

(No Model.)

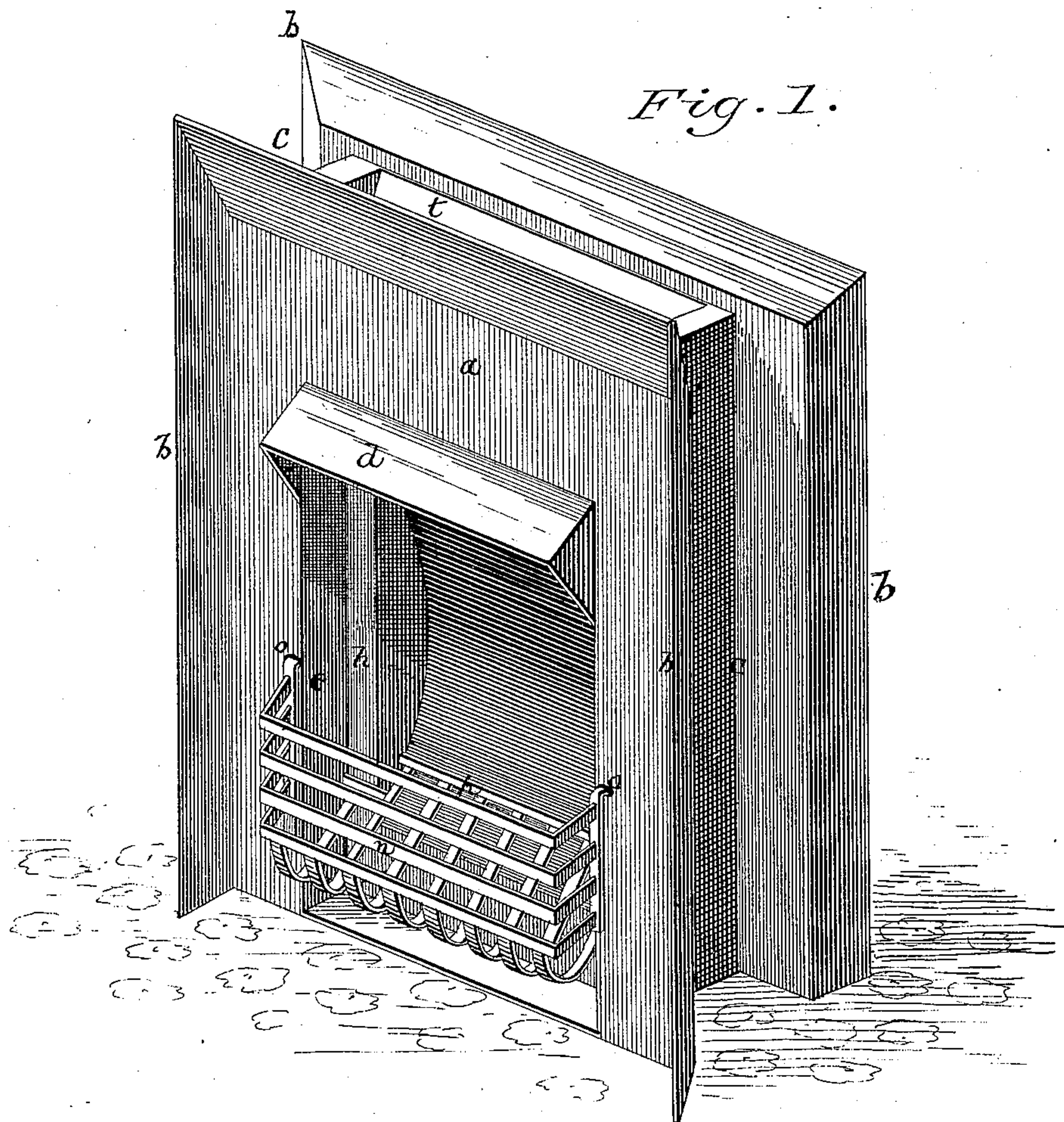
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J. H. BURNAM.

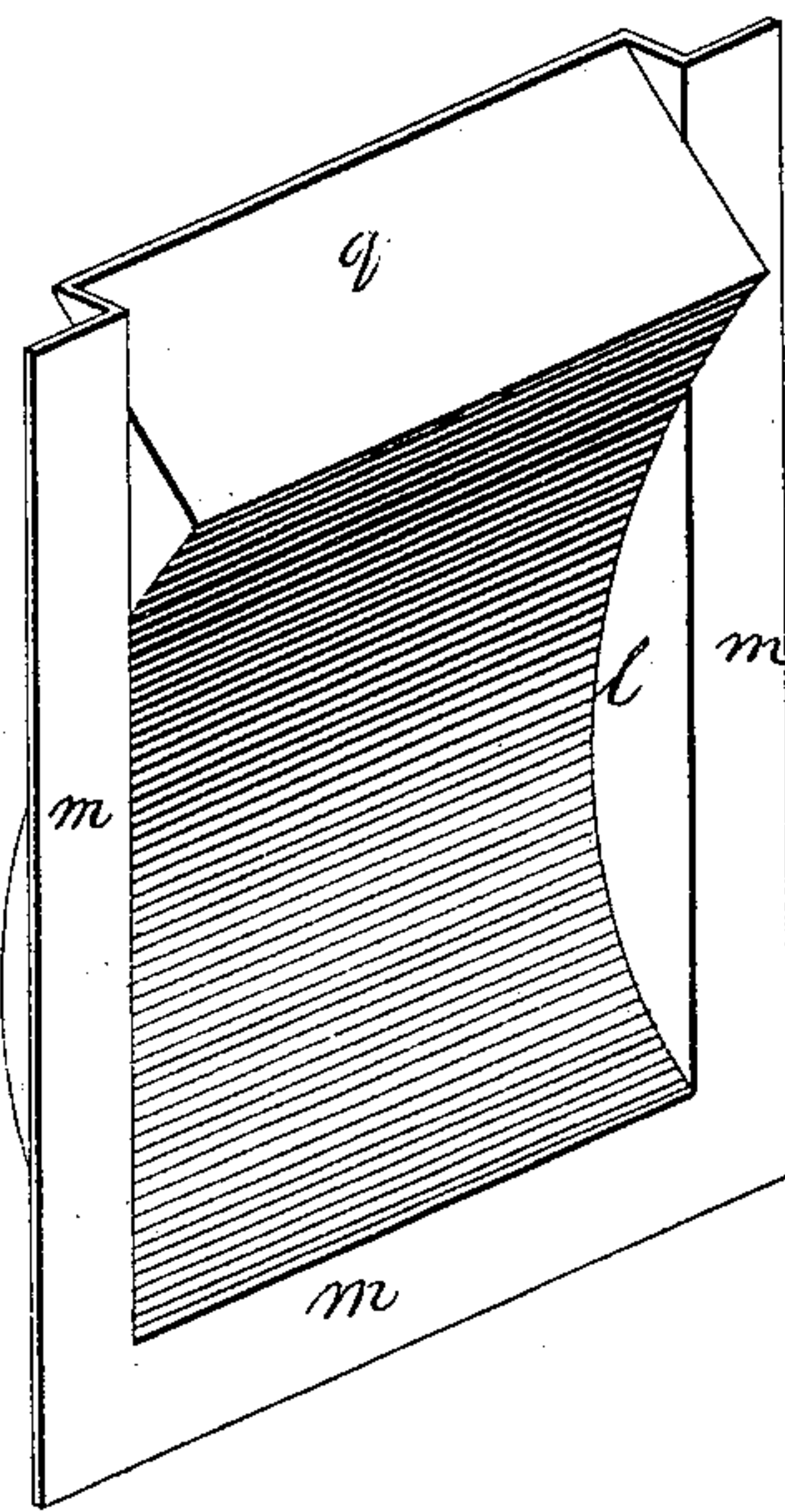
TWO ROOM HEATING FIRE BACK AND FRAME.

No. 287,230.

Patented Oct. 23, 1883.



*Fig. 2.*



Witnesses:

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2 Sheets—Sheet 2.

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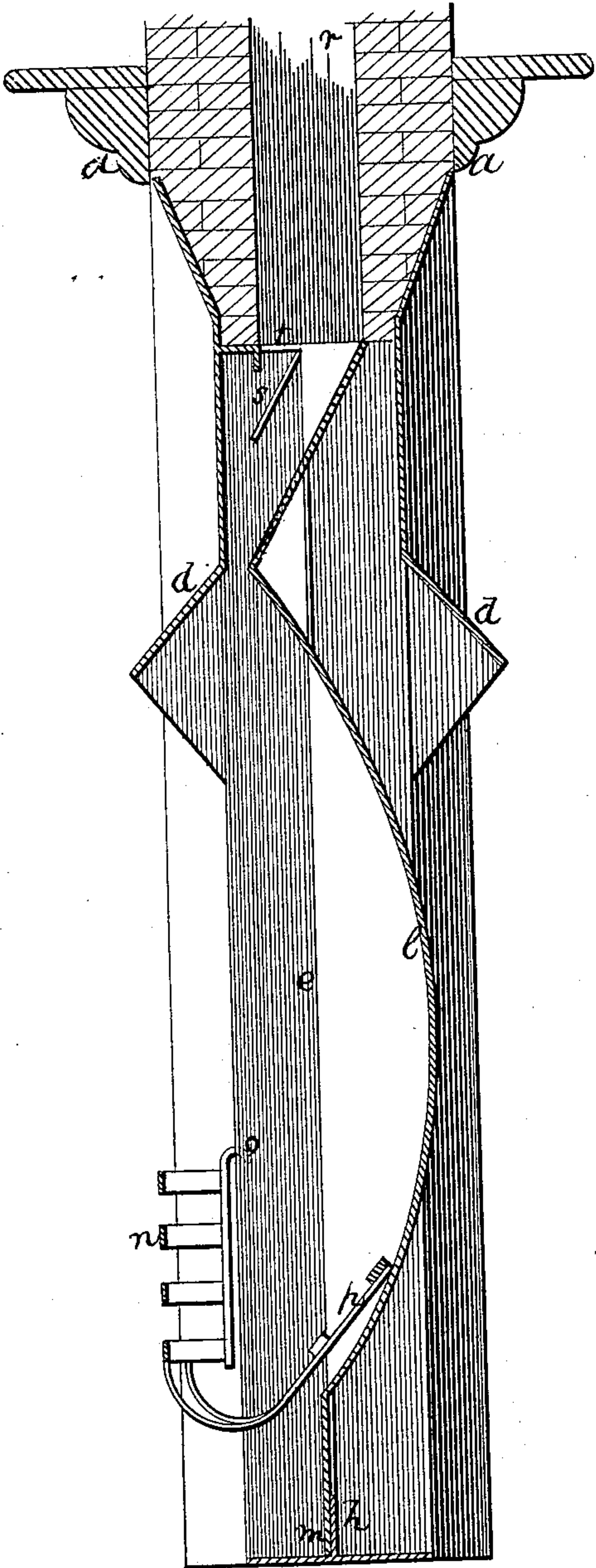


Fig. 3.

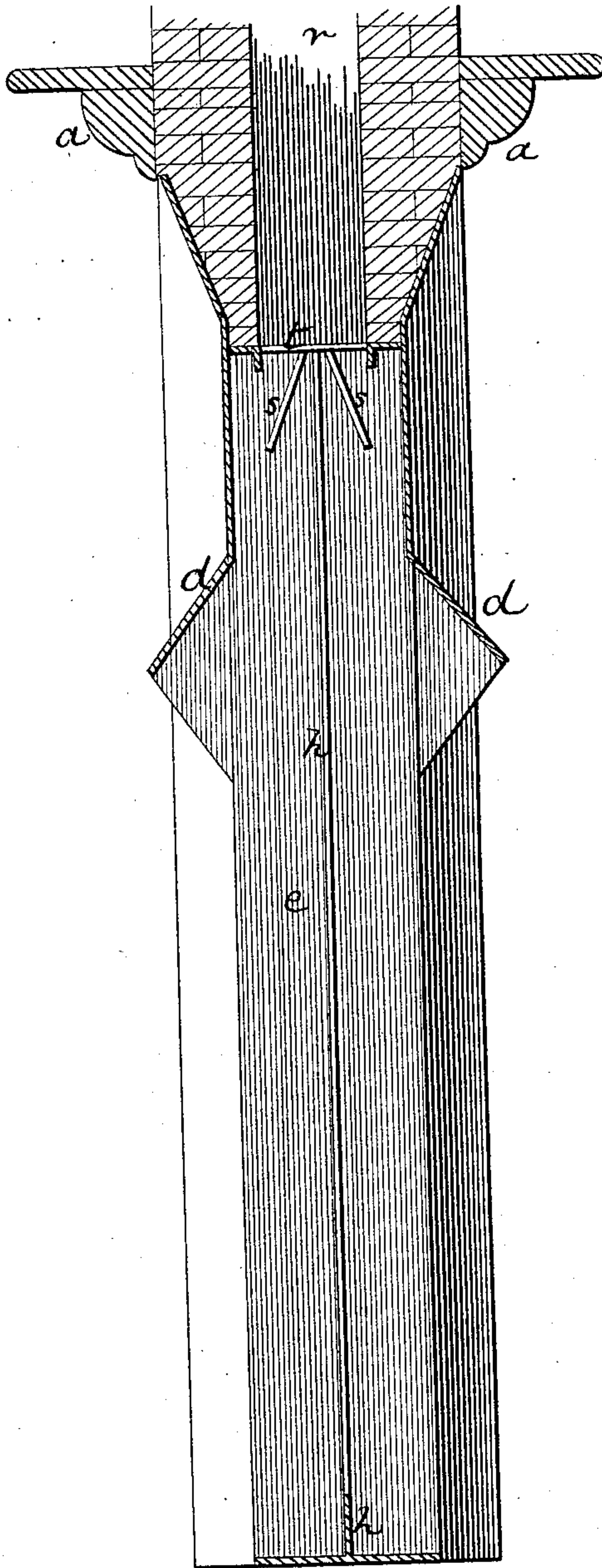


Fig. 4.

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# UNITED STATES PATENT OFFICE.

JAMES H. BURNAM, OF FAYETTEVILLE, TENNESSEE.

## TWO-ROOM-HEATING FIRE BACK AND FRAME.

SPECIFICATION forming part of Letters Patent No. 287,230, dated October 23, 1883.

Application filed February 10, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES HENRY BURNAM, a citizen of the United States, residing at Fayetteville, in the county of Lincoln and State of Tennessee, have invented a new and useful improvement in fire-places and fire-backs for heating two adjoining rooms on the same floor with one fire, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings and letters of reference marked thereon, in which—

Figure 1 is a perspective view of my improved fire-place grate and fire-back. Fig. 2 is a perspective view of the fire-back. Fig. 3 is a central vertical section through the fire-place and fire-back, and Fig. 4 is a similar section with the fire-back removed.

My invention relates to improvements in means for heating two adjoining rooms on the same floor with one fire; and it consists, first, of a fire place or frame inclosed in a chimney in a partition-wall between two adjoining rooms on the same floor, the opening in the fire-place extending through it and into the adjoining room, and a metallic heat-conducting fire-back inserted into said opening in the fire place or frame, and provided with a grate, so that a fire made in the grate in one room will heat it, and also the adjoining room on the same floor.

My invention further consists in certain details of construction, hereinafter more fully set forth.

In the accompanying drawings, *a* represents a fire place or frame, preferably made of cast-iron, and either in one piece or in sections, and inclosed in a chimney built in the partition-wall between two adjoining rooms on the same floor. The foundation of the chimney is prepared to receive the fire place or frame at a level with the floors of the adjoining rooms to be heated by one fire, and the chimney is continued up of nearly or the same thickness as the frame, inclosing the latter at its sides, and continues upward through the roof, leaving a smoke-flue, *r*, in the chimney corresponding with the opening *t* in the top of the fire place or frame *a*, for the escape of the products of combustion. The fire-place *a* is preferably provided with extended flanges *b* on its back and front faces, forming side recesses, *c*, in which the walls of the chimney are built. *e*

represents the central opening in the fire place or frame, which extends entirely through it and into the adjoining room on the same floor, and the middle of the sides and bottom of the opening *e* in the fire place or frame *a* is provided with a continuous flange, *h*, against which the flanges *m* (see Fig. 2) of the reversible fire-back *l* rest, and may be held in place by a fastening-pin or other equivalent means applied to the bottom flange, *m*, and the lower flange, *h*. The fire-back *l* is formed of metal, preferably iron, so that its heat-conducting power will be great, and its body is made concave, so that its body will project through the opening *e* in the fire-place partly into the adjoining room. The concave portion of the fire-back terminates near its upper end in an inclined plane, *q*, the upper edge of which rests on one of the longitudinal sides of the opening *t*, for the passage of the products of combustion into the chimney. By this construction it will be seen that the fire-back is readily detached, and can be inserted in the opening in the fire-place from either room, so that a fire can be made in either room, and at the same time both rooms be heated by one fire. It will also be seen that the inclined plane *q* of the fire-back closes the draft-opening of the adjoining room, so that none of the radiated heat from the back of the concave metallic fire-back can pass through the draft-opening *t* in the fire-place, and thence into the chimney, but will be utilized in the adjoining room.

*s s* represent inclined springs or projections secured to the upper ends and opposite sides of the longitudinal flanges *h*, the function of the springs being to hold the fire-back in place at its upper end.

*n* represents a grate, the side vertical bars of which are hooked and are removably secured in holes made in the front and back faces of the frame *a*. The rear end, *p*, of the bottom of the grate is inclined inwardly and upwardly, and rests against the front concave face of the fire-back, the weight of the fuel being thus exerted to hold the fire-back in position.

*d d* represent hoods placed over the tops of the opening in the fire-place on its opposite faces.

This construction is extremely simple and cheap.



Two adjoining rooms on the same floor can be readily heated by one fire, one room being heated by the fire-back and the other by the open fire, and the fire-back being readily reversed, a fire can be made in either room, as desired.

I am aware that a fire-place having an opening extending centrally through it and provided with a revolving vertical fire-back carrying a grate adapted to be swung in the fire-place from a room to one adjoining it, the chimney of the fire-place being provided with two hinged dampers connected by a chain and operated by an eccentric to close the draft-opening in the room opposite that in which the grate is employed, is old, and I therefore lay no claim to such construction, my invention being different, simpler, and cheaper than that disclaimed, in that I dispense with the hinged dampers, chain, and eccentric of that construction, and employ a concave fire-back provided with an inclined rigid extension at its upper end.

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

1. The combination, with a fire-place having an opening extending centrally through

it, of a reversible concave metallic fire-back having an inclined plane at its upper end, forming a rigid extension thereof, said fire-back being thus adapted to project into the adjoining room and close the draft-opening in the fire-place of said room, substantially as described.

2. The combination, with the fire-place *a*, provided with the central opening, *e*, extending centrally through it, and having the flanges *h*, of the reversible concave metallic fire-back *l*, having flanges *m* and inclined plane *q*, substantially as described, and for the purpose set forth.

3. The combination, with the cast-iron fire place or frame *a*, having the flanges *b*, recesses *c*, smoke-passage *t*, and opening *e*, extending centrally through it and provided with the flanges *h*, of the reversible concave metallic fire-back *l*, having flanges *m* and inclined upper end, *q*, and removable grate *n*, substantially as described, and for the purpose set forth.

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Witnesses:

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J. D. MCKINNEY.