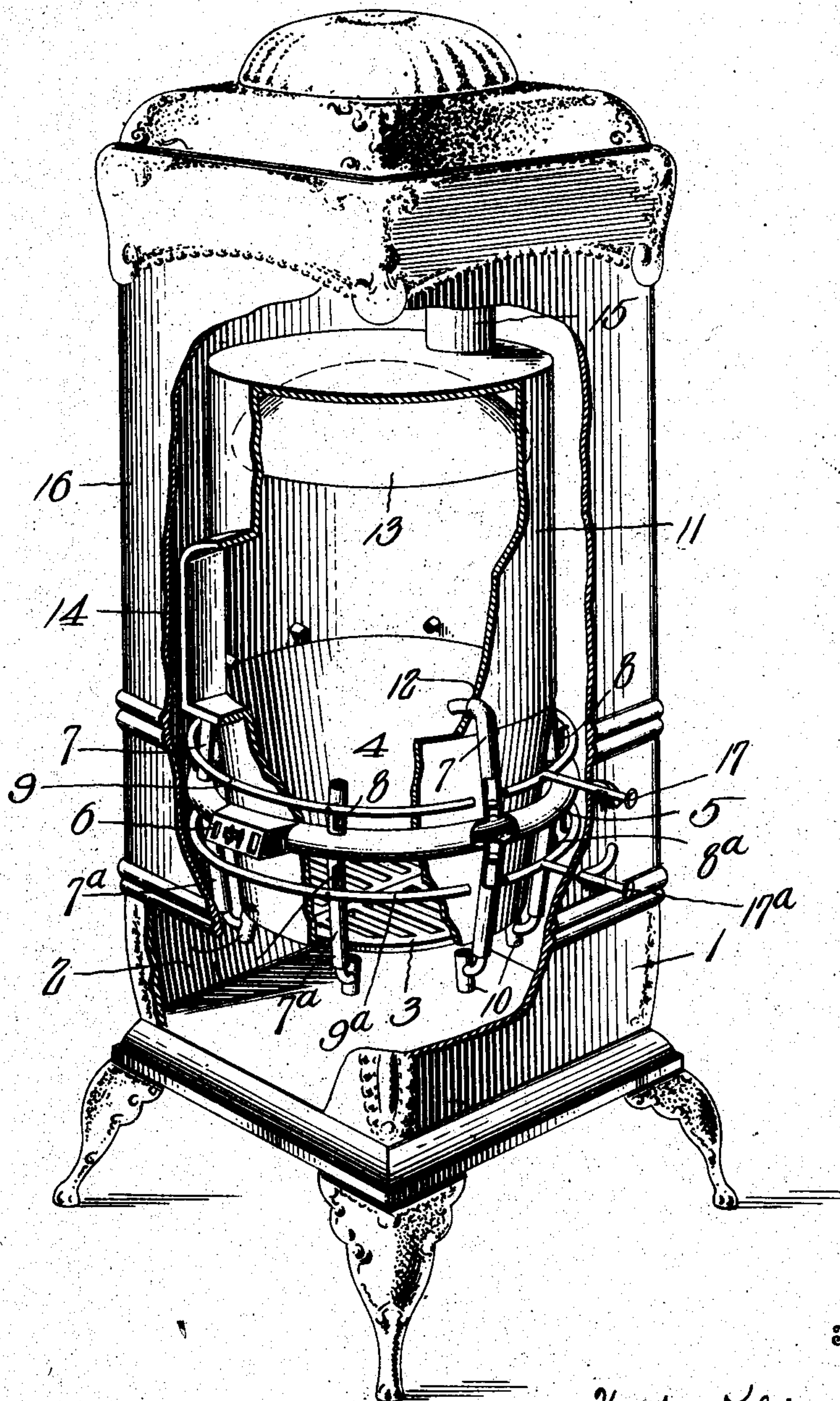


No. 889,003.

PATENTED DEC. 18, 1906.

W. KLINE.  
STOVE OR FURNACE.  
APPLICATION FILED MAR. 29, 1906.



Inventor

Witnesses

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# UNITED STATES PATENT OFFICE.

WALTER KLINE, OF AKRON, OHIO.

## STOVE OR FURNACE.

No. 839,003.

Specification of Letters Patent.

Patented Dec. 18, 1906.

Application filed March 29, 1906. Serial No. 308,707.

*To all whom it may concern:*

Be it known that I, WALTER KLINE, a citizen of the United States, and a resident of Akron, in the county of Summit and State of Ohio, have invented certain new and useful Improvements in Stoves or Furnaces, of which the following is a specification.

The present invention relates to stoves or furnaces.

The object of the invention is to provide improved means for regulating the amount of air introduced beneath the fire through the ash-pit or above the fire over the top of the fire-pot.

Another object is to prevent the heat escaping from the stove through the smoke-flue.

Other and further objects will appear in the following description and will more particularly be pointed out in the annexed claims.

The invention is illustrated in the accompanying drawing, which shows a perspective view of a stove embodying my invention, parts being broken away in order to better show the improvements.

1 indicates the base of the stove, and 2 is the ash-pit.

3 is the grate at the bottom of the fire-box

4. The fire-box is encircled by an annular tube 5, which is provided with a damper or air-inlet 6.

11 is the dome or top of the stove, which fits on the top of the fire-box 4.

7 represents vertical tubes which extend upwardly from the annular tube. The lower end of each of the tubes 7 communicates with the tube 5, and the upper end is bent inwardly and passes through a perforation 12 in the dome 11 directly above the fire-box. Each of the tubes 7 is provided with a damper 8, and these dampers are connected by a wire 9, which surrounds the fire-box and by means of which the dampers are operated in unison through the medium of a suitable slide 17, which extends outside of the jacket 16, surmounting the base of the stove.

7<sup>a</sup> represents vertical tubes which extend downwardly from the annular tube 5. The upper end of each of the tubes 7<sup>a</sup> communicates with the tube 5, and to their lower end is fitted a substantially T-shaped tube 10, which opens into the ash-pit directly below the grate 3 and directs the air into the fire through the outer edges of the grate. The tubes 7<sup>a</sup> are provided with dampers 8<sup>a</sup>, con-

nected by a wire 9<sup>a</sup>, which in turn is connected to a slide 17<sup>a</sup> on the outside of the jacket 16, thus permitting the dampers 8<sup>a</sup> to be operated in unison and independently of the dampers 8.

The dome 11 is provided with a door 14 and a smoke-flue 15, and to the top of the dome is secured an oval-shaped bowl 13, by means of which the heat is distributed equally to all parts of the dome and which prevents the heat from escaping through the flue 15.

The amount of air entering the annular tube 5 is regulated by means of the damper 6. From the tube 5 the air passes either upwardly through the tubes 7 into the upper part of the fire-box or it passes downwardly through the tubes 7<sup>a</sup> and 10 into the space below the grate. The path of travel of the air depends on the position of the dampers 8 and 8<sup>a</sup>, and the passage of the air may be regulated at will by adjusting the slides 17 and 17<sup>a</sup>. When the air is admitted from below, by opening the dampers 8<sup>a</sup> and closing the dampers 8 it will cause the fire to burn more readily than it otherwise would do. On the other hand, if the dampers 8 are opened and the dampers 8<sup>a</sup> closed the fire will at once be checked.

By the use of my improved system there is no longer danger of the stove becoming overheated in the night-time, and the door of the stove can be kept closed at all times.

Having described my invention, what I claim is—

1. In a stove, the combination with the fire-box and the grate, of an annular tube encircling the fire-box, and provided with an air-inlet, a series of vertical tubes extending upwardly from said annular tube and opening into the interior of the stove at the top of the fire-box, a second series of vertical tubes extending downwardly from said annular tube and opening into the interior of the stove at the bottom of the fire-box, means for regulating the passage of air from the annular tube through the upwardly-extending vertical tubes, and means for regulating the passage of air from the annular tube through the downwardly-extending vertical tubes.

2. In a stove, the combination with the fire-box, of an annular tube encircling the fire-box and provided with an air-inlet, a series of vertical tubes extending upwardly from said annular tube and opening into the



interior of the stove at the top of the fire-box, a damper in each of the vertical tubes, a second series of vertical tubes extending downwardly from said annular tube and opening  
5 into the interior of the stove at the bottom of the fire-box, a damper in each tube of the second series, means for operating the dampers of one series of tubes in unison, and means for operating the dampers of the second se-

ries of tubes in unison and independently of the dampers of the first series of tubes.

The foregoing specification signed at Akron, Ohio, this 24th day of March, 1906.

WALTER KLINE.

In presence of—

WM. A. MARTIN,

A. J. KREIGHBAUM.