

(No Model.)

J. F. KEENER.

HEAT RADIATOR.

No. 357,207.

Patented Feb. 8, 1887.

Fig. 1.

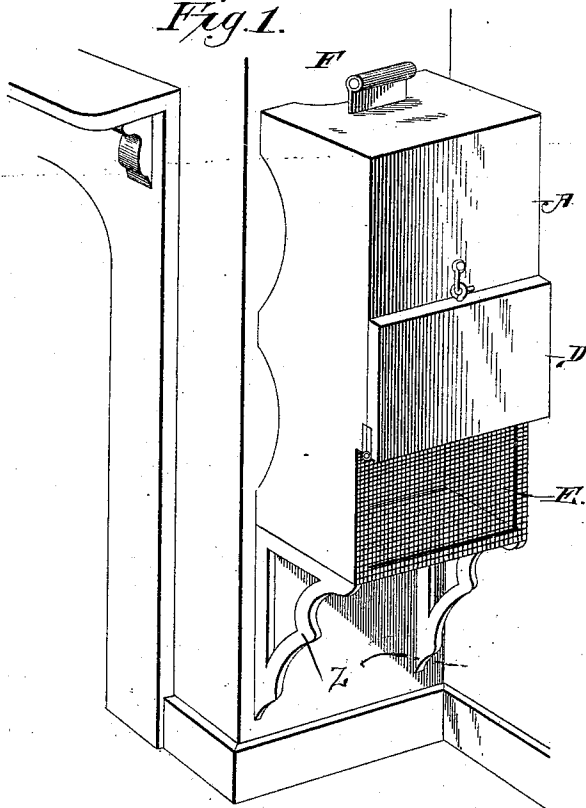
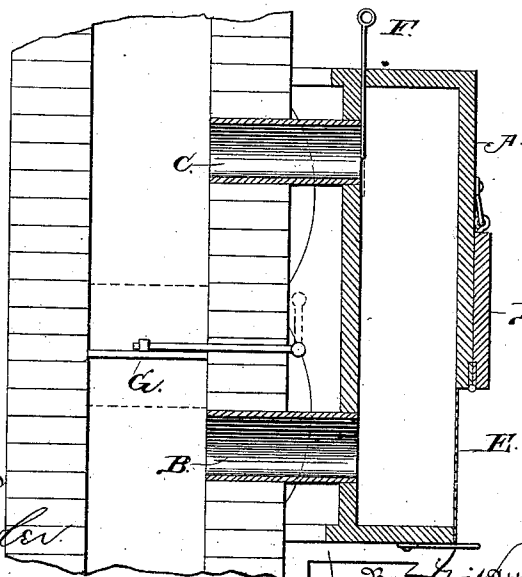


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

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HEAT-RADIATOR.

SPECIFICATION forming part of Letters Patent No. 357,207, dated February 8, 1887.

Application filed April 7, 1886. Serial No. 198,154. (No model.)

To all whom it may concern:

Be it known that I, JACOB FRANTZ KEENER, a citizen of the United States, residing at Kittanning, in the county of Armstrong and State of Pennsylvania, have invented a new and useful Improvement in Heat-Radiators, of which the following is a specification.

My invention relates to an improvement in heat-radiators; and it consists in the peculiar construction and combination of devices, that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the drawings, Figure 1 is a perspective view of my invention. Fig. 2 is a vertical sectional view of the same.

A represents a drum, which may be made of any preferred construction, and is provided at its lower end on one side with an inlet-pipe, B, and at its upper end on the same side with an outlet-pipe, C. The drum A is supported on brackets Z, suitably secured to the chimney or flue, so that the weight of the drum will not be placed on the pipes B C. On the outer side of the drum, near the lower end thereof, is a hinged door, D, and the opening in the lower side of the drum covered by the said door, when the latter is closed, is covered by a wire-netting, E. In the upper end of the drum is arranged a vertically-movable slide-damper, F, which is adapted to partly cut off the inner end of the discharge-opening C.

In operation the pipes C and B enter the side of the chimney in an upper apartment and communicate with the flue in the chimney, and in the latter, above the pipe B, is located a damper, G. When this damper is closed, the heat which passes up the chimney is deflected and caused to pass into the drum through the pipe B. If the door D is closed and the damper F is opened, (the damper G remaining closed,) the heated air from the chimney-flue will pass upwardly through the drum and through the pipe C back into the chimney, and a small degree of heat will be radiated from the drum into the room. If the damper F is partly or entirely closed, so as to obstruct the escape of the heated air from the drum to the chimney, (the damper G remaining closed, as before,) the drum will become heated to a higher degree

than in the previous instance, and will consequently radiate more heat into the room. If the door D is then opened, (the dampers F and G still remaining closed,) the heated air from the chimney will be admitted into the room through the screen E, and the drum then serves as a register, and is working at its maximum degree of efficiency as a heater.

If it be desired to employ the device as a ventilator for the apartment, this may be accomplished by opening the damper G in the chimney-flue, to prevent the deflection of heated air from the chimney to the drum, and the door D and the damper F must be also opened, when the air in the apartment will enter the drum through the screen E and escape through the pipe C up into the chimney.

The screen is useful to prevent soot and other products of combustion from escaping into the room from the drum when the latter is used as a register.

A heat-radiator thus constructed is cheap and simple, is not likely to get out of order, and will be found very efficient in localities where natural gas is used as fuel, enabling upper apartments to be heated by the waste heat which usually escapes up the chimney.

In experiments made with a heat-radiator thus constructed, in practical operation, I obtained a greater degree of heat in an upper apartment in which the radiator was located than was thrown out by the fire in the room below.

Having thus described my invention, I claim—

1. The combination, with a chimney or flue having the damper G to open or close the same, of the drum A, having the pipe B at its lower end communicating with the flue below the damper G, the pipe C at its upper end communicating with the flue above the damper therein, the damper F, to open or close the pipe C, and the opening in the lower portion of the drum having the screen E and the door D, for the purpose set forth, substantially as described.

2. In combination with brackets attached to the flue, the heat-radiator supported on the brackets above the floor, and pipes B C, communicating with the radiator and opening

into the chimney or flue, and a damper, G, located in the chimney or flue between the pipes B C, as set forth.

3. A heat-radiator consisting of a hollow
5 reservoir provided at the upper and lower
ends with pipes B C, a damper, F, for closing
communication between the radiator and the
pipe C, an outlet-opening in the radiator to
allow distribution of the heat into the room,
10 an open-work covering, E, for the outlet-

opening, and a door, D, to close over the covering, as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JACOB FRANTZ KEENER.

Witnesses:

FRANK E. HAYS,
R. S. SLAYMAKER.