W. FRAZIER.

Heating Stove.

No. 1,571. Patented April 30, 1840.

Fig. 1.

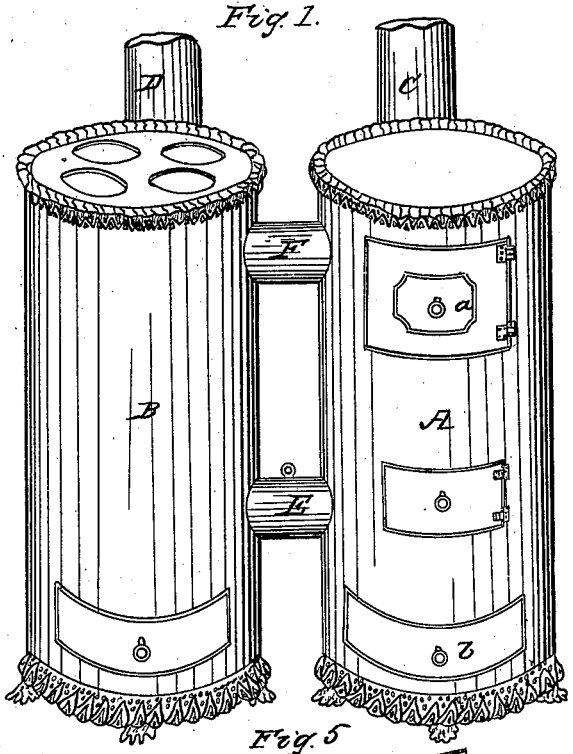


Fig. 3

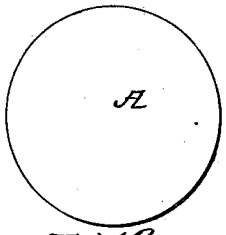


Fig. 2

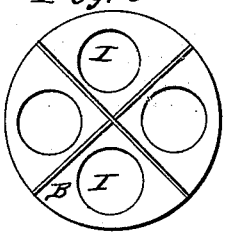


Fig. 4

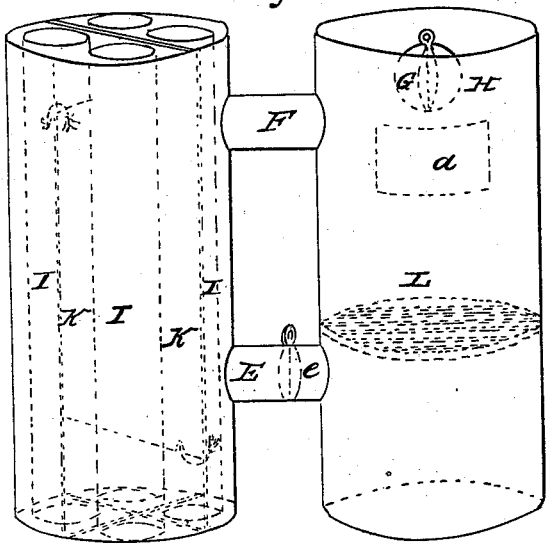


Fig. 5

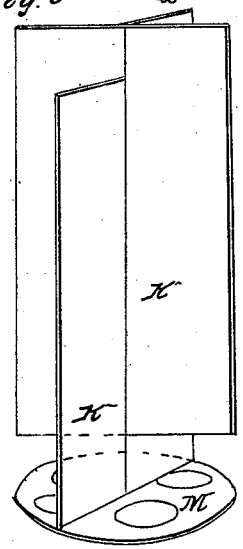
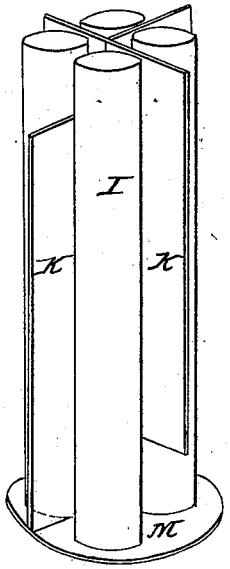


Fig. 6



Witnesses
Owen L. Warren
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UNITED STATES PATENT OFFICE.

WILLIAM FRAZIER, OF BROOKLYN, NEW YORK.

CONSTRUCTION OF DRUMS FOR HEATING APARTMENTS.

Specification of Letters Patent No. 1,571, dated April 30, 1840.

To all whom it may concern:

Be it known that I, WILLIAM FRAZIER, of the city of Brooklyn, county of Kings, and State of New York, have invented a new and useful Improvement in Stoves or the Apparatus for Warming Rooms; and I do hereby declare that the following is a full and exact description.

The name of this invention is "Frazier's improved radiator."

The nature of it consists in conveying the smoke through sundry passages, concealed within a drum in order that the heat may be as nearly as possible expended before the smoke reaches the chimney.

To enable others skilled in the business to make and use my invention, I proceed to describe its construction and operation, reference being had to the drawings hereunto annexed and making part of this specification.

A stove is made of any desirable pattern, but the shape preferred is that of an upright cylinder. The drum or radiator should be of the same pattern as the stove. Any number of the drums may be used, but two are generally sufficient. In this specification only one drum is described, that being sufficient to illustrate the principle.

The stove may be for wood or coal and of any approved pattern, the radiator being the part claimed. The stove and radiator are placed side by side with two connecting pipes, one near the top and the other near the bottom. The bottom one is just below the grate. The top one is for the passage of the smoke from the stove to the radiator. There is also an outlet for the smoke at the back side near the top of the stove for the smoke to pass into the chimney direct when it is not desirable to have it pass through the radiator, and another outlet similarly situated at the back of the radiator to convey away the smoke after it has passed through the different chambers and given out its heat. There is a damper in the pipe at the back of the stove and another in the lower connecting pipe between the two.

The general appearance of the stove and radiator will be seen by reference to the drawing in the perspective view Plate I.

The interior of the drum of the radiator is divided by partitions into four parts (see Plates II and III). Each of these apartments has a pipe running down through it from top to bottom, into which the cold air enters below and passes out at top rarefied. These pipes are marked in the drawings I. The partitions inside the drum do not all extend entirely to the top and bottom as will be seen by reference to the drawing of the sections, Figure 5 and Fig. 6. The smoke enters into one of the apartments of the drum, then passes down to the bottom into the next chamber and up through that and into the next chamber and down that and into the fourth chamber, from which it issues at the top into the pipe D. When more radiators are wanted the smoke is conveyed into an additional drum by a connecting pipe and carried through the different chambers in the manner already described.

The following is a more particular description of the various parts by immediate reference to the drawings.

Plate I, Fig. 1, a perspective view of the stove and radiator. The two pipes issue from the back near the top; Plate II, Fig. 2, the top of the radiator or drum; Fig. 3, the top of the stove; Fig. 4, a partial section showing the positions of the various internal parts and the course of the smoke, which is represented by the arrows; Plate III, Fig. 5, the partitions within the drum shown separate; Fig. 6, the pipes and partitions shown together.

The same letters refer to the same things in all the drawings.

A, the stove; *a*, the door for fuel; B, the radiator or drum; *b*, drawer for ashes; C, the pipe through which the smoke is allowed to pass when it is not desirable to use the radiator; D, the pipe into which the smoke passes from the radiator; E, a connecting pipe below the grate; *e*, a damper; F, flue from the stove to the radiator; G, damper in the passage H leading to C; I, the pipes in the drum, through which the cold air from the bottom is rarefied in passing up through; K, the partitions inside the drum; L, the grate on which the fire is laid; M, the bottom of the radiator.

What I claim as my invention and desire to secure by Letters Patent is—

The partitions K and the pipes I combined, in the drum, B, as above described.

WM. FRAZIER.

Witnesses:

OWEN G. WARREN,
JOHN H. WANDS.