(No Model.)

J. G. SMITH.

FIRE PLACE.

No. 265,163 Patented Sept. 26, 1882.

Fig. 1.

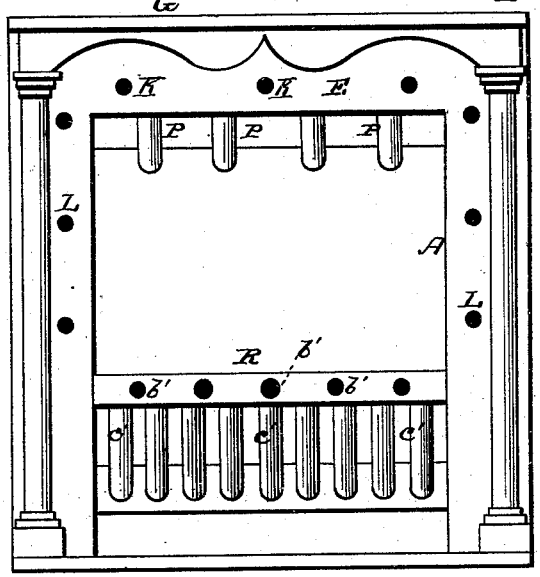


Fig. 2.

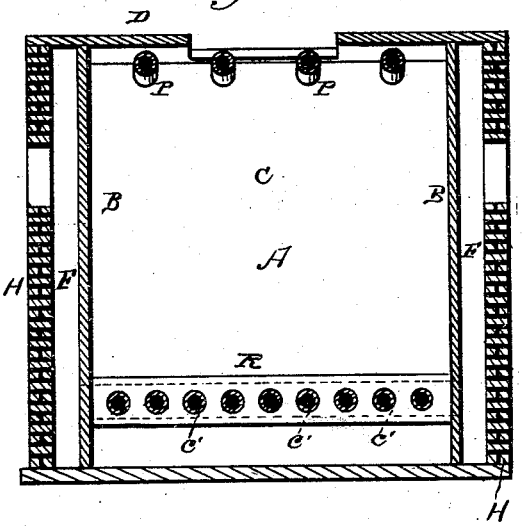


Fig. 3.

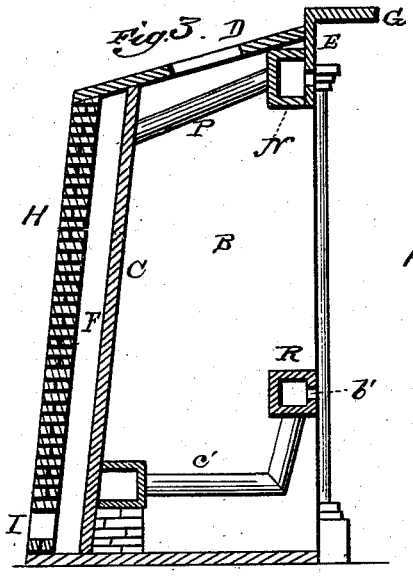
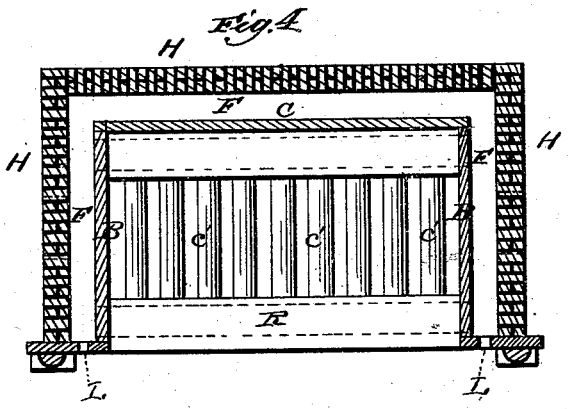


Fig. 4.



WITNESSES

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JAMES G. SMITH, OF CLEVELAND, OHIO.

FIRE-PLACE.

SPECIFICATION forming part of Letters Patent No. 265,163, dated September 26, 1882.

Application filed July 22, 1882. (No model.)

To all whom it may concern:

Be it known that I, JAMES G. SMITH, a citizen of the United States, and a resident of Cleveland, in the county of Cuyahoga and State of Ohio, have invented a new and valuable Improvement in Fire-Places; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a front view of my fire-place. Fig. 2 is a vertical longitudinal section of the same. Fig. 3 is a vertical sectional view, and Fig. 4 is a horizontal section.

This invention has relation to fire-places; and it consists in the construction and novel arrangement of the recessed plate forming the fire-place wall, and at the same time forming the inner wall of an air-chamber or air-chambers at the back and sides, and having a jamb or face-flange forming the front wall of the side air-chambers, and carrying flues at the top of the fire-place communicating with the air-chambers, and provided with outlet-openings for the discharge of air, which has been admitted into the rear air-chamber through openings communicating with the outside air, all as hereinafter set forth.

In the accompanying drawings, the letter A designates the fire-place front, consisting of the side walls, B, rear wall, C, top D, and the jamb or face-flange E, the latter being usually ornamented, and sometimes provided with a mantel-shelf, G.

F represents an air-chamber located at the back and sides of the fire-place A, and formed by leaving an interspace between the brick-work H of the chimney and the inside walls, B and C. Supply-openings I are located at the back and lower portion of the air-chamber F, said openings having communication with the air outside of the building, admitting the same into said air-chamber.

K represents discharge-openings made through the front flange, E, and designed to communicate with the air-chamber at the sides of the fire-place, admitting the air heated in said chamber into the room or apartment. Discharge-openings L can also be made at the sides of the fire-place to admit heated air into the room.

Across the front portion of the top of the fire-place, immediately in rear of the transverse portion of the face-flange E, is located a cross-flue, N, the ends of which communicate with the air-chamber F, and the front of which is provided with openings communicating with the room or apartment, said openings extending through the transverse portion of the face-flange E. Communicating with said cross-flue are the top flues, P, which are arranged in series across the top of the fire-place and extend from front to rear, communicating with the back portion of the air-chamber F.

Extending across the lower portion of the fire-place in front is a cross-flue, R, which forms the front bar of the grate, and is provided with discharge-openings b' through its front wall. The ends of this cross-flue communicate with the chamber F through openings in the side walls, B, and the middle portion of said cross-flue communicates with the rear portion of the air-chamber through the series of hollow grate-bars c'. Conducting-pipes may connect the air-chamber F with other rooms above or below for heating them, extending within or outside of the chimney, as desired.

The action is as follows: Cold air is admitted from the outside into the chamber F through the supply-openings I, and, becoming heated in said chamber and in the hollow grate-bars and top flues, is discharged as heated and pure air into the room through the discharge-openings hereinbefore mentioned, thus heating and ventilating the room at one and the same time. The discharge-openings may be provided with revolving or sliding dampers, to regulate and control the amount of heat passing into the room, and in arranging said discharge-openings it is designed to employ ornamental work around them; or the openings themselves may be made of ornamental shape. Sometimes it may be desirable to make the side openings, L, as well as the front openings, K, and openings in the cross-flues, of sufficient size to enable them to be used independently of each other.

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

1. A fire-place front consisting of the back wall, C, side walls, B, and jamb or face-flange E, the upper and lower cross-flues, N R, the series of top flues, P, the series of hollow grate-bars c', and the discharge-openings K and b', substantially as specified.

2. In a fire-place, a heating and ventilating air-chamber, F, having in rear the supply-openings I, and extending around the back and sides of the fire-place, the upper and lower cross-flues, N and R, the series of top flues, P, the series of hollow grate-bars c', and the air-outlets K, L, and b', substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JAMES G. SMITH.

Witnesses:
K. B. SMITH,
HENRY GOLDSMITH.