

E. Y. ROBBINS.

Fireplace.

No. 43,604.

Patented July 19, 1864.

Fig. 1.

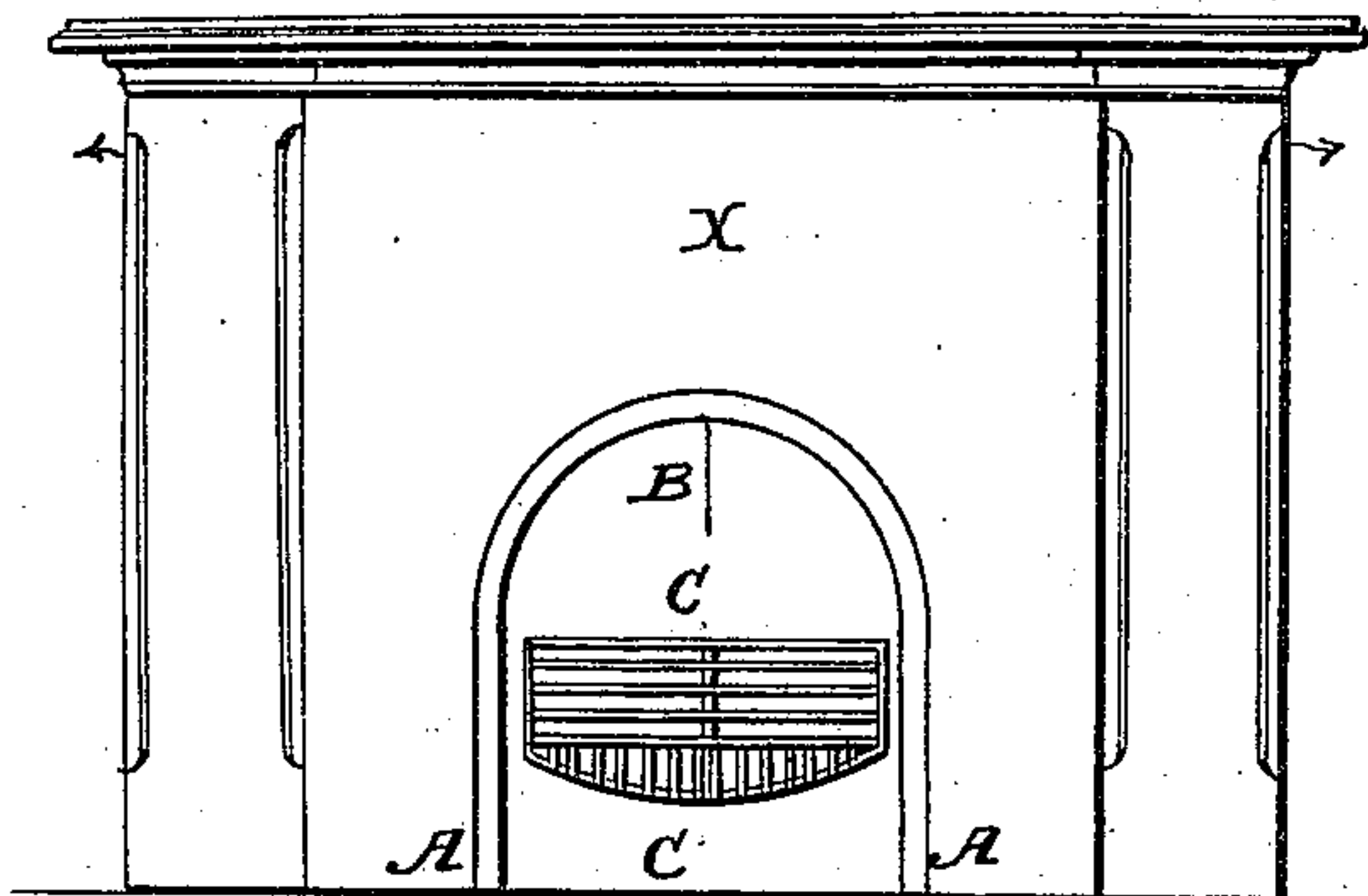


Fig. 2.

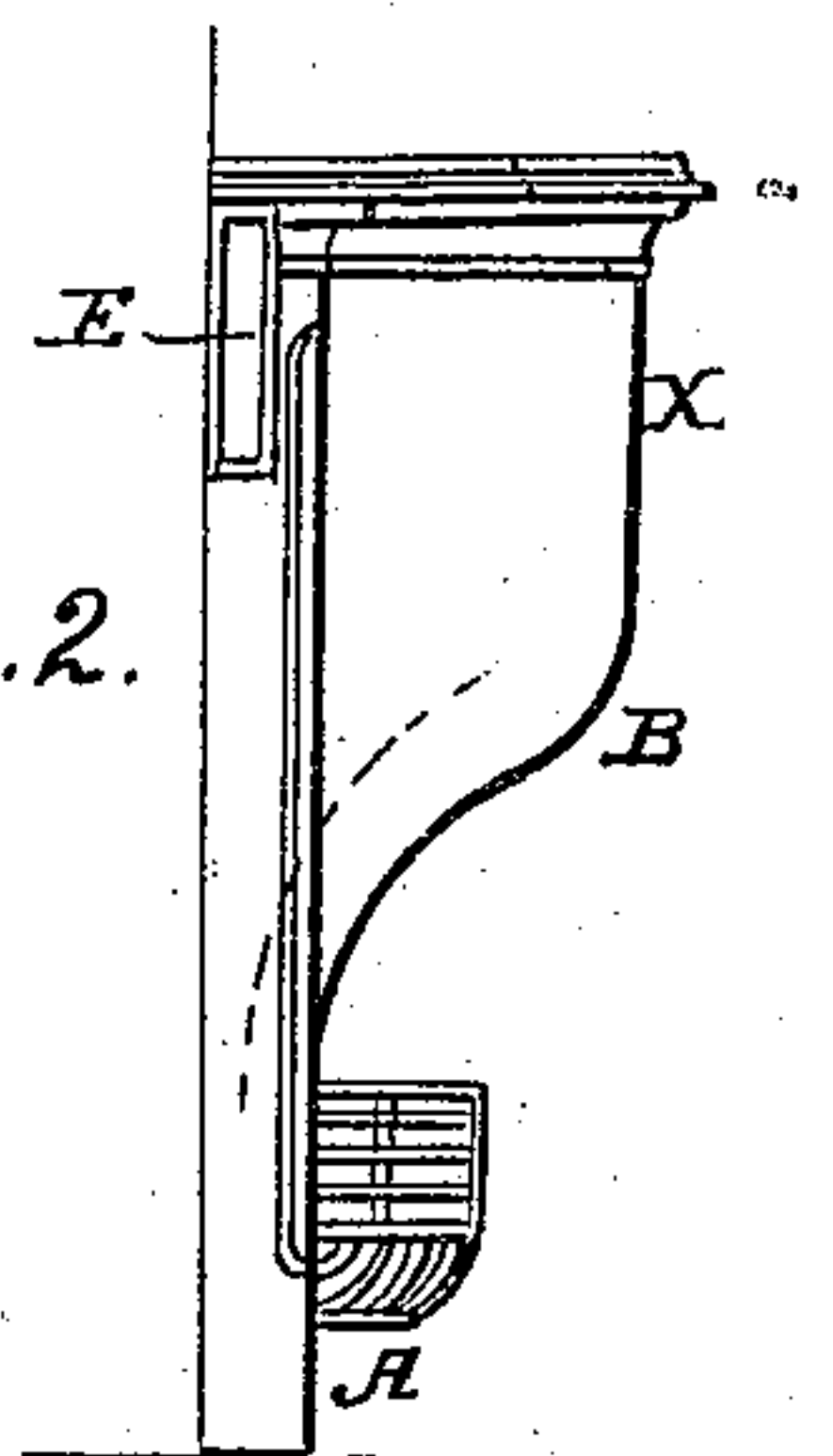


Fig. 3.

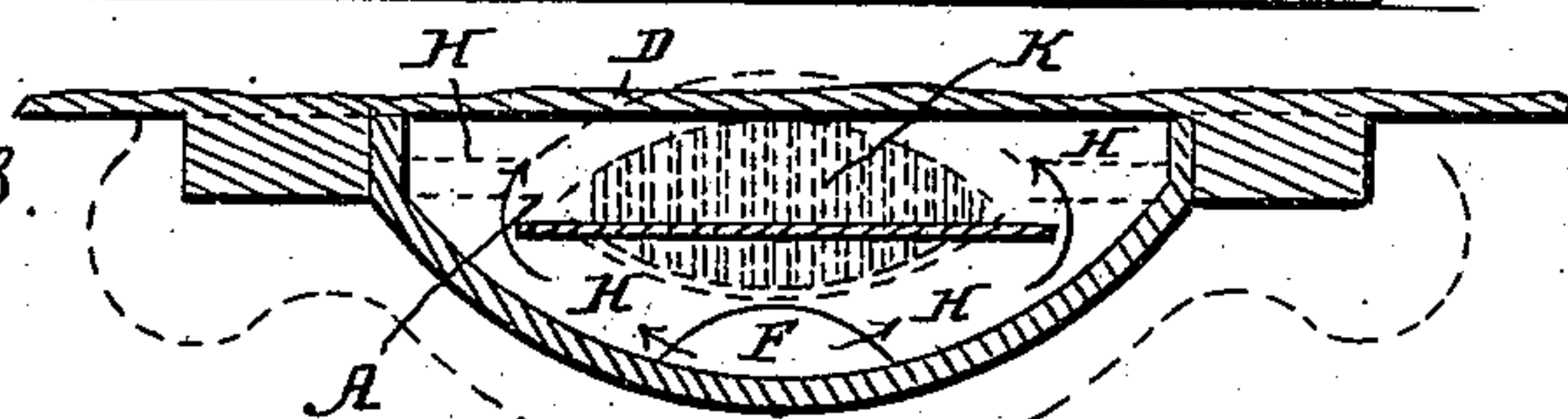


Fig. 4.

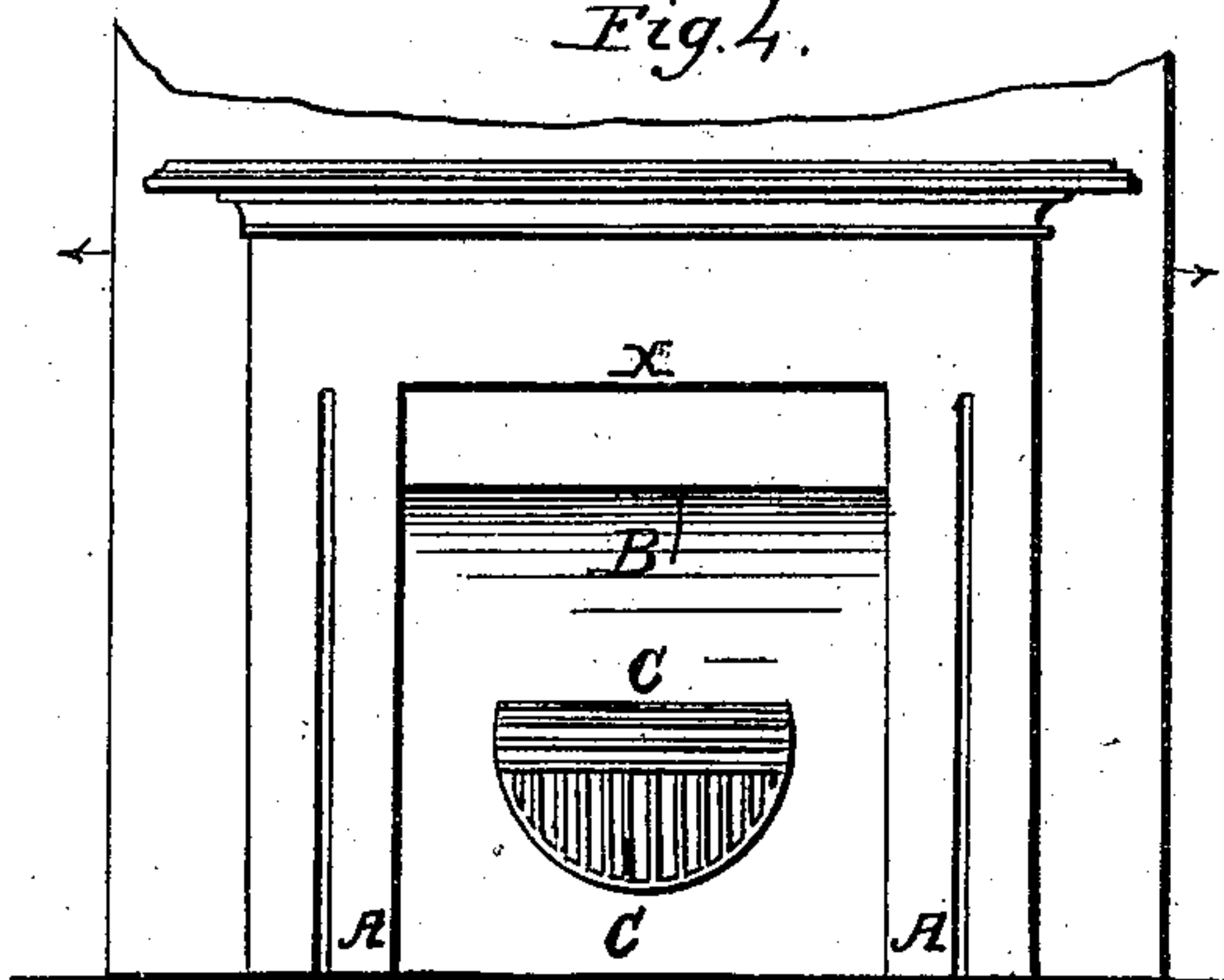


Fig. 5.

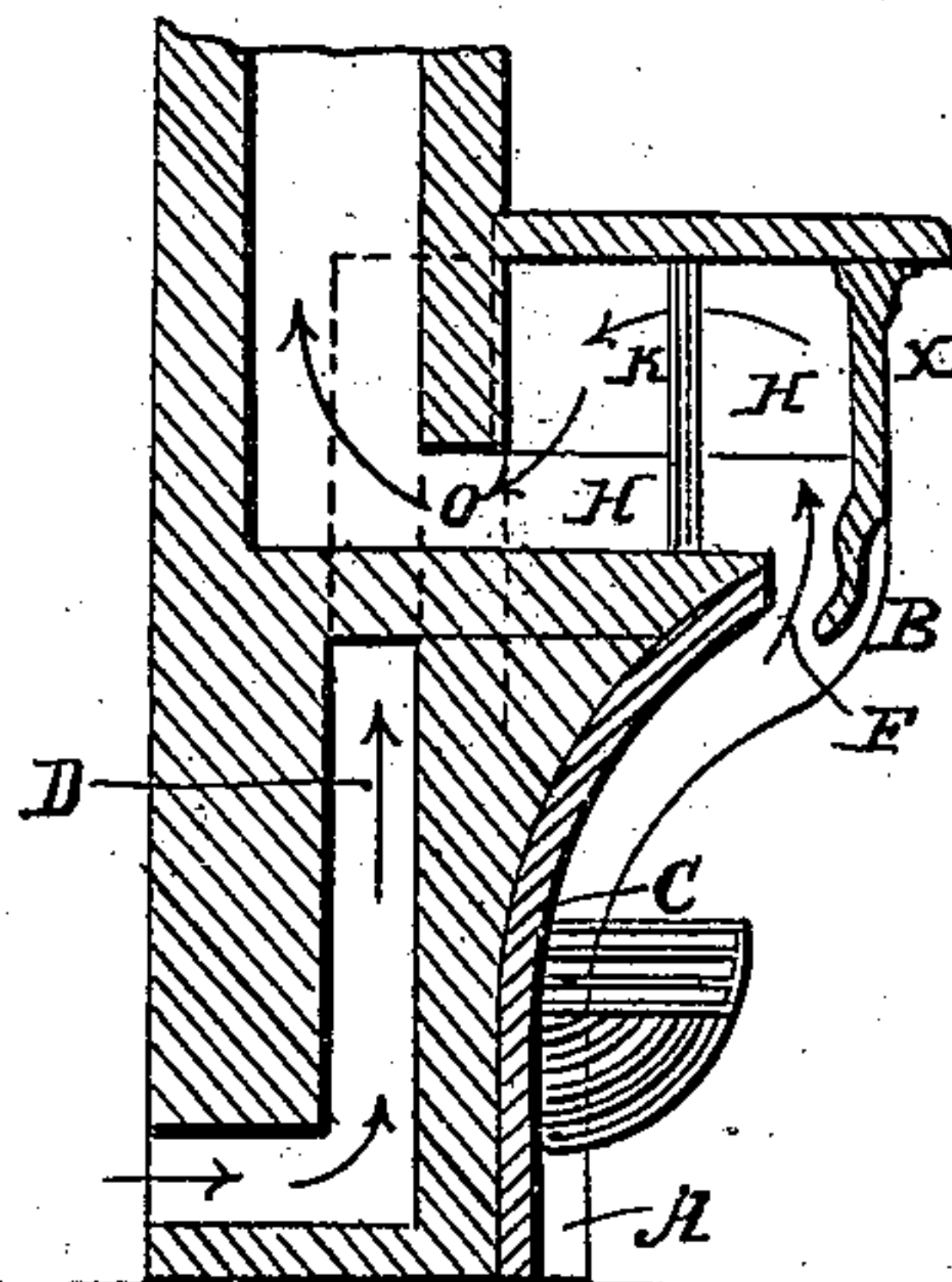


Fig. 6.

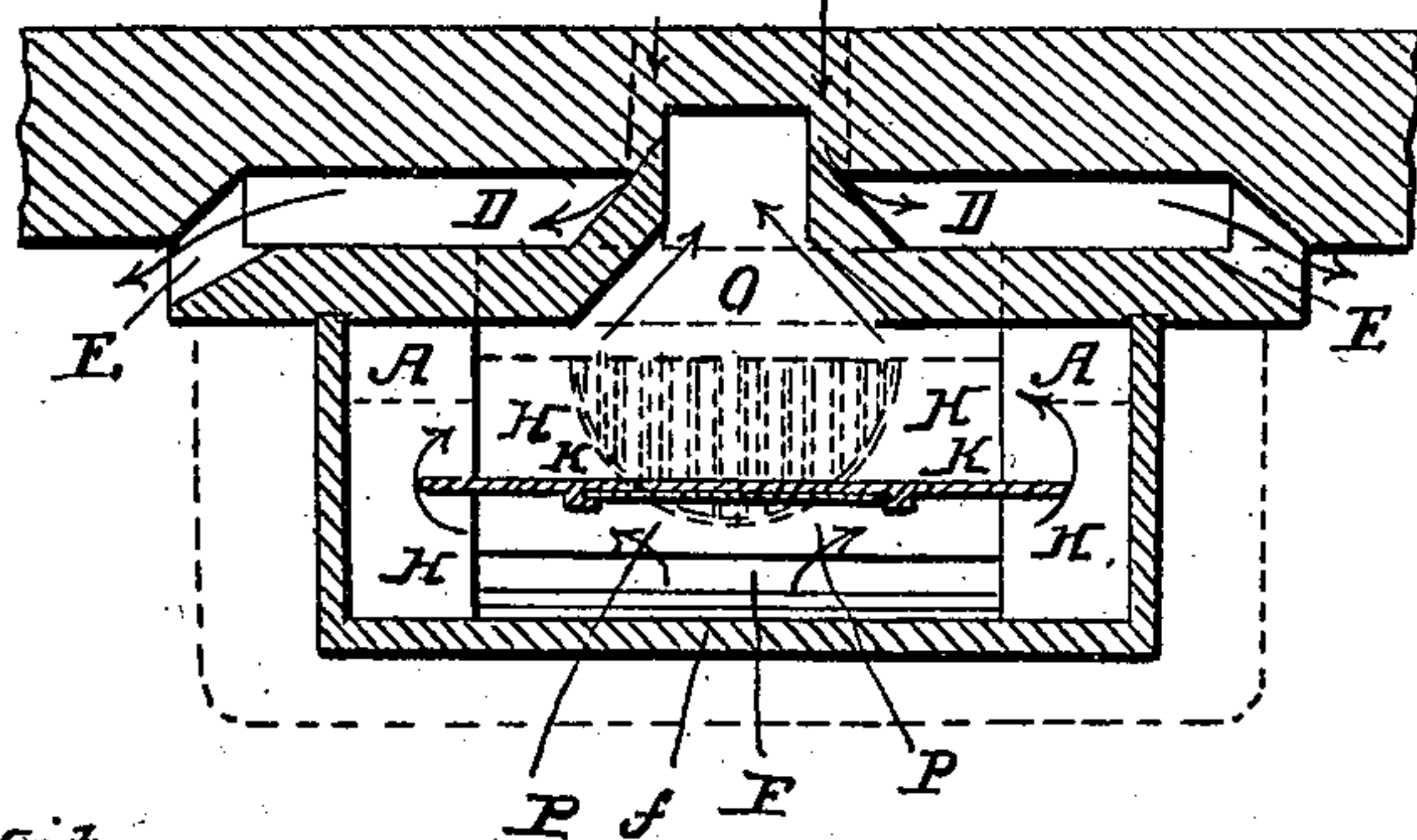
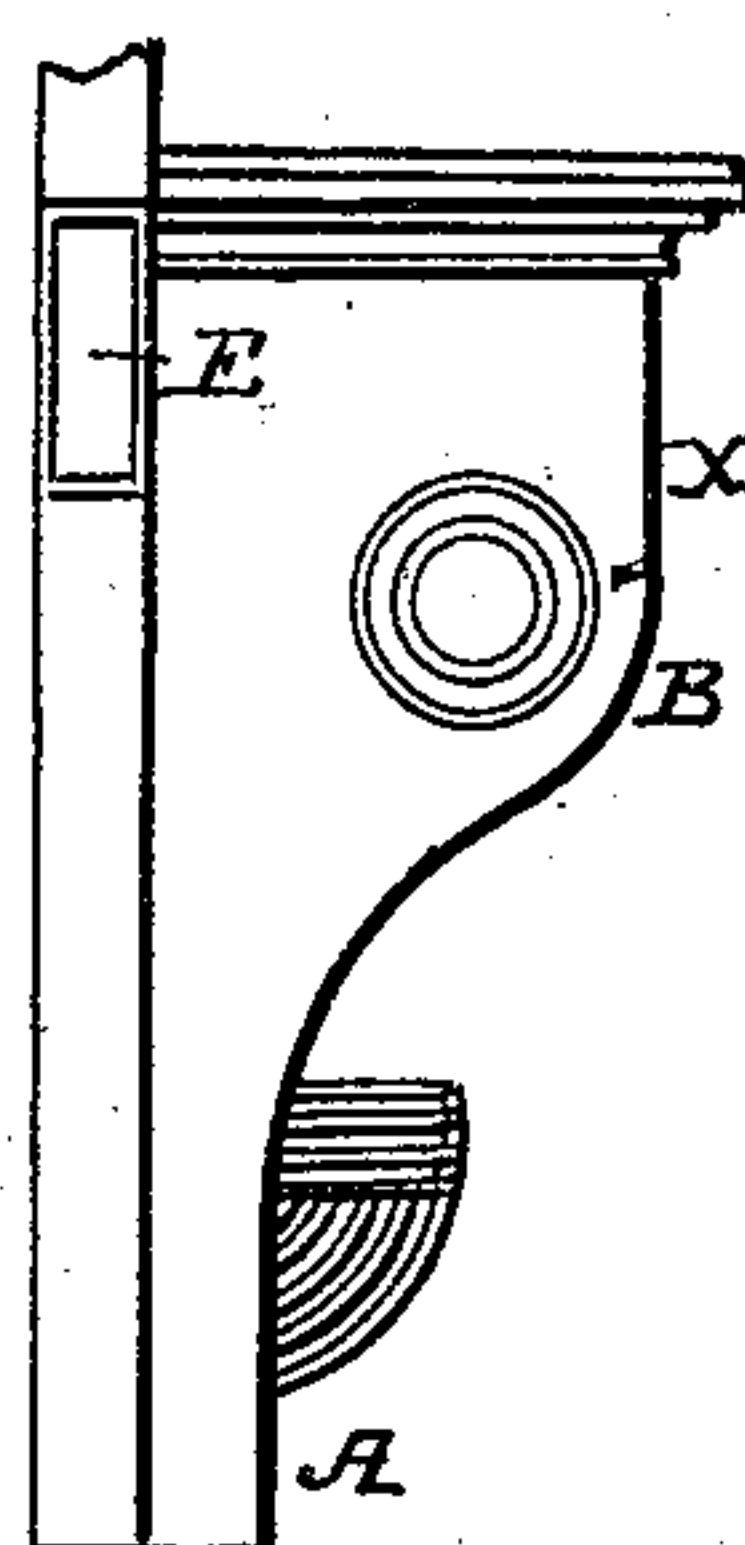


Fig. 7.



Witnesses:

J. S. Confrey

G. Moore.

Inventor

E. Y. Robbins

UNITED STATES PATENT OFFICE.

E. Y. ROBBINS, OF CINCINNATI, OHIO, ASSIGNOR TO WM. PENN NIXON, OF
SAME PLACE.

IMPROVEMENT IN FIRE-PLACES.

Specification forming part of Letters Patent No. 43,604, dated July 19, 1864.

To all whom it may concern:

Be it known that I, E. Y. ROBBINS, of Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and Improved Fire-Place and Mantel, of which the following is a full and exact description, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my improvement consists in bringing the upper parts of the jambs and the arch and the breast or front of the mantel forward in an inclination or projection over the base of the jambs, allowing a strong forward inclination of the fire-back, so that it shall become more thoroughly heated by the blaze and hot gases impinging against it, and radiate the heat downward to the floor without the necessity of deep jambs, which obstruct the radiation sidewise; also, in making the large front or breast of the mantel below the shelf (and the shelf itself, if desired) a warming-surface by causing the smoke and hot gases to circulate through a large chamber within, as described below.

I construct the fire-place and mantle by beginning at the base or hearth with shallow or ordinary jambs, A, Figures 1, 2, 3, 4, 5, and 7, which, as they rise toward the arch B, Figs. 1, 2, 4, 5, and 7, gradually curve or incline forward into the room, so that the arch of the fire-place and the breast or front of the mantel X project six or eight inches, or more or less, over the base of the jambs. The fire-back C, Figs. 1, 4, and 5, is built with a corresponding forward inclination. The blaze and hot gases, impinging against this inclined fire-back, impart to it a high degree of heat, which heat, from the inclined position of the fire-back, is radiated downward to the floor. The fire-back itself is made of slabs of soapstone, or of fire-tile, or clay, or other earthy material, three or four inches thick, more or less, and behind it is an air-space, D, Figs. 3, 5, and 6, three or four inches in depth from front to back, and as wide and high as the fire-place or mantel itself if desired. Into this air-space fresh air is admitted from without, which, becoming warmed against the back surface of the stone or tile fire-back, rises up and enters the room at convenient openings, as at E E,

Figs. 2, 5, 6, 7, near the ends of the shelf; or it may be carried up in flues in the wall to the room above to warm and ventilate it. The smoke, after coming forward under and against the strongly inclined fire-back to near the front of the projecting arch, passes up through the opening F, Figs. 3, 5, 6, into a large smoke-chamber, H, Figs. 3, 5, and 6, bounded in front by the breast of the mantel and above by the shelf, or by a slab of stone or tile immediately under the shelf. Thus the whole front and shelf, becoming warm, transmit or conduct the heat into the room, and become a large radiating or warming surface. To secure a more thorough circulation of the smoke through this chamber H, Figs. 3, 5, and 6, and to prevent it from going at once into the chimney, a partition or diaphragm, K, Figs. 3, 5, and 6, of sheet-iron or brick is placed in such a position that the smoke is made to traverse the extremities of the said chamber, and it is finally discharged into the chimney through the opening O, Figs. 5 and 6, at the lower part of the said smoke-chamber behind. A slide, P, Figs. 5 and 6, may be placed in this partition to allow an opening to be made in case of the necessity of cleaning out the smoke-chamber. The front of the mantle may be made horizontally, either straight or curved, as I do not confine myself to any particular figure or shape, except so far as to make it conform to the general description above given. Neither do I confine myself to the combination of the projected and warmed front or breast, but use either or both separately or in combination, as may be desired. The fire-back and the breast or front of the mantel, and all warming surfaces with which the air of the room, or that afterward to be admitted into the room, comes in contact should be made of stone, clay, or other earthy materials which absorb large quantities of heat, retain it for a longer time, and give it out more gradually than metal, and hence preserve a more equable temperature of the room, and so promote comfort and health, metal being quickly heated to an uncomfortable and unwholesome degree, and becoming as quickly cold when the fire goes down, whereas clay or tiles will hold heat for a long time after the fire is out.

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

1. The inclination or curving forward of the upper part of the jambs, causing the arch of the fire-place and the front or breast of the mantel to project over the base of the jambs, thus affording space for a corresponding forward inclination of the fire-back without the necessity of deep jambs, which obstruct the radiation of the fire sidewise, substantially as above described.

2. In combination with the forward inclination or curving of the jambs, the making of the large front or breast of the mantel (and the shelf, if desired) a non metallic warming or radiating surface, all as above set forth, or any other arrangement substantially the same and which will produce the intended effect.

E. Y. ROBBINS.

In presence of—

J. R. HUNTER,
WM. PENN NIXON.