(No Model.)

J. CONROY.

HEATING APPARATUS.

No. 345,833. Patented July 20, 1886.

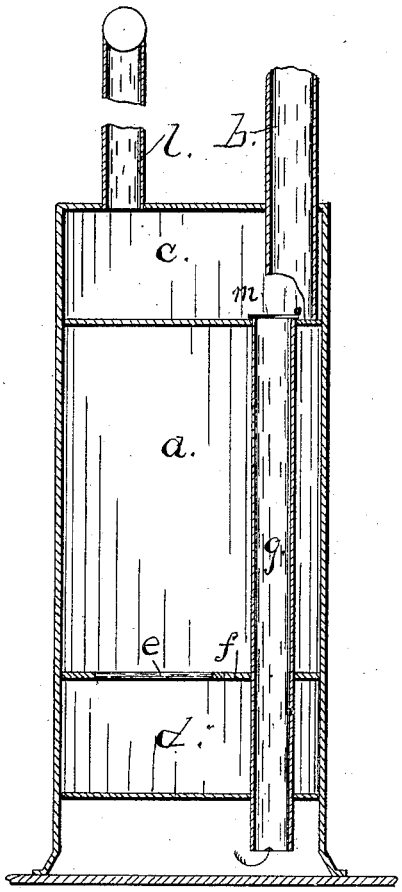

Fig. 2.

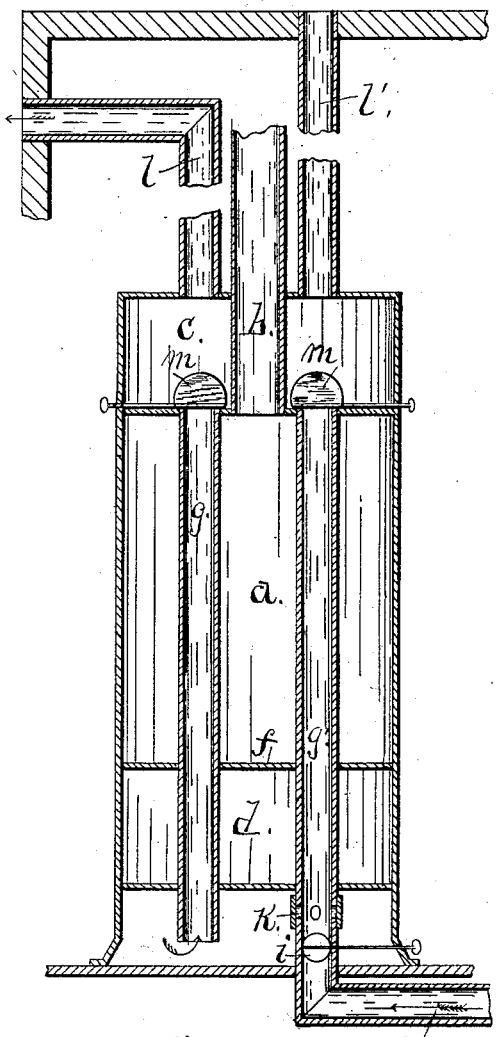

Fig. 1.

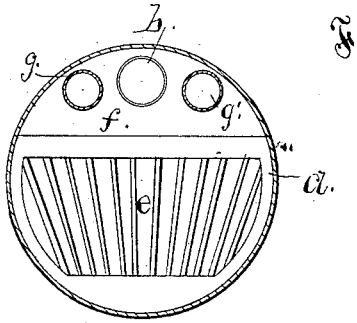

Fig. 3.

Attest:
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UNITED STATES PATENT OFFICE.

JOHN CONROY, OF BAY CITY, MICHIGAN.

HEATING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 345,833, dated July 20, 1886.

Application filed January 30, 1886. Serial No. 190,270. (No model.)

To all whom it may concern:

Be it known that I, JOHN CONROY, a citizen of the United States, residing at Bay City, in the county of Bay and State of Michigan, have invented certain new and useful Improvements in Heating Apparatus, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

The object of this invention is to provide a means of heating several rooms by the use of one stove, and at the same time introduce fresh air into the rooms, and to derive a greater benefit from the combustion of the fuel used in the stove, and thereby reduce the amount of fuel and labor, and avoid the annoyance of the smoke and dust produced by a stove in a room. I attain these objects by means of the device illustrated in the accompanying drawings, in which—

Figure 1 is a transverse vertical section of a stove and of my improved device attached thereto. Fig. 2 is a section at *x y*. Fig. 3 is a horizontal section of the device through the combustion-chamber.

Similar letters refer to similar parts throughout the several views.

a represents the fire or combustion chamber of a stove, and *c* is an air-chamber, located directly above the combustion-chamber *a*, and *d* is an ash-pit below the chamber *a*. A grate, *e*, together with a solid portion, *f*, at the rear of the grate, separates the chamber *a* from the ash-pit. This grate portion *e* may be made removable, for cleaning or renewal, and the solid portion *f* being in a horizontal position allows ashes and cinders to collect thereon, which prevents the fire from coming in direct contact therewith, so that warping and burning out of this portion is avoided.

g and *g'* are pipes passing vertically through the rear portion of the chamber *a*, and through the solid portion *f* and the rear portion of the ash-pit, and with their upper ends terminating just within the air-chamber *c*. The lower end of these pipes may be located near the floor, as *g*, or may be extended at *g'* by the pipe *h* to the outside atmosphere, and provided with a damper, *i*, for shutting off the outside air when desired, and a draft-opening, *k*, for allowing the air of the room to pass into the pipe when the pipe *h* is closed.

b is a smoke-pipe connecting with the upper portion of the combustion-chamber *a*, and, passing through the air-chamber *c*, is connected to the chimney, and carries away the smoke and gases produced by combustion of the fuel.

To the upper portion of the air-chamber *c* is connected one or more conducting-pipes, *l* and *l'*. These conducting-pipes are carried to and connected with any room which it is desired to heat.

Dampers *m* are placed within the air-chamber *c*, and arranged to cover over and shut off the upper ends of the heating-pipes *g* and *g'*, so that either may be shut off at will. Suitable dampers may be placed within the conducting-pipes *l* and *l'*, so that either or both may be shut off, if desired.

The operation of the device is, that when the fire is placed within the combustion-chamber the heat acts to warm directly the air within the flues *g* and *g'* and the air-chamber *c*, causing it to rise and pass through the conducting-pipes *l* and *l'* into some room or place remote from the stove, the cooler air from the floor of the room passing in at the bottom of the pipe *g*; or the cool air from the outside passes in through the air-pipe *h*, and in passing through the heated portions of the pipes *g* and *g'* and the chamber *c* this cool air becomes warmed or heated and expanded, and quickly passes out through the pipes *l* and *l'* to the space above, giving at all times a supply of pure air within the rooms, as well as warming several rooms with one fire.

Having described my improvement, what I claim as my invention, and desire to secure by Letters Patent, is—

A heating and ventilating apparatus consisting of the combustion-chamber *a*, the heating-chamber *c* above the combustion-chamber, a smoke-pipe, *b*, connected with the combustion-chamber and passing through the heating-chamber, an ash-pit, *d*, below the combustion-chamber, a grate-portion, *e*, and solid portion *f* between the combustion-chamber and ash-pit, the vertical air-flues *g* and *g'*, with their

lower ends opening near the floor and passing through the rear portion of the ash-pit and combustion-chamber, and connected with the lower portion of the heating-chamber, and the conducting-flues *l* and *l'*, connected with the upper portion of the heating-chamber *c*, all in combination and arranged substantially as herein described, and for the purpose set forth.

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

JOHN CONROY.

Witnesses:
J. E. THOMAS,
W. H. POWER.