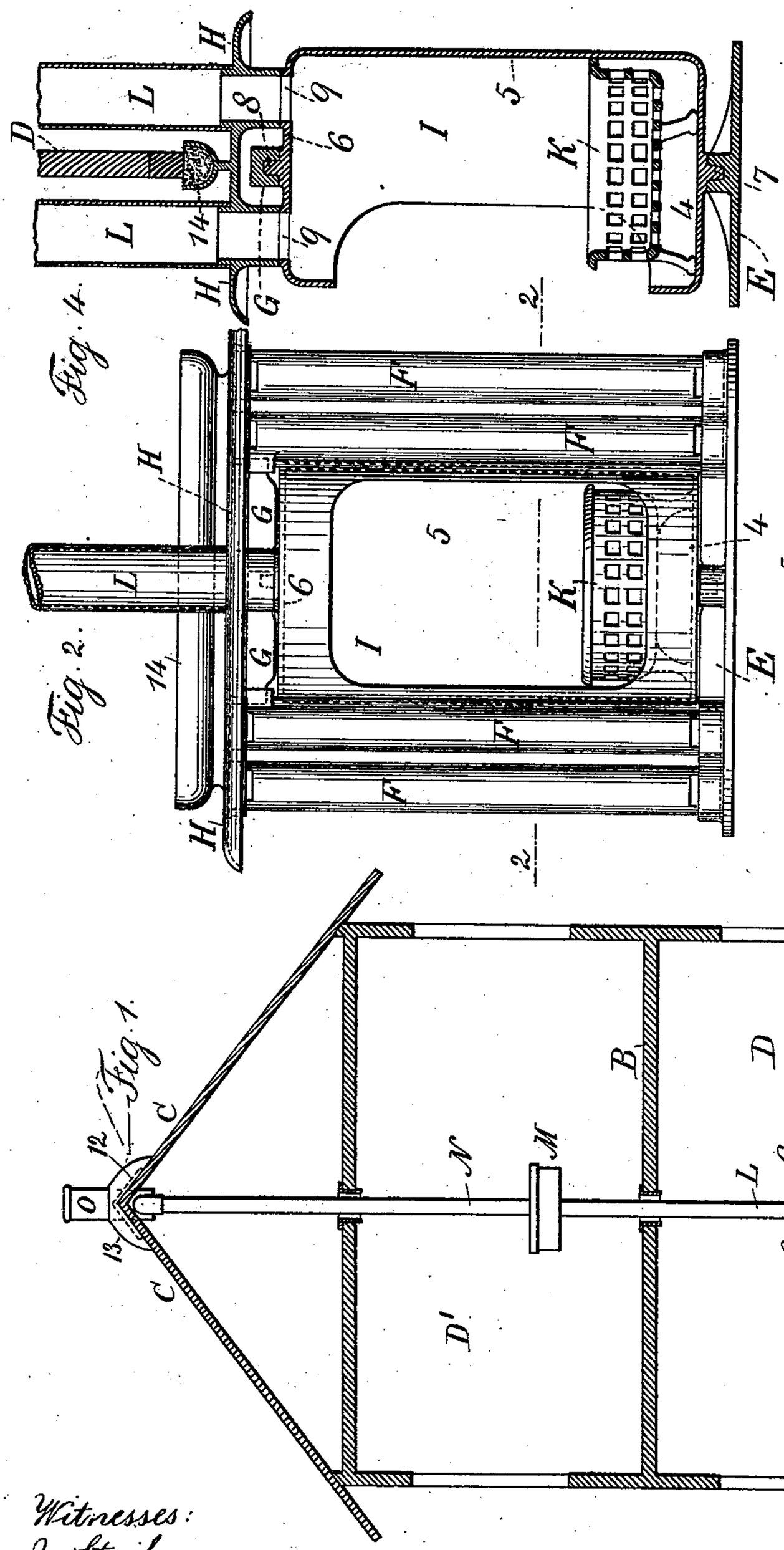
(No Model.)

2 Sheets—Sheet 1.

T. HOLLAND.

COTTAGE HEATER.

No. 543,092. Patented July 23, 1895.



Witnesses:
J. Stair
Chas. H. Smith

Inventor:
Timothy Holland
per Lemuel W. Serrell
Atty

(No Model.) 2 Sheets—Sheet 2.

T. HOLLAND.

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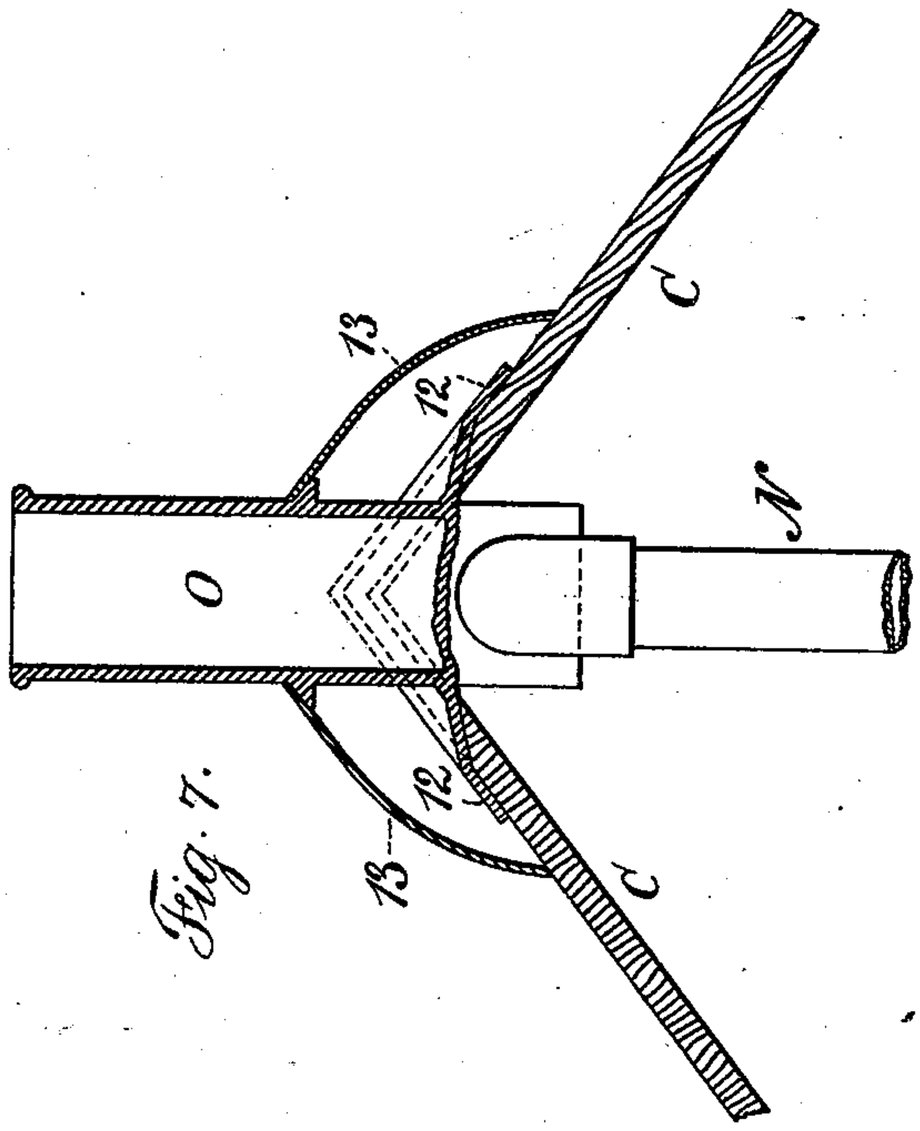

Fig. 7.

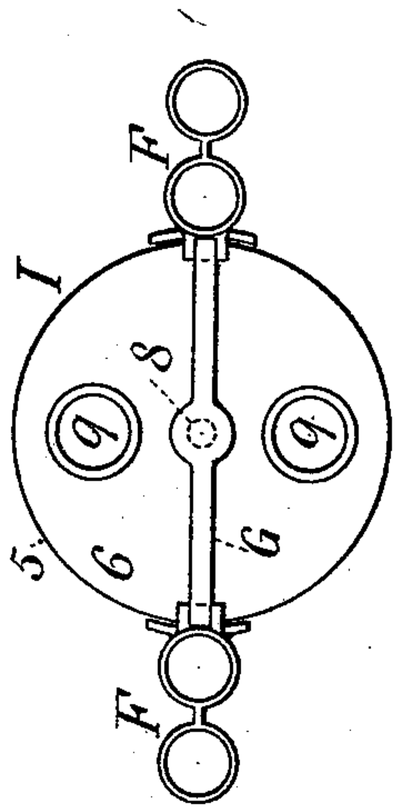

Fig. 5.

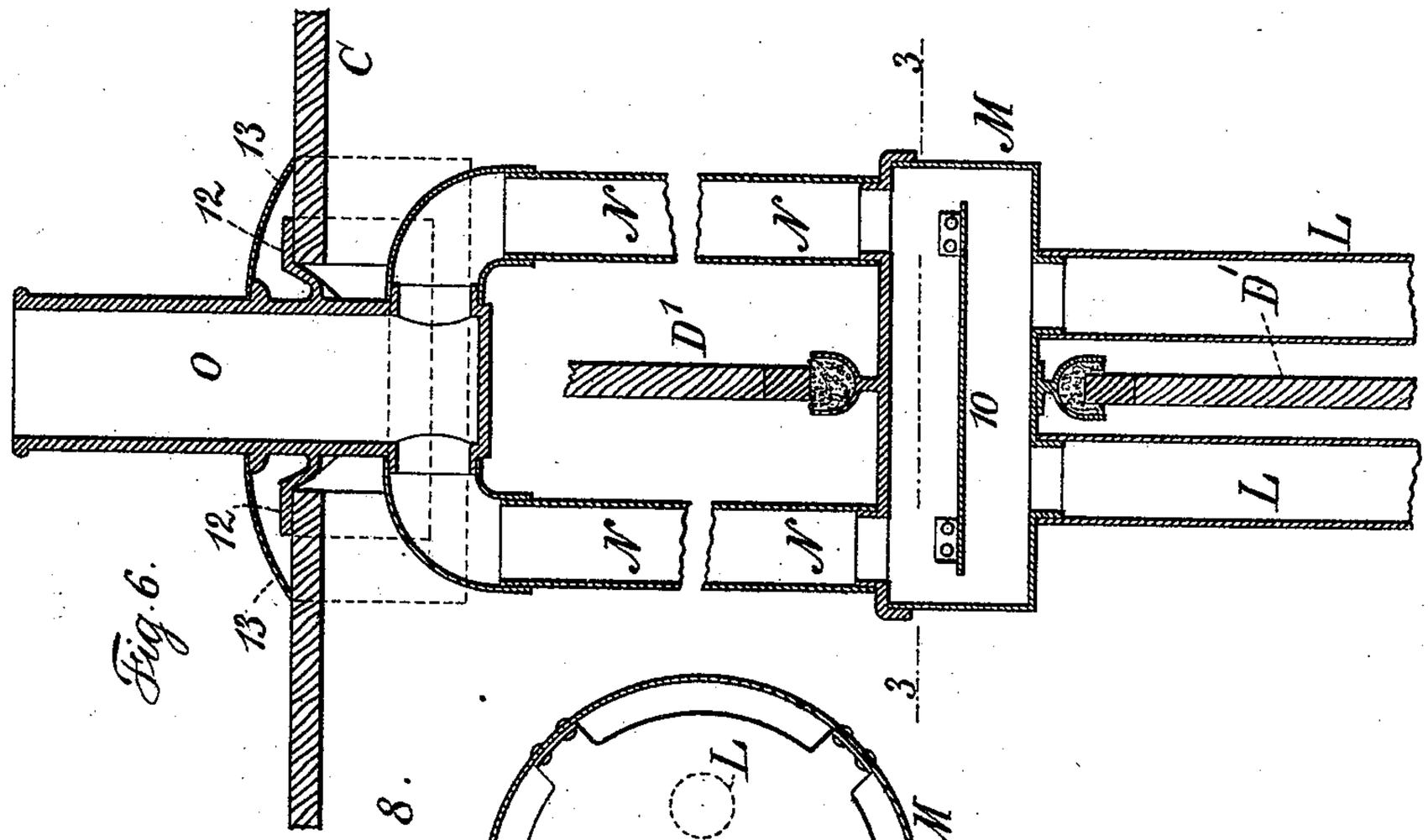

Fig. 6.

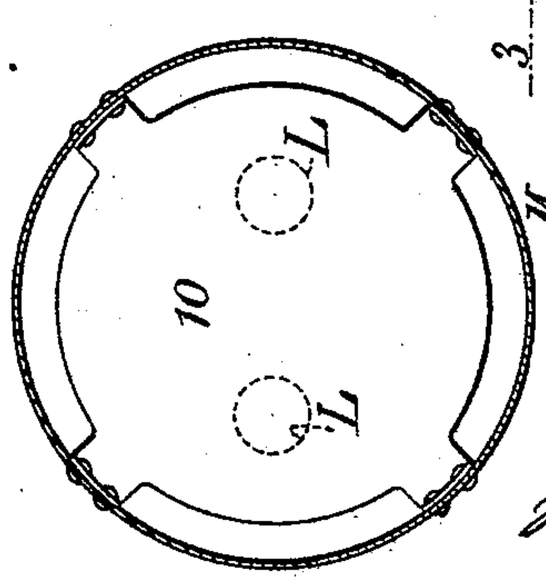

Fig. 8.

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UNITED STATES PATENT OFFICE.

TIMOTHY HOLLAND, OF NEW YORK, N. Y.

COTTAGE-HEATER.

SPECIFICATION forming part of Letters Patent No. 543,092, dated July 23, 1895.

Application filed November 19, 1894. Serial No. 529,239. (No model.)

To all whom it may concern:

Be it known that I, TIMOTHY HOLLAND, a citizen of the United States, residing in the city, county, and State of New York, have invented an Improvement in Cottage-Heaters, of which the following is a specification.

Buildings have been constructed and used to a considerable extent, especially in new settlements and in dwellings for workmen, in which there are four rooms, two on the ground floor and two above, and the rooms are separated by wooden or plaster partitions and the house is constructed without any ordinary brick chimney, and in this class of buildings difficulty is experienced in warming the same and in preventing the risk of fire.

I make use of a metallic framework set into the partition between the two rooms on the ground floor, and into this framework an open grate or hearth is fitted and supported by pivots at the top and bottom, so that the grate can be rotated for the fire to heat either one of the lower rooms by both radiation and convection, the other room being heated to a less extent by the air that is warmed by contact with the closed back portion of the rotary hearth, and the framework around the hearth also forms a mantel for each room, and pipes for conveying the products of combustion pass upwardly through the ceiling and advantageously at both sides of the partition, and in the upper rooms a radiating-drum is provided that projects at each side of the partition, and the pipe or pipes continue up from the same to a peculiarly-constructed chimney-top of cast metal or similar material and adapted to coincide with the roof and form a tight joint.

By this improvement the entire heating apparatus is easily applied and is efficient in heating the four rooms of the house, an ordinary brick chimney is dispensed with, and the heat can be directed to advantage into whichever room it is desired.

In the drawings, Figure 1 is a general elevation in reduced size representing the improvement and indicating the outline of the building. Fig. 2 is an elevation of the heater and frame. Fig. 3 is a sectional plan view at line 2 2, Fig. 2. Fig. 4 is a vertical section through the heater at right angles to Fig. 2. Fig. 5 is a plan view of the heater and frame, the top or mantel being removed. Fig. 6 is a vertical section through the drum and chimney. Fig. 7 is a sectional elevation at right angles to Fig. 6; and Fig. 8 is a horizontal section at the line 3 3, Fig. 6.

The floor-line is indicated at A and the second floor at B and the peak of the roof at C, and the partition separating the rooms of the lower floor is shown at D, and the partition separating the room of the upper floor at D′.

It is to be understood that the building is of any desired character, and that this improvement is available with buildings that are entirely of wood and with buildings that are of other suitable material.

The base-plate E is adapted to receive the side columns F, that support the top frame G, over which is the mantel H, and it is advantageous to make the columns F hollow with openings at the top and bottom, so that air may circulate through these columns and prevent them from becoming too hot, and at the same time the heat will be conveyed into the room.

Between the columns F, the base E, and the top frame G there is an opening into which is received the rotatable hearth I, which is formed with a bottom or ash-pit 4, a back plate 5, usually in the form of a segment of a cylinder, and a top plate 6, having a downwardly-projecting skirt, uniting with the upper parts of the back plate at the edges, so as to form a chamber to the rotatable hearth, within which fuel is to be burned, and a suitable grate K is provided, adapted to the reception of coal or wood, which can be burned on this rotatable hearth, and there is a bottom pivot 7, by which the hearth is supported upon the base-plate E, and a top pivot 8 in the frame G for supporting the hearth and allowing the same to be turned around, so that the fire is exposed either in one room or the other.

In the top part of the rotatable hearth there is a flue opening or ring 9. I prefer to have two of these, one toward the front and the other toward the back and equidistant from the top pivot 8, and through the mantel

H are openings with rings adapted to receive the smoke-pipes L, which pass up from the mantel through the ceiling and floor to a drum M. The pipes L are located one at each side of the partitions D D′, and the flue openings or rings in the top part 6 of the rotatable hearth coincide with the downwardly-projecting hubs or pipe-sections that are cast with the mantel, so that the hearth can be rotated and the pipes forming the flues for the products of combustion will coincide one with the other when the fire is exposed in either one room or in the other.

The drum M may be of any desired character. I however prefer to make this drum hollow and with a cast-metal top adapted to form a mantel, and with a central deflecting-plate 10, so that the products of combustion are caused to pass around the edges of this plate in their ascending course, and this mantel is adapted to be supported by the partition D′ and to project at each side thereof.

From the drum M one or two pipes N are made use of that ascend to the chimney-top O, and this chimney-top is preferably of cast-iron and provided with a flange 12, adapted to set upon the woodwork of the roof and to be connected thereto, and with a flange 13, that projects beyond the flange 12 and serves to prevent water passing in between the flange 12 and the woodwork, and I find it advantageous to make in this flange 12 a channel that may receive any moisture from drifting snow or otherwise and conduct the same to the lowest place where the flange joins to the roof of the building.

In order to lessen the risk of heat being conducted to the partition D or D′ from either the mantel H or the top of the drum M, I prefer to cast upon the top of the mantel H a V-shaped trough 14, that is sufficiently wide to receive the lower edge of the partition, and into this trough asbestos or mineral wool or similar material is received to prevent the heat passing to the woodwork, and a similar flange and trough can be provided when desired upon the bottom of the drum M at its junction with the partition.

It is to be understood that the framework, mantel, and rotatable hearth can be ornamented to a greater or less degree, so as to make the heating apparatus ornamental and attractive in appearance, and the heating drum can also be made more or less ornamental, and the chimney cap or top can also be of cast-iron and ornamented upon the surface.

I claim as my invention—

1. A base plate, hollow columns having openings at the upper and lower portions for air to circulate through the same, and a top frame, in combination with a rotatable hearth having pivots received by the frame and base plate, such rotatable hearth having a closed back and an opening for the escape of the products of combustion, a top plate or mantel with openings through the same to coincide with the opening or openings in the top of the rotatable hearth, and flue pipes extending upwardly from such mantel, substantially as set forth.

2. A base plate, hollow columns having openings at the upper and lower portions for air to circulate through the same, and a top frame in combination with a rotatable hearth having pivots received by the frame and base plate, such rotatable hearth having a closed back and an opening for the escape of the products of combustion, a top plate or mantel with openings through the same to coincide with the opening or openings in the top of the rotatable hearth, and flue pipes extending upwardly from such mantel, such flue pipes passing through the ceiling and floor, and a drum with which such flue pipes are connected, substantially as set forth.

3. A base plate, hollow columns having openings at the upper and lower portions for air to circulate through the same, and a top frame, in combination with a rotatable hearth having pivots received by the frame and base plate, such rotatable hearth having a closed back and an opening for the escape of the products of combustion, a top plate or mantel with openings through the same to coincide with the opening or openings in the top of the rotatable hearth, and flue pipes extending upwardly from such mantel, such flue pipes passing through the ceiling and floor, and a drum with which such flue pipes are connected, and a pipe passing from the drum and a chimney top with which such pipe is connected, substantially as set forth.

Signed by me this 9th day of November, 1894.

TIMOTHY HOLLAND.

Witnesses:
GEO. T. PINCKNEY,
S. T. HAVILAND.