

(No Model.)

D. PEARSON.
HOT AIR FIRE PLACE.

No. 332,429.

Patented Dec. 15, 1885.

Fig. 1.

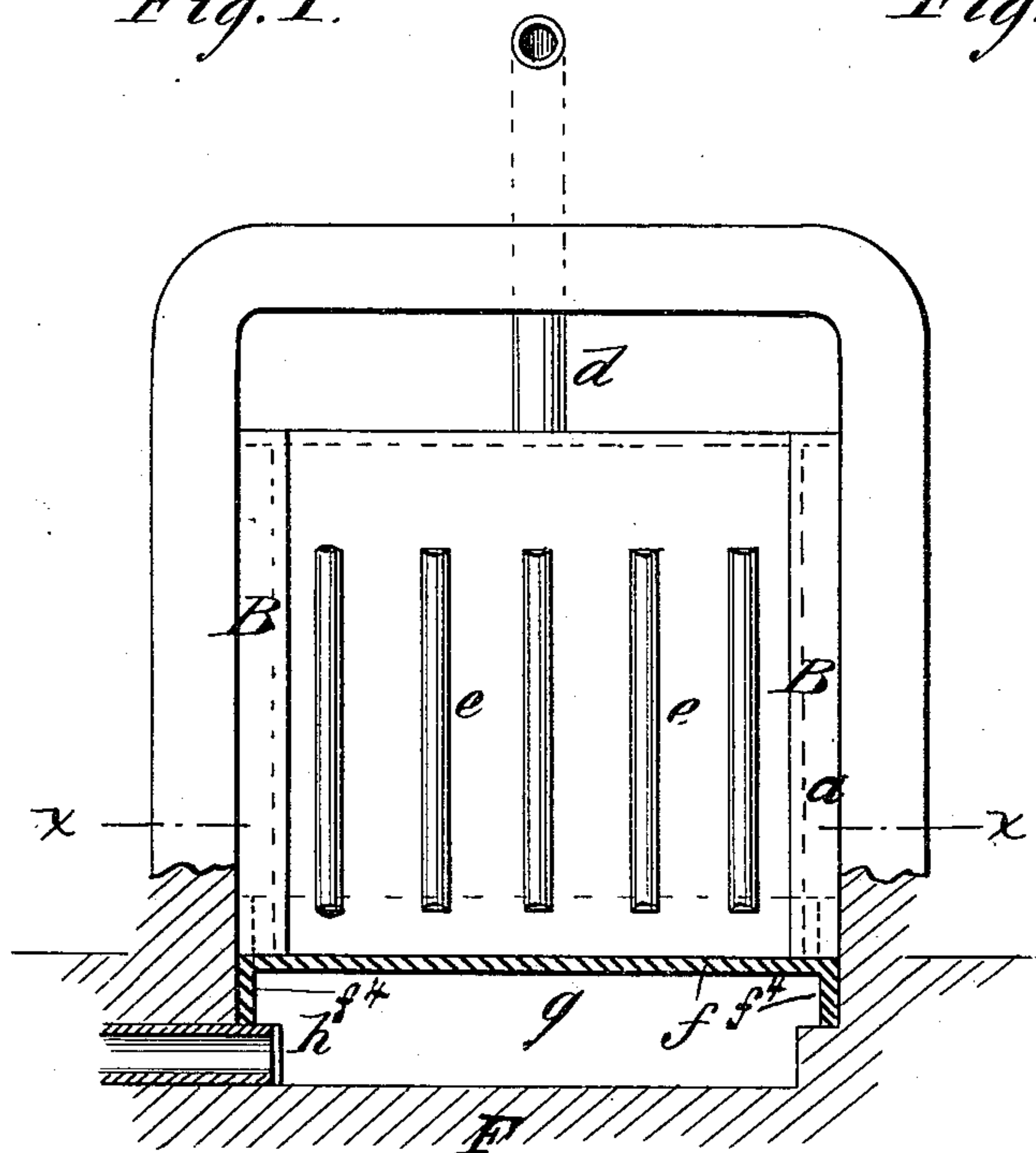


Fig. 2.

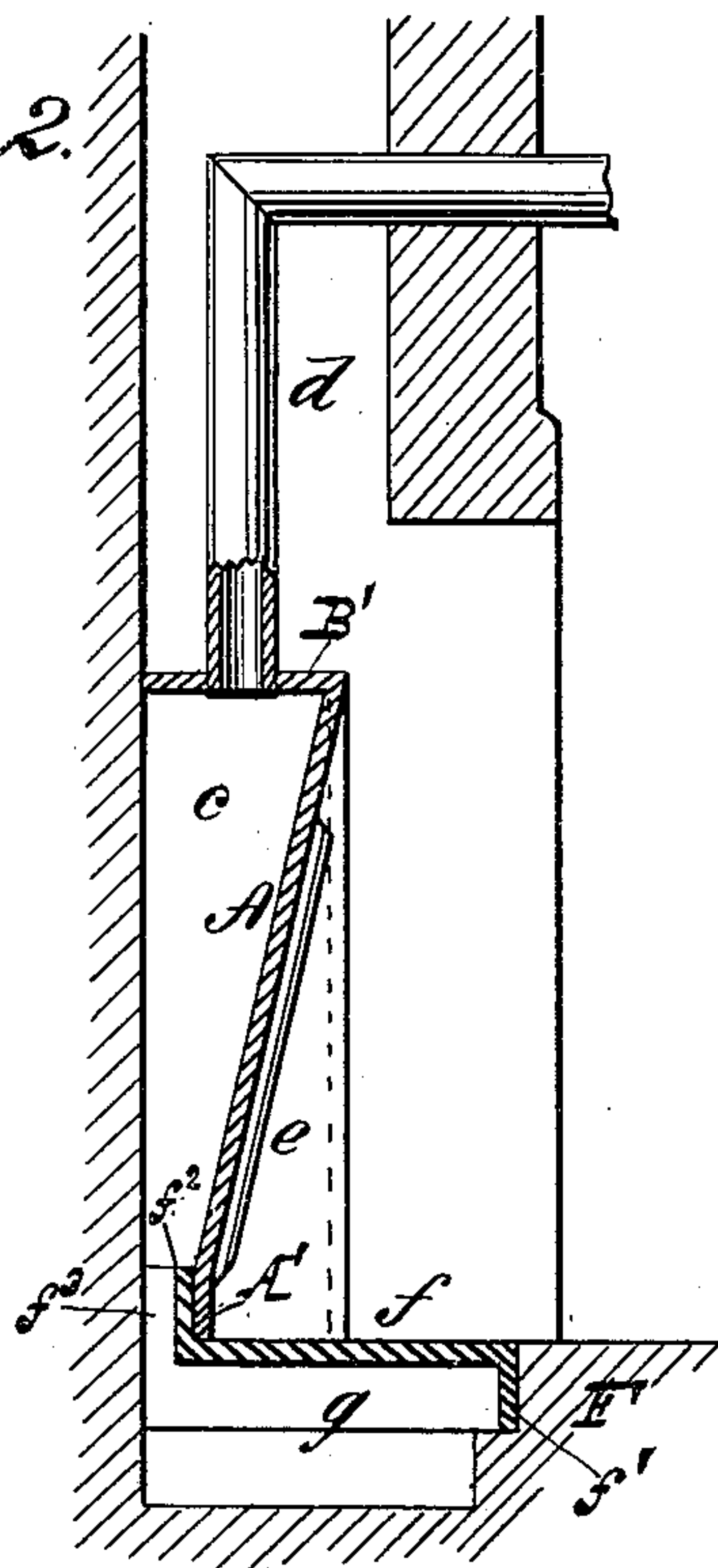


Fig. 3.

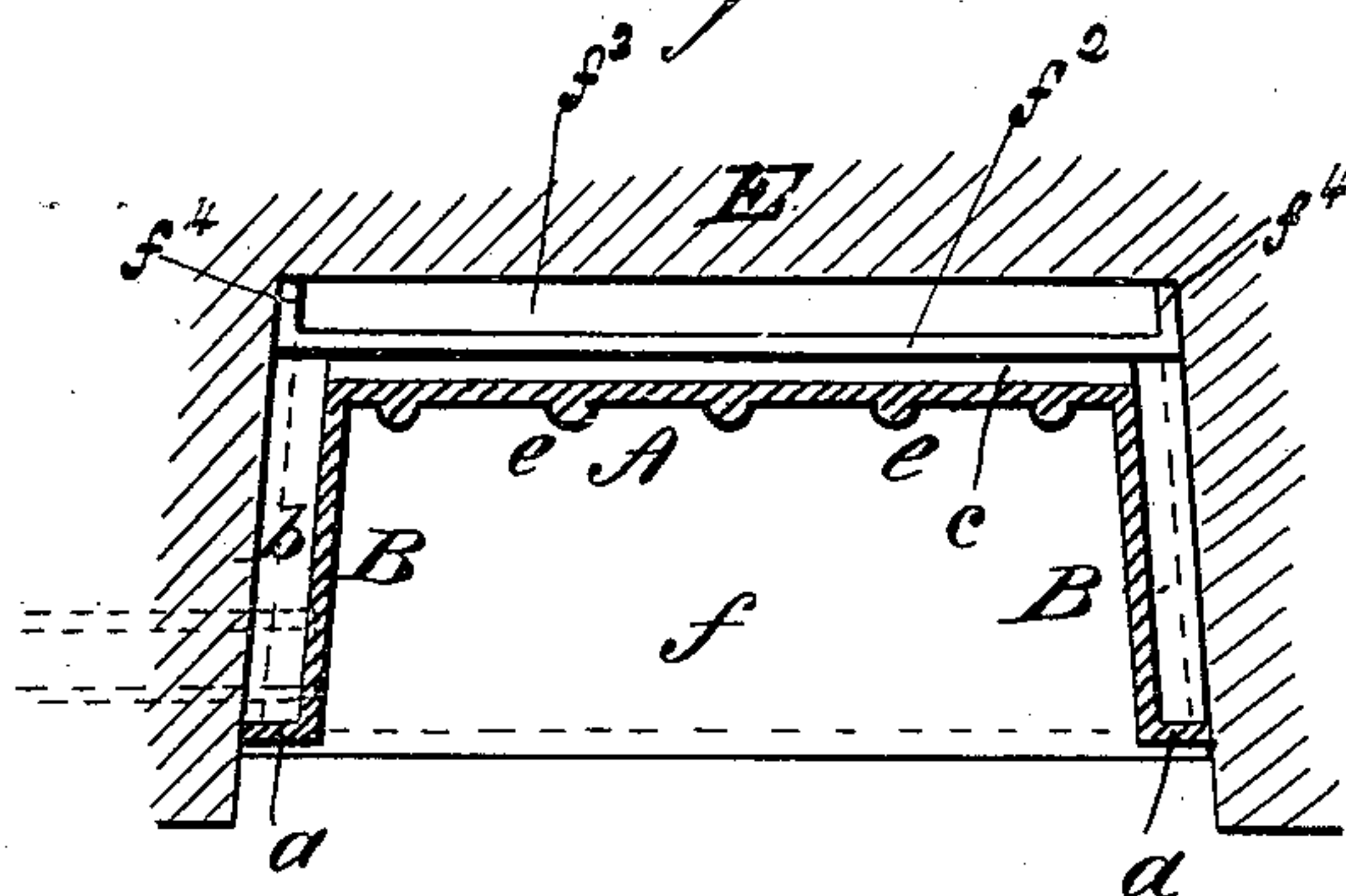
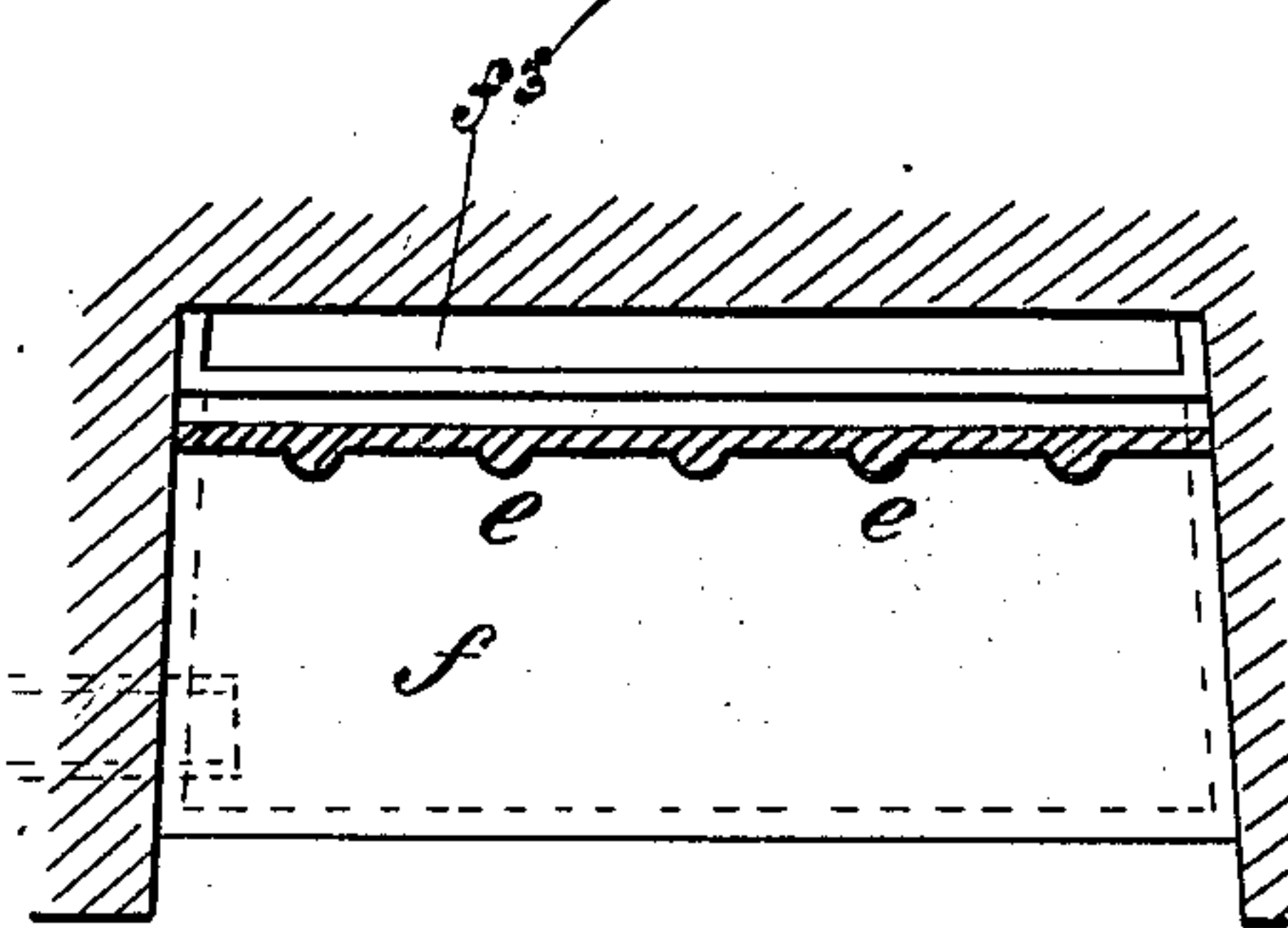


Fig. 4.



WITNESSES:

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DOYEL PEARSON, OF MEMPHIS, TENNESSEE.

HOT-AIR FIRE-PLACE.

SPECIFICATION forming part of Letters Patent No. 332,429, dated December 15, 1885.

Application filed November 1, 1884. Serial No. 147,003. (No model.)

To all whom it may concern:

Be it known that I, DOYEL PEARSON, of Memphis, in the county of Shelby and State of Tennessee, have invented a new and Improved Hot-Air Fire-Place, of which the following is a full, clear, and exact description.

My invention relates to open fire-places in which wood is burned, the object being to save waste heat and to conduct the heated air where it is wanted, so that the heat may be diffused throughout a room or carried to any particular point, as desired.

The invention consists of the combinations of parts, including their construction, substantially as hereinafter described, and pointed out in the claim.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a front elevation, partly sectional, of a fire-place with my improvements. Fig. 2 is a vertical section of the same. Fig. 3 is a horizontal section on the line *xx* of Fig. 1, and Fig. 4 is a horizontal section of the fire-place in a modified form.

E are the inclosing-walls, and F the hearth, of an ordinary open fire-place. Across the bottom of the fire-place, in a recess in the hearth, is fitted a plate, *f*, having a downwardly-extending supporting-flange, *f'*, at its front edge and like downwardly-extending flanges *f''* at its ends, whereby a chamber, *g*, is formed beneath the fire-bed of the hearth. A pipe, *h*, extends through the brick-work from the chamber *g* to the open air. At the back edge of the plate *f* is an upwardly-extending flange, *f''*, between which and the rear walls of the fire-place is a passage, *f'''*. A plate, A, formed with a portion, A', slightly oblique to the body of the plate, having triangular forwardly-extending sides B, provided with lateral flanges *a*, and having at its upper edge a backwardly-extending offset, B', is placed across the rear of the fire-place, with its oblique portion A' against the flange *f''* of the plate *f*, and the offset B' resting against the rear wall of the

fire-place, whereby a chamber, *c*, is formed back of the plate A, and chambers *b* between the side walls of the fire-place and the sides B, these chambers communicating. A pipe, *d*, extends upward from the offset B' through the chimney-flue, and may be extended to enter an upper room. Upon the inclined outer face of the plate A ribs *e* are formed, which prevent the fuel from coming directly against the plate, thereby giving space for draft. In case the fire-place is a very large one, the castings may occupy only a portion of it. The sides B may extend entirely to the front of the fire-place opening or only a portion of the distance; or they may be omitted entirely, as in Fig. 4. By this construction the fresh air supplied by the pipe *h* is diffused throughout the chambers *c g b*, so that it becomes highly heated by heat which would otherwise pass off through the chimney. By conducting the air from the outside a supply of fresh heated air is obtained, and the strong current through the chambers will prevent the plates from becoming so intensely heated as to burn out. At the same time the waste heat of the hearth is saved, and the fire-place itself will radiate more heat than the ordinary brick fire-place.

The heater is intended for application to fire-places already built.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

In a fire-place, the combination, with the inclosing-walls E and the hearth F, of the plate *f*, having the flanges *f'*, *f''*, and *f'''*, the plate A, having the oblique portion A', wings B, flanges *a*, and offset B', the outlet-pipe *d*, and the inlet-pipe *h*, substantially as shown and described, whereby chambers are formed beneath and at the back and sides of the fire-place and air can pass through and be warmed in said chambers, as set forth.

DOYEL PEARSON.

Witnesses:

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CHAS. M. CARROLL.