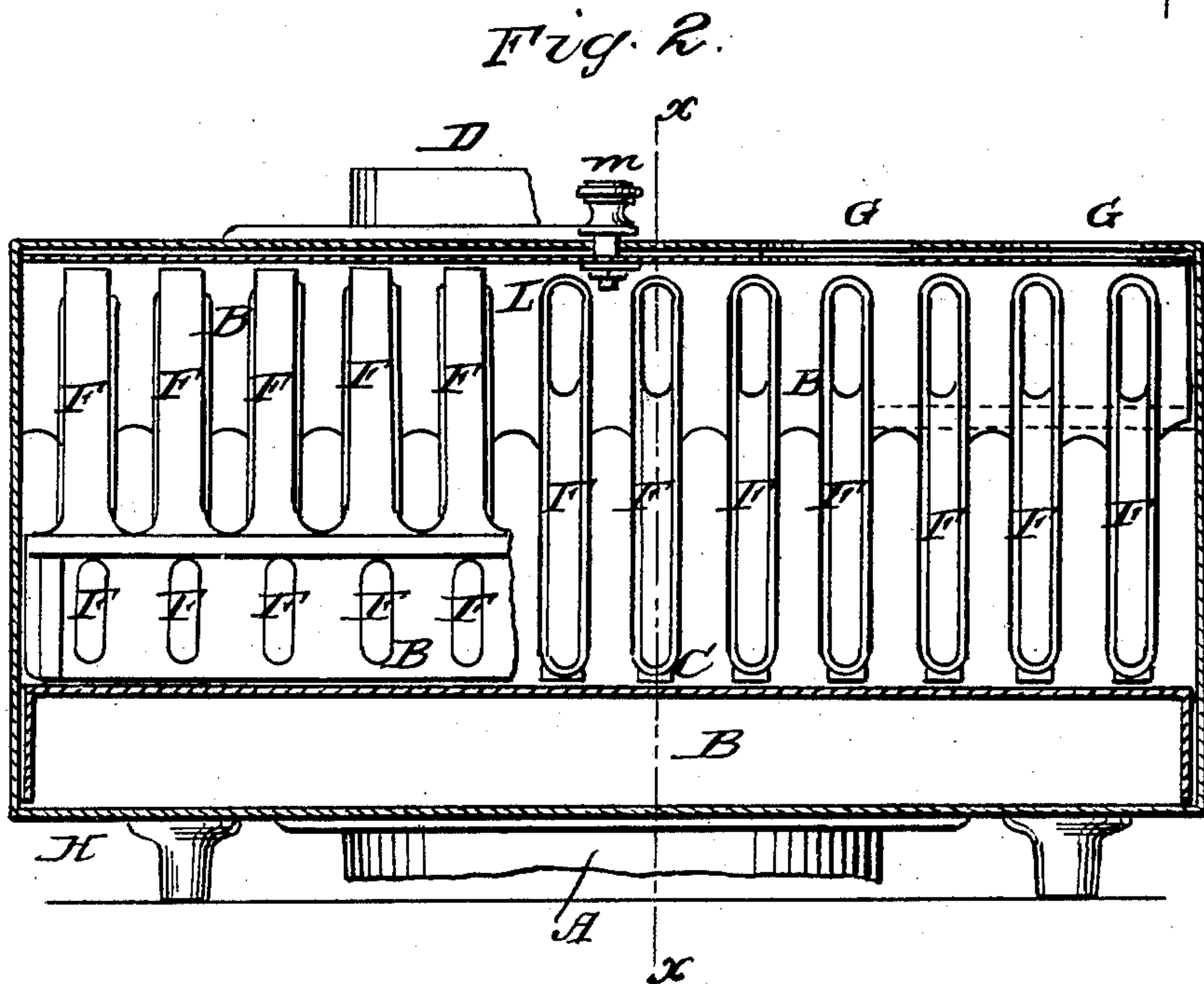
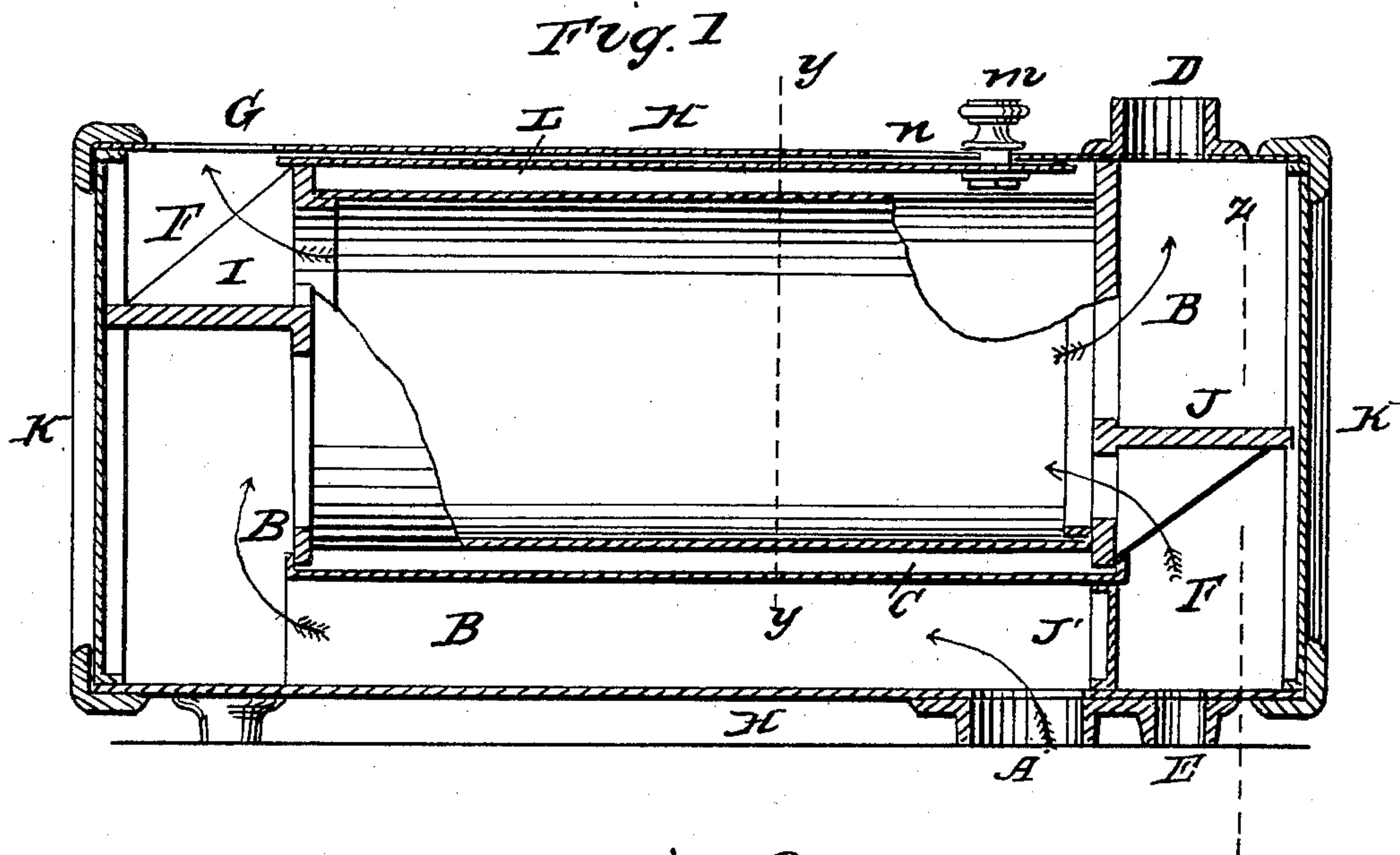


A. CANT.  
Heating Drum.

No. 86,362.

Patented Feb. 2, 1869.



Witnesses  
Wm. A. Morgan  
Chas. C. Cotton

Inventor  
Adam Cant.  
per Munnelle  
Atty



ADAM CANT, OF GALT, CANADA, ASSIGNOR TO HIMSELF AND HUGH CANT, OF THE SAME PLACE.

*Letters Patent No. 86,362, dated February 2, 1869.*

**IMPROVEMENT IN STOVE-PIPE DRUMS.**

*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, ADAM CANT, of Galt, Dominion of Canada, have invented a new and improved Air-Heater; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to an improved arrangement for heating air, for warming buildings, or other purposes; and

It consists in the arrangement of the flues and plates within the casing, as will be hereinafter more fully described.

Figure 1 represents a vertical section of the heater, through the line *x x* of fig. 2.

Figure 2 represents vertical sections of fig. 1, through the lines *y y* and *z z*, showing the arrangement of the air-flues, and the spaces between them, for the passage of the flame and products of combustion.

Similar letters of reference indicate corresponding parts.

This heater is placed over a suitable furnace or fire-box, and the flame and products of combustion enter through the aperture marked A, and circulate through the heater between the air-flues, or through the spaces and passages marked B.

C is a horizontal plate, which forms the bottom of the air-flues, against which the flame impinges as it enters the heater.

The course of the flame and products of combustion through the heater to the chimney is indicated by arrows in red color.

D represents the chimney.

The cold air enters the heater through the aperture E, and passes through the air-flues, which are marked F, in an opposite direction from the flame or products of combustion, as indicated by the black arrows.

The heated air is discharged through the apertures marked G.

H represents the casing which encloses the flues, which casing may be made of any suitable material, and of any desired size.

The flues may be made either of sheet or cast-iron.

The horizontal plates at each end of the heater, marked, respectively, I, J, and J', separate the air from the products of combustion.

K represents the detachable ends of the heater, by the removal of which access is obtained to the interior, and which allow of the removal of the flue-section, or the plates of which it is composed.

To regulate the flow of air through the heater, there is a damper or sliding plate, L, which is operated by the knob *m*, which plays in a slot, *n*, in the outside casing.

By this arrangement it will be seen that a very great heat-radiating surface is exposed, and that the products of combustion must be compelled to part with their caloric before being discharged into the chimney.

Whenever fuel is an object, the advantages of this heater must be obvious to all.

I am aware of the patent granted to W. Duryea and W. Ennis, April 30, 1867, for an air-heater; but this contains no part of my invention, and I therefore claim nothing therein shown.

I claim as new, and desire to secure by Letters Patent—

The described arrangement, within the case H, of the horizontal air-flues F, the horizontal and end passages B, the horizontal partitions I J J', the plate L, and the plate C, all directing the air and the heated products of combustion in the herein-described courses, for the purpose specified.

Witnesses:

GEORGE FAIRGRIEVE,  
WILLIAM KAY.

ADAM CANT.